## Hadashot Arkheologiyot <br> Excavations and Surveys in Israel

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Zur Natan Final Report Hagit Torge [19/11/2009]


1. Plan.
 south.
(Volume No. HA-ESI 121 (2009
Afiq
Final Report
Oren Zingboym
30/12/2009
During December 2006, a trial excavation was conducted at Qibbuz Afia in the southern Golan Heights (Permit No. A-4957; map ref NIG 26625/74237; OIG 21625/24237), prior to expansion. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Dor-El Company, was directed by O. Zingboym, with the assistance of Y. Ya'aqobi (administration) and A. Shapiro (GPS).
G. Schumacher described the site of Fiq at the end of the nineteenth century CE in his book on the Golan (G. Schumacher, The Jaulan, London, 1888, pp. 136-146). Several surveys were conducted at the site: the Emergency Survey at the beginning of the 1970s (M. Kochavi [ed.], Judaea, Samaria and the Golan Archaeological Survey 1967-1968, Jerusalem, 1972, Site 187, pp. 288-289), the village survey, the Israel Survey of the 1990s (License No. G-108/1993), as well as other surveys (H. Ben David, The Ancient Water Supply System of Hippus-Susita, in D. Amit, Y. Hirschfeld and J. Patrich [eds.], The Aqueducts of Ancient Palestine, Jerusalem, 1989, pp. 133-140). An excavation was conducted at the site in 1982 (License No. K-13; ESI 2:32-33), and various surveys that had been performed in the area revealed numerous architectural elements from churches and a synagogue that indicated the area was inhabited during the Byzantine period.

Before the expansion of the Qibbuz, preliminary examinations were performed with the aid of mechanical equipment to identify the northeastern boundary of the site. Antiquities were discovered in two lots adjacent to the excavation area (depth c. 1.5 m ), which was in a flat basalt area, c. 10 m above the limestone bedrock.
A square ( $4 \times 6 \mathrm{~m}$; Fig. 1), expanded to the north, was opened and finds that dated to the Byzantine, Abbasid and Mamluk periods, as well as the modern era, were discovered.

Byzantine period (fourth-eighth century CE). The finds included a structure (W2, W4), founded on bedrock and built of square basalt stones (L105), which survived a single course high; an opening was set in W2 (Fig. 2).

Abbasid and Mamluk periods (ninth-tenth, twelfth-fourteenth centuries CE). Only potsherds were found.
Twentieth Century CE. Remains of walls and a concrete floor of a building were found (Loci 106, 107, 110; W1, W3; height 1 m ). It seems that most of the building was located northwest of W1.


2. The excavation, looking south.

# (Volume No. HA-ESI 121 (2009 

'Afula
Final Report
Edna Amos
17/12/2008


1. Location map.

2. Plan and sections.

3. Pottery.

4. Floor bedding, looking south.

5. Layer of light color
accumulation (L5) and layer of dark accumulation (L7) below it, looking south.

During January 2006, a salvage excavation was conducted on Ussishkin Street in 'Afula (Permit No. A-4671; map ref. NIG 22736-40/72367-71; OIG 17736-40/22367-71; Fig. 1). The excavation, on behalf of the Israel Antiquities Authority, was directed by E. Amos (surveying and photography), with the assistance of Y. Lavan (administration), N. Getzov (guidance) and H. Tahan (drawing).
Remains dating to Iron I and the Persian and Byzantine periods (HA-ESI 114:27*; 'Atiqot 30:25-67) were exposed in the area, as well as remains from the Early Bronze Age until the Mamluk period (Permit No. A4425).

One and a half excavation squares (c. 35 sq m ) were opened, revealing a floor bedding of fieldstones that was dated to the Early Islamic period (Fig. 2) and two layers of fill from the Early Roman and Late Hellenistic periods. Potsherds from the Late Hellenistic period, Intermediate Bronze Age and Early Bronze Age were found. The subterranean water level flooded the excavation area and prevented the continuation of fieldwork.

Stratum I (Early Islamic period). Most of the excavation area was covered with a layer of fill that consisted of light color earth (L3). The layer contained numerous potsherds from the Early Islamic period, including an open cooking pot (Fig. 3:1) and a holemouth jar with a thickened rim (Fig. 3:2). A floor bedding of medium-sized fieldstones (L10; Fig. 4) was also ascribed to this stratum.
Stratum II (Early Roman period). This stratum comprised a layer of light brown clay soil, similar to mud-brick material, which was found in non-contiguous sections mostly in the northern part of the excavation area (L5; Fig. 5). Many potsherds from the Early Roman period were found, including a Type 3A Kefar Hananya cooking pot (Fig. 3:3), jars with a high neck (Fig. 3:4-6) and a pared lamp (Fig. 3:7).
Stratum III was a layer of dark brown soil (L7) that contained a very large number of potsherds from the Early Roman period, as well as from the Late Hellenistic period, including a cooking pot (Fig. 3:8) and a jar (Fig. 3:9).

The strata were damaged by later pits (Loci 2, 8) that were probably used as septic pits and contained ancient buildings stones together with modern material. Potsherds from the Late Hellenistic period, Intermediate Bronze Age and Early Bronze Age were found throughout the excavation area, probably alluding to the presence of settlement strata from these periods. It was not possible to verify this theory because the excavation was suspended due to the flooding of the subterranean water level.

Previous excavations at Tel 'Afula and its vicinity have shown that the region of the police station (see Fig. 1) lies within the northwestern precinct of the ancient tell. In this region numerous remains that ranged in date from the Late Hellenistic until the Mamluk periods were found. The area of the current excavation was expanded westward and its results are likely to aid in determining the scope of the settlement at the site from the Hellenistic period onward.


1. Location map.

2. Plan and sections.


3. Layer of light color accumulation (L5) and layer of dark accumulation (L7) below it, looking south.

## Ahihud

## Preliminary Report



1. Location map.

2. Areas A, B, plan.

3. Area A, the early phase, corner of building with drafted margins, looking northeast.

4. Area B, refuse pit of pottery workshop debris in the trench, looking north.

Dina Avshalom-Gorni 29/11/2009
During April 2002 and July 2004, two seasons of salvage excavations were conducted along the northwestern fringes of Moshav Ahihud, on a chalk hill at the edge of the 'AkkoValley (Permit Nos. A-3613, A-4217; map ref. NIG 2110/7572; OIG 1610/2572). The excavations, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Moshav Ahihud council, were directed by D. Avshalom-Gorni, with the assistance of Y. Ya‘aqobi (administration), V. Pirsky and A. Hajian (surveying), A. Shapiro (GPS), H. Smithline (field photography), D. Syon (numismatics) and workmen on behalf the Ministry of Labor and from Project 500.
Remains of buildings and large clusters of potsherds were observed in a trench (height c. 4 m , length c. 60 m ) that was dug by a bulldozer and damaged the southern end of the site. Three areas (A-C; 64 sq m in first season, 25 sq m in second season; Fig. 1) were excavated and two strata were identified. A corner of a building and a wall stump, ascribed to the early stratum, were exposed. The earlier walls were reused and pottery kilns were built in the late stratum. After the kilns were no longer in use, they were converted into refuse dumps for a pottery workshop.
The early phase remains in Area A included the southwestern corner of a building (W13, W14; Fig. 2) that consisted of large ashlar stones with drafted margins, arranged as headers and stretchers (Fig. 3). A crushed-chalk floor that was placed on top of virgin, indigenous forest soil abutted the exterior of the structure. A section of a wall, built of roughly hewn stones that were placed on top of bedrock, was exposed in the northeastern corner of Area C. Based on the ceramic finds, the beginning of the settlement can be dated to the Middle Roman period and it seems that the site was also abandoned during this period.
In the late phase the southwestern corner of the early building was reused and a unit of two pottery kilns (Area A) was built in it; one of the kilns was exposed in its entirety. The kiln's firebox was preserved and in its center was a broad column that supported the floor of the firing chamber. The front of the kiln was built of large stones on the northern side, where the stoke hole for the firebox was fully exposed. Smooth leveled bedrock that served as a floor was exposed in the front of the stoke hole. A small section of the second kiln was revealed east of the first one. In Area C, c. 10 m northeast of the kilns, the foundations of fireboxes that belonged to another pair of poorly preserved kilns were partly exposed. A stoke hole was uncovered in the northern side of one of the kilns. After the kilns were no longer in use, their fireboxes and the floor in front of the southern pair of kilns were turned into refuse sites where pottery workshop debris was discarded. It seems that the source of this debris was another workshop in the vicinity, which was not excavated. The debris included a large quantity of potsherds and several fragments of wasters that had been over-fired. Another refuse pit that contained a large amount of pottery workshop debris (Fig. 4) was uncovered at the western end of the large trench (Square B) that had damaged the site.
A preliminary examination of the ceramic artifacts from the late stratum, dating to the third century CE , shows that three main types of barrel jars were primarily manufactured. In addition, a few jar lids, bowls and Saqiye jars were also produced. Once production was suspended, the site was abandoned and never resettled.
The exposed pottery workshop adds important data to our knowledge of pottery workshops along the fringes of the 'Akko Valley in the Roman and Byzantine periods, such as Horbat 'Uza (ES/ 13:19-21).


1. Location map.


## Tel ‘Akko

Final Report
Hanaa Abu-'Uqsa
22/2/2009


1. Plan.

2. Tombs, looking north.

In April 2005 an excavation was conducted at the northwestern foot of Tel 'Akko (Permit No. A-4433; map ref. NIG 20828-30/75868-7; OIG 15828-30/25868-7), prior to the installation of a cellular antenna. The excavation, on behalf of the Antiquities Authority with the financial support of Cellcom Company, was directed by H. Abu-'Uqsa, with the participation of Y. Lavan (administration), H. Tahan (surveying), H. Smithline (photography) and D. Syon (numismatics).
The surface level, which was removed by mechanical equipment, contained modern debris. The remains of several tombs were exposed at a depth of 1.6 m (Figs. 1, 2). Tomb 1 was aligned in a northeast-southwest direction; its northern end was not exposed. In Tomb 5, situated in the northeast corner of the square, a skeleton was found in its original position with its head facing east. South of it were two built tombs, Tombs 2 and $3(0.55 \times 1.10 \mathrm{~m})$; one was covered with stones, while all that survived of the other was an outline in which children appeared to be buried. Tomb $4(0.6 \times 0.7 \mathrm{~m})$ was located south of Tomb 1 . Scattered bones and concentrations of stones that most likely came from tombs which had been damaged were found in the area.
Potsherds that were collected from the surface level and the fill are not related to the tombs; most of them date to the Persian and Hellenistic periods while a few are from the Roman and Crusader periods. Four bronze coins were also found: one Hellenistic (third-second centuries BCE; IAA 119529), two Seleucid (Antiochus III, 200-187 BCE, IAA 106194; Antiochus IV, 'Akko, 175-164 BCE; IAA 106193) and a small cast coin most likely from the Late Roman period (end of the fourth century-beginning of the fifth century CE, IAA 119530).

Pit graves and built tombs made of fieldstones or dressed stones were found on nearby Ben-Ami Street and in the underground railroad passage, located c. 15 m north of the current excavation (Permit Nos. A-4063, A-4410). These tombs were similar to those exposed in the current excavation and it seems that all of these tombs belonged to a Roman period cemetery.



## 'Akko, Lily Sharon Park

## Final Report

Hanaa Abu-'Uqsa


1. Location map.

2. Pottery and glass vessels

3. Fragments of ceramic coffins.

4. Decorated fragment of a ceramic coffin.

During July 2005, a salvage excavation was conducted in the Lily Sharon Park north of Tel 'Akko (Permit No. A-4410; map ref. NIG 208530-670/758662-80; OIG 158530-670/258662-80), in the wake of damage caused to antiquities during development works. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Yefe Nof Company on behalf of the Ministry of Transportation, was directed by H. Abu 'Uqsa, with the assistance of A. Shapiro (GPS), Y. Nagar (physical anthropology), L. Porat (pottery restoration), H. Smithline (studio photography) and H. Tahan (pottery drawing).

Extensive excavations were conducted between 2003 and 2007 along Highway 85, connecting 'Akko to Karmi'el, in preparation of moving the road to an underground route further east. The excavation in the Lily Sharon Park was part of this project, designated as Area H. Seven other areas were opened (A-G; Fig. 1). Areas A, C, D and E, located west of Tel 'Akko and east of the railroad track, yielded a large cemetery that dated to the Roman period; a few tombs were found in Area G, northwest of the tell. Area H was subdivided into two secondary areas: the eastern car park (Area H1), where eight tombs were exposed and the western car park (Area H2), where several tombs from different periods were damaged.
Area H1 consisted of a single built tomb and seven simple pit graves, whose contents were not excavated. Remains of at least seven individuals were discerned in the pit graves; five were male adults whose exact ages are unclear. The interred were laid on the back, aligned east-west, with their head at the western end. The hands of two individuals were placed alongside the body, but it was impossible to determine the position of the hands of the other deceased. Since no other artifacts were recovered from the graves it is impossible to date them.

Area H2 was damaged prior to the excavation, which made it impossible to establish how many graves it contained. Pottery vessels from different periods were collected from this area, including a bowl decorated with red bands from the Late Bronze II (Fig. 2:1); a Base-Ring I Bilbil from Late Bronze I-II (Fig. 2:2); a northern type chalice from Iron II (Fig 2:3); a jar with a straight shoulder from the Persian period (Fig. 2:4); three spindle bottles (Fig. 2:5-7), one of which (No. 5) is slipped red, from the Hellenistic period; and a Kefar Hananya Type 1B bowl (Fig. 2:8), dating from the end of the first or beginning of second century until the middle of the fourth century CE. Two glass candlestick bottles (Fig. 2:9, 10), which are frequently found in tombs from the first-second centuries CE and even the third century CE, were also found. Other artifacts in this area included fragments of ceramic coffins and coffin lids (Fig. 3), one of which is decorated with reddish patterns (Fig. 4). Similar coffins were discovered in the northern cemetery of 'Akko, dating to the Roman period (first-second centuries CE) and at 'Uza, where they dated to the second-third centuries CE.

In light of these finds, it appears that the hill north of Tel 'Akko, where the park is located, was used as the cemetery of the settlement on the tell for a prolonged period-from the Late Bronze Age until the Roman period.


1. Location map.

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2. Pottery and glass vessels.


4. Decorated fragment of a ceramic coffin.

# (Volume No. HA-ESI 121 (2009 

'Akko<br>Final Report

Yoav Lerer
30/12/2009


1. Location map.

2. Plan.

3. Pottery.

During December 2001, an excavation was conducted in 'Akko (Permit. No. A-3538; map ref. NIG 20997/75907; OIG 15997/25907; Fig. 1), prior to construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the 'Akko municipality, was directed by Y. Lerer, with the assistance of Y. Ya'aqobi (administration), V. Essman and V. Pirsky (surveying), A. Thatcher (pottery reading), H. Tahan (pottery drawing), G. Finkielsztejn (identification of seal impressions), D. Syon (numismatics) and E. Stern and N. Getzov.
A small probe (11 sq m; Fig. 2) was opened c. 20 m south of the bathhouse that is dated to the thirteenth century CE (HA-ESI 110:12*-13*).
After removing modern fill to a depth of 1.2 m , a stratum (thickness 0.7 m ) that included numerous potsherds from the Hellenistic and Crusader periods, which were mixed in modern garden soil, was exposed. Ten amphora handles with seal impressions that dated to the end of the third-beginning of the second centuries BCE (below) and three coins were found.
A small section of a wall or pillar (W100, length 0.9 m ), built of partly dressed stones ( $0.8-0.9 \mathrm{~m}$ ) and preserved three courses high, was exposed c. 0.3 m below this stratum.
A section of another wall (W101, length 3.5 m ), oriented north-south and built of partly dressed stones, was exposed 0.3 m below W100. The wall, founded on dark soil, was probably a foundation course.
Wall 102, built of large fieldstones and aligned north-south, was exposed 0.4 m below W101.
The ceramic artifacts recovered from beneath W100 dated to the Hellenistic period and included bowls (Fig. 3:1-4), kraters (Fig. 3:5-7, 10), mortaria (Fig. 3:8, 9), a flat bowl (Fig. 3:11), an amphora (Fig. 3:12), a flask (Fig. $3: 13$ ), spindle bottles (Fig. 3:14, 15), amphora bases (Fig. 3:16, 17), a skyphos base (Fig. 3:18) and a lamp fragment (Fig. 3:19).
Of the three coins that were found only two were identified and dated to the thirteenth century CE.

1. Reg. No. 1000, L100, IAA 102884 (surface).

In the name of Amaury, early $13^{\text {th }}$ century CE, 'Akko (?).
Obverse: AMALRICVS REX cross pattée, annulets in 2, 3, quarters.
Reverse: [DE IERVS]ALEM cross (incuse).
billon denier, $0.39 \mathrm{~g}, 16 \mathrm{~mm}$.
Cf. Metcalf 1995, PI. 11.
(Metcalf D.M. 1995. Coinage of the Crusades and the Latin East in the AshmoleanMuseum, Oxford [The Royal Numismatic Society, Special Publications 28]. Oxford).
2. Reg. No. 1017, L106, IAA 102883.

Abbey of St. Martin, $13^{\text {th }}$ century CE, Tours (?).
Obverse: only the copper core remains, with no design.
Reverse: [TVRO]NVS CIVI the abbey.
Fourée denier, $0.85 \mathrm{~g}, 18 \mathrm{~mm}$.
Cf. Metcalf 1995, PI. 23, Nos. 608-613.

## Amphora Stamps

Gerald Finkielsztejn
Ten Rhodian stamps were recovered from the excavation. They are dated from the end of the third to the first third of the second centuries BCE. The associations and chronology are based on Finkielsztejn 2001 (Chronologie detaillée et revisée des eponyms rhodiens de 270 à 108 av. J. -C. environ, premier bilan [BAR Int. S. 990]. Oxford), with references therein.

## Rhodes

Period II
Rh 1. 103.1010 - Stamp in the shape of an ivy leaf.
[E]p[i] Qrasu
damou
The frabricant is Epigonoj 1st. Date: 219-213 BCE.
Rh 2. 102-103.1016. A - Rectangular stamp.
Symbol of Epi
Helios
Very eroded letters. The fabricant was most probably Qeudwroj (Finkielsztejn 2001:98-100, 105, 112, 191). Date: (235) 226-210 BCE.

Rh 3. 101.1003 - Rectangular stamp.
Epi Eukrati(da)
Daliou
Although this may not be ascertained, it is possible that the engraver played with the fact that the beginning of the month is the end of the name of the eponym and therefore, he did not repeat the syllable da. Date: 203-199 BCE.

Rh 4. 102.1009.A - Rectangular stamp.
[----------]
The profile of the handle and the appearance of the die date this amphora to late Period II-early Period III. Date: end of the third-beginning of second centuries BCE.

Period III
Rh 5. 101.1007-CS
Damokrat[euj]
Rose
Fabricant Damokrathj 1st. Associations with eponyms from Pausaniaj 2nd to N...kasagoraj 1st (Finkielsztejn 2001:117, 191-192). Date: 199-172/170 BCE.

Rh 6. 102-103.1016.B -
There is no clear visible trace of a stamp on this quite eroded handle. It is possible that the handle was not stamped (by mistake rather than because the second handle may have born all the information, an unlikely possibility for the period) or that the stamp (which may have been circular) has completely disappeared. The profile of the handle dates this
amphora to Period III. Date: first third of the second century BCE.

## Period IV

Rh 7. 103.1012-CS.
Epi Swsikle[uj Art]amitiou Rose
The fabricant is either Aristoklhj 2nd or Ippokrathj. Date: 159/158-155/154 BCE.
Rh 8. 102.1009. B - Rectangular stamp.

$$
\begin{aligned}
& \text { E[pi -------] } \\
& \text { Agrianiou }
\end{aligned}
$$

The profile of the handle and the appearance of the die date this amphora to Period IV-Period V. Date: second third of the second century BCE.

## Period V

Rh 10. 101.1004.B - Rectangular stamp.
Bromijou Wreath
Associations with eponyms from Gorgwn to Alexiadaj , but with the wreath type only down to Autokrathj 1st (Finkielsztejn 2001:121-123, 130, 155, 193, 195). Date: 154/153-138/137 BCE at least (wreath type), down to 138/137 BCE at least for the fabricant's career.

Rh 9. 101.1004.A - Rectangular stamp.

## Pagcareu

Device j
Association with eponyms: Timodikoj (The Hebrew University collection, No. 2434; thanks to Gila Horowitz) and Alexiada (Graeco-Roman Museum in Alexandria; thanks to Jean-Yves Empereur). There is one isolated example in Marissa without device (to be published by this author). See Finkielsztejn 2001:195; Date: 145-138/137 BCE at least.
The architectural finds and seal impressions are indicative of at least three settlement phases from the Hellenistic period. The Rhodian seal impression found in L103 on W100 (see Rh 1 in the above report) shows that the wall was constructed not earlier than the second half of the second century BC.
The thirteenth century CE coin in L106 is an exception, since it penetrated into the Hellenistic layer during a later period.


1. Location map.



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2. Pottery.

3. Plan.

4. Incisions.

During November 2006, a trial excavation was conducted southeast of the 'Akko citadel (Permit No. A-4707; map ref. NIG 2064-70/7580-5; OIG 1564-70/2580-5), prior to the renovation of a theater hall. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Old 'Akko Development Company and the Ministry of Tourism, was directed by E. Stern and H. Abu 'Uqsa, with the assistance of V. Essman and V. Pirsky (surveying), H. Smithline (field photography) and H. Tahan (incision drawings).
Plastered walls with applied incisions (W1, W2; Figs. 1, 2) were exposed beneath a modern concrete floor. The walls were covered with sandy soil fill (L100), which contained several potsherds that mostly dated to the Ottoman period and a few-to the Crusader period.
It seems that the walls with the incisions were part of a building or street from the Crusader period, similar to walls that had previously been revealed along the southern road of the Hospitaller center (HA-ESI 110:13*-14*).


1. Plan.

2. Incisions.

# (Volume No. HA-ESI 121 (2009 <br> Aloney Abba Preliminary Report 

## Leea Porat

26/7/2009


1. Winepress, looking east.

2. Olive press, looking southeast.

During August-September 2006, a salvage excavation was conducted at Aloney Abba (Permit No. A-4875; map ref. NIG 21591-601/73678-85; OIG 16591-601/23678-85), in the wake of discovering antiquities while developing a new neighborhood in the moshav. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the moshav, was directed by L. Porat, with the assistance of Y. Lavan (administration), V. Essman, V. Pirsky and T. Kornfeld (surveying and drafting), A. Shapiro (GPS and drafting), H. Smithline (field photography), D. Syon (metal detection) and R. Frankel and N. Getzov (consultation)
The excavation was carried out along the western slope of a hill, c. 500 m southwest of its summit, where remains of a small settlement (farmstead?) had been surveyed in the past and potsherds from the Iron Age until the Byzantine period were collected (Map of Nahalal [28], 1983, Site 45).
Three areas (A-C) were opened. Remains of a paved path from the Roman period were discovered in Area $A$; a cistern and a winepress were exposed in Area B and two water cisterns; remains of a quarry and a cave, in which an oil press was installed, were exposed in Area C.

Area A was opened at the bottom of the slope. A wall (length c. 5 m ) built of large fieldstones, with a row of ashlar stones incorporated between them, was exposed close to surface in the southern square ( $3.2 \times 4.0 \mathrm{~m}$ ). Fragments of pottery vessels from the Hellenistic and Roman periods were found in the clayey soil alongside the wall. These remains were probably the continuation of the paved path that was discovered to their north (HA-ESI 120). The corner of a building, preserved two courses high, was exposed near the surface in the northern square ( $2.5 \times 5.0 \mathrm{~m}$ ). The foundation course of fieldstones was placed on bedrock and two ashlar stones above it had remained from the bottom course of the wall and just protruded above surface. Potsherds dating to the Hellenistic and Roman periods were found.

Area B was opened further up the slope, c. 55 m east of Area A. The cleaning of bedrock surfaces exposed a cistern (not excavated) and a winepress to its south (Fig. 1). The winepress consisted of a square treading floor ( $2.17 \times 2.20 \mathrm{~m}$ ) and a rectangular collecting vat $(0.65 \times 1.04 \mathrm{~m}$, depth 0.27 m$)$ that were aligned perpendicular to each other. Two wide perforations conveyed the liquid from the treading floor to the collecting vat. Similar winepresses at Ta'anach and other sites were dated to the Middle Bronze Age ('Atiqot 44:195-207).

Area C was opened c. 50 m northeast of Area B, further up the slope. The oil press installed in the cave $(7 \times 10 \mathrm{~m})$, whose ceiling was damaged during development work, had survived in its entirety (Fig. 2). A staircase hewn in the opening of the cave, which faced southeast, led to a built entrance where two doorjambs stood in situ.
The basin (yam) of an olive crushing mill was situated to the right of the entrance, in the northeastern part of the cave. It seems that the original yam and the revolving wheel (memmel) were made of limestone, but after they became worn, a basalt memmel was placed in the yam; a limestone memmel that was probably the original one was found on the floor of the cave. A Maresha-type olive press was constructed opposite the entrance, along the southern side of the cave. A niche for anchoring the olive press' beam was installed in the western side of the cave. A central collecting vat was hewn opposite it and around the edge of the vat was a groove where a press bed was positioned and on which the 'aqalim (baskets used to hold crushed olives for pressing) were piled. Two smooth betulot (stone piers) were set on either side of the vat. Between the collecting vat and the cave entrance was a rectangular rock-hewn pit that contained four olive press weights.

The finds from the cave indicate that it was first used in the Hellenistic period and continued to be used until the Middle Roman period. On the floor of the cave were fragments of pottery vessels, bone spoons for processing the olive mash, a stone seal that is decorated with a bird and a date-palm or olive branch, as well as two Roman coins from the time of Trajan (98-117 CE): a silver tetradrachma that was struck in the mint of Tyre (IAA 106198) and a bronze coin from the mint of Sepphoris (IAA 106197).


1. Winepress, looking east.


# (Volume No. HA-ESI 121 (2009 

## Amazya East

## Final Report

Gregory Seriy
4/8/2009


1. Plan and sections.

2. Trough II, looking north.

During July 2004, a salvage excavation was conducted at Moshav Amazya (Permit No. A-4213; map ref. NIG 160465-85/64185-212; OIG 110465-85/14185-212), in the wake of damage to the ceiling of a cave by mechanical equipment. The excavation, on behalf of the Israel Antiquities Authority, was directed by G. Seriy, with the assistance of E. Aladjem and Y. Haimi (administration) and A. Hajian (surveying and drafting).

A burial cave hewn in soft chalk was found. The southern part of its underground chamber was excavated (Fig. 1). Remains of mud plaster were discerned on the sides of the chamber and its northern part was found filled with modern construction debris.
Two arcosolia with burial troughs were hewn in the western side of the chamber. Remains of gray and mud plasters covered the side of the arcosolium that contained Trough I (L103; $0.6 \times 2.4 \mathrm{~m}$; Fig. 2), which was devoid of finds. Trough II ( $0.60 \times 1.83 \mathrm{~m}$; Fig. 3) was not excavated.
The upper part of a Gaza jar (Fig. 4) was found in the fill on the floor of the cave, which seems to have extended further east.
The cave could not be dated due to lack of finds and it appears to have been used during the modern era.


1-1


2. Trough I, looking southwest.

3. Trough II, looking north.

4. Gaza jar.


1. The survey map.

2. Dolmen 16, looking east.

3. Site 70, rock-hewn cupmarks, looking north.

During December 2003, a survey was conducted in the 'Ami'ad Quarry (Permit No. A-4036; map ref. NIG 24670-750/75775-815 OIG 19670-750/25775-815), prior to enlargement. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Kefar Gil'adi Quarries, was directed by A. Mokary, with the assistance of L. Yihye and A. Shapiro (GPS).

Seventy-seven sites were surveyed on a southwestern slope, where the quarry is to be enlarged and farther along the slope that extends west of this area (a total of 300 dunams; Fig. 1).

The sites included an elliptical dolmen (No. 1; length c. 8 m ) and eleven circular dolmens that consisted of two small ones (Nos. 29, 72; diam. 2 and 4 m ), five medium-sized (Nos. 3, 40, 43, 45, 48; diam. 4.4-9.0 m) and four large ones (Nos. 13, 16, 17, 69; diam. 10-12 m; Fig. 2). The remains of burial cells could be seen in the middle of the dolmens; a built burial cell (height 0.5 m ), paved with flat stones, survived in Dolmen 69; at least two burial cells built of large stones were identified in Dolmen 16, which consisted of medium and large fieldstones. Eleven dolmens, whose identification was uncertain, were also surveyed: one elongated (No. 59; $4 \times 8 \mathrm{~m}$ ) and the rest circular (Nos. 7, 14, 18, 19, 21, 26, 33, 42, 57, 58; diam. 5.0-7.3 m). Building remains were discerned in the middle of Dolmen 18 and flat stones were observed in Dolmen 57. Forty-three stone clearance heaps were identified: one elliptical (No. 11; length 6 m ), two of irregular shape (Nos. 5, 41), thirteen elongated (Nos. 8, 27, 31, 36, 38, 44, 49, 51, 56, 62, 73-75; length 6-10 m, width c. 3 m ) and the rest circular (Nos. 2, 6, 9, 10, 15, 22, 23, 28, 32, 34, 37, 39, 47, 50, 52-55, 60, 61, 63-68, 78; diam. 2-10 m; Fig. 3).
Nine walls (width $0.5-1.0 \mathrm{~m}$ ), mostly built of fieldstones, were documented in the survey area. Some were probably used to delineate cultivation plots (Nos. 12, 24, 30, 71; length 30-50 m, max. preserved height 0.5 m ; Fig. 4). Others formed open rectangular and circular enclosures (No. 4-c. $19 \times 19 \mathrm{~m}$; No. 20-length of perimeter wall c. 50 m ; No. 25-6 $\times 8$ m ; No. 46 -at least $15 \times 50 \mathrm{~m}$; No. 76-length of perimeter wall c. 60 m ); one of the enclosures (No. 46) was built of roughly hewn limestone. Other antiquities surveyed included a kind of passage ( $N o .77$; length 22 m , width 5 m ) that was hewn along the slope in an east-west direction; a cluster of four rock-hewn cupmarks (No. 70; Fig. 5), three of which were identical in size (diam. 0.6 m ) and one was smaller (diam. 0.4 m ); and a single quarry (No. 35; length 2 m ).

The dolmens indicate that the surveyed area was used as a burial site, probably in the Intermediate Bronze Age. The stone clearance heaps, field walls and enclosures show that in a later period, whose date cannot be determined, the area was used for agriculture.


1. The survey map.


2. Dolmen 16, looking east.


3. Stone Clearance Heap 32, looking east.

4. Wall 24 , looking northeast.

5. Site 70, rock-hewn cupmarks, looking north.


1. Location map.

2. View from the site, looking to the southwest.

3. Building 20, looking northwest.

4. Watchman's Hut 24, looking north.

5. Pottery.
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## 'Ar'ara (Southwest)

## Final Report

Amir Gorzalczany, Shireen Mahajna and Abdallah Masarwa
During November 2006, a trial excavation was conducted along the lower northwestern slopes of the western hill of Qazir, within the precincts of the 'Ar'ara and 'Ar'ara Southwest sites (Permit No. A-4954; map ref. NIG 209170-339/710281-618; ÖIG 159170$339 / 210281-618$; Fig. 1), in the wake of development plans. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Qazir-Harish local council, was directed by A. Gorzalczany, with the assistance of S. Mahajna and A. Masarwa (area supervision), M. $\bar{A}$. Tabar (preliminary survey, area supervision and assistance), S. Ya'aqov-Jam (administration), V. Essman and V. Pirsky (surveying), A. Dagot and L. Yihye (GPS), T. Sagiv (field photography), P. Gendelman (pottery reading), C. Hersch (pottery drawing), L. Ben Hamo (the Qazir Economic Development Company), L. Elbaz (project coordinator), A. Kabha (council surveyor), A. 'Azav, K. Sari, M. Masarwa, A. Oren (IAA central region), A. Abu-Diab, M. Hasdiya and laborers from Tiberias.

The remains are located along the eastern fringes of the El-Ahwat site (HA-ESI 110:32*-34*). The area, covered with rockfall and a tangle of thorny vegetation, enjoys excellent vantage points that lookout to the south, east and west (Fig. 2). At least five small artesian springs are currently located within a radius of several hundred meters from the site.
During a preliminary survey, 34 points were thought to be antiquities sites (Fig. 3). Three excavation areas (AC) were initially opened and later, two of them ( $B, C$ ) were consolidated into one. An agricultural region, which included farming terraces, buildings and watchman's huts that apparently dated to the Roman period (secondthird centuries CE), was exposed.

## Area A

Four of six surveyed sites were excavated. Circular stone installations and rows of well-arrayed stones that were poorly preserved, precluding the evaluation of their character, were exposed. The largest of the installations (F11; $2 \times 4 \mathrm{~m}$ ) was elliptical and founded on bedrock; a wall built of two rows of stones delimited its southern end. Another circular installation was smaller (F10; diam. c. 1.5 m ), poorly preserved and also founded on bedrock. A circle of stones (F12; diam. c. 2 m ), surrounding an exposed bedrock surface and a similar installation (F13) that was found covered with the collapse of large stones, were discovered.

## Areas B, C

The remains in these areas, located south of Area A, were better preserved. Five buildings and four watchman's huts were excavated.
The most prominent building in the area (F20; $6 \times 7 \mathrm{~m}$; Figs. 4, 5) was not completely exposed. The square structure was built of double inner walls (thickness c. 1.8 m ) that consisted of large roughly hewn stones and a core of small stones. A stone with a round perforation was discerned in the eastern wall and was probably meant for hitching animals. Alongside the northern wall was a kind of corridor (length 2 m , width 1 m ) that led to an exit, blocked by a row of stones. A few potsherds and jar rims from the second century CE were found in the building.
A massive, north-south oriented wall that was preserved three courses high, had survived from a second large structure (F18; length 6 m ). A third structure (F23) included built walls in the east and west (width c .1 m ), which were incorporated in the natural bedrock on the southern side; the northern wall was not preserved. The eastern wall (length 9 m , width 1 m ) that curved toward the north was all that remained of the fourth building (F16), whose western part was destroyed. A small room ( $1.0 \times 2.5 \mathrm{~m}$ ) whose walls were founded on bedrock was preserved at the southern end of the building. A fifth round structure ( F 21 ; diam. 7 m ) was not fully excavated but its plan could be traced. A probe $(0.8 \times 5.0 \mathrm{~m}$ ) excavated in its southern part revealed several ribbed and worn potsherds that could not be dated.

Several circular watchmen's huts were exposed. One watchman's hut (F24; diam. 6 m ; Figs. 6-8), preserved four courses high and founded on bedrock, had a corbelled roof. The walls of an entrance corridor (length 2 m , width 0.7 m ) in the southwestern side were built of large stones (max. dimension $0.5 \times 0.6 \times 1.0 \mathrm{~m}$ ) and three steps were hewn in its floor.
The other three watchman's huts (F15, F17, F21) were reasonably well-preserved, but less than F24; all of them were incorporated in retaining walls or farming terraces. Watchman's Hut 15 was incorporated in a wall (width 2 m ) that was partly built and partly bedrock hewn.
Similar structures, which were dated to the Iron Age, based on the small finds they contained, were discovered at ElAhwat itself (HA-ES/ 110). Yet, in other excavations in the region, they were dated to the Hellenistic, Roman, Byzantine and Early Islamic periods ('Atiqot 55:83-107, 109-159 [Hebrew]; HA-ESI 110:31*-32*; HA-ESI 120), and even to the modern era (Z. Ron, The Watchman's Hut as an Expression of Hilltop Farming in the Mountains of Judea and Samaria, Tel Aviv, 1976).

The poor state of preservation, the damage caused by man and nature and the absence of datable finds make it difficult to date the complex and the agricultural installations. A number of ribbed potsherds, found above and below the floors of the buildings, included krater rims (Fig. 9:1-3), jars (Fig. 9:4-6) and a jug (Fig. 9:7) that dated to the second-third centuries CE, and the likes of which are known from nearby sites, such as Ramat Ha-Nadiv.
Bearing in mind the nature of the complex and the limited extent of the excavation, it is suggested that the complex should be considered part of the agricultural hinterland of the nearby El-Ahwat site, at least during the Roman period.


1. Location map.

2. View from the site, looking to the southwest.


3. Building 20, looking northwest.

4. Watchman's Hut 24, plan and section.

5. Watchman's Hut 24, looking north.

6. Pottery.

# (Volume No. HA-ESI 121 (2009 

Ashdod, the Southern Shore Preliminary Report
Pirhiya Nahshoni


1. General view of the site, looking north.

2. Area C, mud-brick building, looking northwest.

3. Cypriot pithos.

During December 2006-January 2007, a trial excavation was conducted along the southern shore of Ashdod (Permit No. A-4989; map ref. NIG 163675-850/630830-60; OIG 113675-850/130830-60), prior to the construction of a pumping facility. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ashdod Development Company, was directed by P. Nahshoni, with the assistance of S. Talis (area supervision and data computation), H. Lavi and Y. Lender (administration), V. Essman and V. Pirsky (surveying), the Sky View Company (aerial photography), A. Ganor (pottery restoration), C. Amit (studio photography) and laborers from Qiryat Gat and Ashqelon.
The site (c. 4 dunams; Fig. 1) is situated along the beach, on a low kurkar hill, c. 1 km south of the Assyrian compound in Ashdod-Yam. Previous excavations at the site ascertained that it dated to the Late Bronze Age (ESI 15:131). Installations for the production of wine were exposed in Area A and to their northeast was a complex of rooms and courtyards built of mud bricks (Area B; HA-ESI 113:107*-108*). Two areas were opened in the current excavation, north of Area A (C-four squares; D-three and one-half squares); building remains and installations, ascribed to the second half of the thirteenth century BCE, were discovered. Another area that was excavated south of Area A (E—one-half square) was devoid of in situ remains.
Area C was opened in the southwestern part of the site, where the surface slopes southward and westward. Remains of three building phases were exposed. An installation or structure, built of mud bricks and ascribed to the earliest phase, was negated in the second building phase. All that remained of it were mud bricks and a section of an earthen floor, overlain with vessels, which could be discerned on the lower part of the slope.
The kurkar bedrock that protruded in the eastern part of the area was leveled to a depth of c .0 .7 m in the second phase and the structure/installation that existed in the southern and western part of the area was leveled. These measures prepared the surface for the construction of a large mud-brick building ( $5 \times 6 \mathrm{~m}$; Fig. 2) that survived by four rooms. One room was almost entirely preserved (Room 50; inner dimensions: $2.2 \times 3.2 \mathrm{~m}$ ) and sections of three other rooms remained to its west and south (Rooms 51-53). The walls of the building, preserved two to five courses high (0.18-0.42 m ), were built of reddish and dark gray mud bricks. Most of the walls consisted of a single row of mud bricks that were arranged widthwise (width c. 0.6 m ); one of the walls was built of two rows of mud bricks. Dark gray mortar was used both as bonding material and as plaster. Earthen floors abutted the base of the walls. The finds recovered from the building, which continued in use until the site was abandoned, included locally produced vessels and imported ware, including a Cypriot pithos (Fig. 3).
Two installations, also attributed to the second phase, were discovered north of the building. The southern installation was trapezoidal ( $0.4-1.0 \times 1.0 \mathrm{~m}$, depth 0.6 m ) and built of mud bricks and plaster. The northern was an elliptical installation (preserved length 0.5 m , width 0.7 m , depth 0.2 m ; its northern part was not preserved), hewn in kurkar bedrock and coated with hydraulic plaster. This installation, which may have been used as a winepress, was negated prior to the abandonment of the site and a tamped earth floor, ascribed to the third construction phase, was placed atop it.
The finds recovered from the three construction phases were identical in date and attest to the architectural changes in this area, which occurred over a short period of time at the end of the thirteenth century BCE.

Area D was opened c. 50 m east of Area C, where the surface slopes to the south. After the removal of a sand layer by mechanical equipment, meager remains of a mud-brick building $(2.0 \times 2.3 \mathrm{~m})$, which comprised two partly preserved walls and rooms, were discovered. The building was founded on top of an open occupation level, an exposed section of which was overlain with ash and potsherds. The use of this occupation level, which was set on the kurkar bedrock, continued almost uninterrupted after it was incorporated within the building. It therefore seems that the distinction between the two building phases is only technical and the ceramic finds indicate that the phases existed for a short period of time at the end of the thirteenth century BCE.
Kurkar-hewn pits (diam. $1.0-1.4 \mathrm{~m}$, depth $0.5-0.8 \mathrm{~m}$ ) were found further down the slope, toward the south. They contained pottery vessels, including imported wares, as well as stone objects, which all dated to the end of the thirteenth century BCE.

Area E was opened c. 50 m south of Areas C and D, where the surface was two meters lower. Horizontal fill layers of alternating sand, potsherds and kurkar, which contained mixed finds with modern debris, were found.

The ceramic finds from Areas C and D, which included imported vessels from Cyprus, Egypt and Mycenae, as well as the large quantity of organic material that survived on the floors, indicate that intensive activity was conducted at the site. It seems that the short-lived settlement subsisted on processing agricultural produce and benefited from extensive commercial ties.


1. General view of the site, looking north.

2. Area C, mud-brick building, looking northwest.


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Ashqelon
Final Report
Yoram Haimi
In January 2003 a salvage excavation was conducted in the Ashqelon Metal Company compound located within the Migdal neighborhood (Permit No. A-3804; map ref. NIG 161299/620400; OIG 111299/120400) after ancient remains were discovered in probe trenches. The excavation, on behalf of the Antiquities Authority and with the financial support of the Afridar Company, was directed by Y. Haimi, with the participation of H. Lavi (administration), A. Hajian (surveying and drafting), I. Lidski-Reznikov (artifact drawings), M. Salzberger (studio photography) and D.T. Ariel (numismatics).
Parts of buildings representing two architectural phases were exposed at the site.

## Stratum A

Three walls of a room (W101, W102, W103; L10; Fig. 1) were exposed that were built of wadi cobbles and treated on their outside faces with hydraulic plaster. West of the room was another wall (W108, L31) on whose southwestern side was an installation. Southeast of W101 were sections of walls (W111-113) of another room, most of which was not excavated. While exposing Walls 103 and 108, four coins were found, of which three fulus were identified, one of the Umayyad governor Marwān b. Bashīr (c. 705-710 CE; IAA 97967) and two from the Abbasid period (one dated to 832 CE; IAA 97966, 97970). The pottery from this layer included bowls (Fig. 2:1, 2), kraters (Fig. 2:3, 4), a casserole (Fig. 2:5) and storage jars (Fig. 2:6,7) that are characteristic of the end of the Byzantine period and the beginning of the Umayyad period, and a lamp (Fig. 2:8) from the Abbasid period.

Stratum B
Below the remains of the upper building were walls of two rooms that belong to an earlier structure. In the north Walls 104, 107 and 106 form a room whose northern wall was not found and whose interior is divided by a partition wall (W110). East of Wall 104 is a round column base that was incorporated into the floor bedding (L34). Pottery vessels were found on the floor, among them a Late Roman Ware bowl (Fig. 3:1), Gaza storage jars (Fig. 3:2, 3), a juglet (Fig. 3:4) and an intact sandal lamp (Fig. 3:5) that date to the sixth century CE. Southwest of this room the northern and western walls (W105, W109) of another room were found.

Wall 101, ascribed to Stratum A, was partly destroyed by a recently cut refuse pit that was excavated to a depth of 3 m . Fragments of pottery vessels found in the pit include the base of a mortarium (Fig. 4:1) and lekythoi (Fig. 4:2-4) from the Persian period (fourth century BCE) and fragments of bases of Terra Sigilatta bowls from the first century CE (Fig. 4:5, 6) together with sherds that date to the sixth century CE originating in Stratum B. Due to the imposed limitations of the excavation it was not possible to enlarge it in order to determine the original context of the ancient pottery vessels that were found in the refuse pit and ascertain the period when it was dug.
Eleven coins from the Byzantine period were discovered, of which ten were identified; some date to the second half of the fourth century CE (IAA 97961, 97965, 97972, 97973) while others date to the sixth century CE, almost all of them small denominations, including five pentanummia (IAA 97960, 97963, 97964, 97969, 97971). The latest coin is a hexanummium (IAA 97962) from the reign of Heraclius I, struck at Alexandria (613-618 CE).

The remains of two settlement strata were exposed in the excavation that apparently was established at the end of the Byzantine period (Stratum B; sixth century CE). It seems that it was rebuilt at the beginning of the Umayyad period (Stratum A; seventh century CE), apparently extending into the Abbasid period.


1. Strata A and B, plan.

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3. Pottery, Stratum B.

4. Pottery from the refuse pit

## Ashqelon

Final Report


1. Plan and sections.

2. The winepress, looking west.

3. The collecting vat, looking west.

4. Kraters and cooking vessels.

5. Glass artifacts.

Pirhiya Nahshoni
During November-December 2005, a salvage excavation was conducted in Ashqelon (Permit No. A-4641; map ref. NIG 16043/61986; OIG 11043/11986). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Aharoni Brothers Company, was directed by P. Nahshoni, with the assistance of H. Lavi (administration), V. Pirsky and V. Essman (surveying and drafting), Y. Nagar (physical anthropology), Y. Bukengolts (pottery restoration), C. Hersch (drawing), Y. Gorin-Rosen (glass) and Y. Huster.
Seven excavation squares were opened at the corner of Eli Cohen and Tishrei Streets in the Migdal Ashqelon neighborhood (Fig. 1). A layer of fill from the Hellenistic period was discovered; upon it were the remains of a winepress and a few construction remains that dated to the Byzantine period. In 2002, remains that dated to the Roman, Byzantine and Early Islamic periods were excavated in a lot, located next to and west of the current excavation (Permit No. A-3804). In 1993 and several dozen meters to the west of the excavation, remains from the Roman and Byzantine periods were excavated ('Atiqot 37:181-209 [Hebrew]). Remains from the Hellenistic and Byzantine periods, c. 500 m northwest of the excavation, were excavated (ESI 14:110-111), as well as remains from the Chalcolithic period ('Atiqot 38:99*-111*). Other excavations in the Migdal Ashqelon quarter revealed tombs that date to the Middle Bronze Age (ESI 15:131-132; 16:141).

A layer of soil fill (Loci 127, 129, 137, 145; thickness c. 0.95 m ), which contained potsherds from the Hellenistic period, was exposed; thee included bowls (Fig. 2:1-5), a krater (Fig. 2:6), cooking pots (Fig. 2:7-10), an amphora (Fig. 2:11), jars (Fig. 2:12-15), a hydria (type of water jar; Fig. 2:16), a jug (Fig. 2:17) and a juglet (Fig. 2:18).
Remains of a built winepress were exposed on the layer of fill (Fig. 3). These consisted of a treading floor (L140), three fermentation cells (Loci 110, 111, 123) and a collecting vat (L144). The western part of the treading floor was located beyond the limits of the excavation area. The treading floor ( $3.6 \times 9.0 \mathrm{~m}$ ) was probably paved with limestone slabs; several fragments of such flagstones were found, ex situ, in the excavation. A channel led from the treading floor to the collecting vat. The fermentation cells $(1.0 \times 2.6-2.9 \mathrm{~m})$ were built of debesh construction that utilized small stones and light colored cement; only the inside of the cells was coated with light colored plaster (wall thickness $0.3-0.4 \mathrm{~m}$ ) and they were preserved to a maximum of 0.35 m high. The cells were paved with potsherds that were set in a herringbone pattern and probably constituted bedding for a plaster layer that was not preserved. A channel leading from the treading floor was discerned in the center of the western side of Cell 110. The space between the cells was filled with soil and stones that aided in maintaining a cool temperature in the cells. Repairs to the walls of the cell were noted in Cell 123. The collecting vat $(1.3 \times 2.0 \times 2.0 \mathrm{~m}$; Fig. 4), whose walls were built of debesh construction, was next to a wall that delimited Cell 123 from the west (W10) and a wall that delimited the treading floor from the north (W14); hence, a double wall of sorts was created around the vat. A circular settling vat (upper diam. 1.05 m , depth 0.55 m ) was cut in the middle of the collecting vat with a small sump in its center (upper diam. 0.3 m , depth 0.23 m ). All the components of the collecting vat were coated with a light colored plaster. The top edge of the collecting vat was plastered, thereby forming a kind of bench (width c. 0.4 m ) that was only preserved along the northern wall. A large quantity of debris was discovered on top of the winepress remains. It included numerous ceramic and glass finds that dated to the end of the Byzantine period, as well as fragments of distorted vessels that attest to the close proximity of a pottery workshop. Based on the dating of the finds, it seems that the winepress ceased to operate in the later part of the Byzantine period. The ceramic finds included Late Roman C bowls (Fig. 5:1-4), Cypriot Red Slip bowls (Fig. 5:5-7), an Egyptian Red Slip bowl (Fig. $5: 8$ ), a Fine Byzantine Ware bowl (Fig. 5:13), local bowls that are characteristic of the Ashqelon region in the Byzantine period (Fig. 5:9, 10, 12), kraters with a folded rim whose sides are adorned with strips of combed decorations (Fig. 6:14), cooking kraters (Fig. 6:2), frying pans (Fig. 6:3), cooking pots (Fig. 6:4, 5), Gaza jars (Fig. 7:1, 3, 4), bag-shaped jars (Fig. 7:5-9), Bet She'an-type jars (Fig. 7:10), Yassi Ada-type amphorae (Fig. 7:11), stirrup jugs and flasks (Fig. 7:12-14) and juglets (Fig. 7:15, 16). The glass vessels included goblets (Fig. 8:1-6) and bottles (Fig. 8:7, 8).
Construction remains, which included a corner of a building (W1, W2) and a floor of small stones (L106), were exposed south of the winepress. Pottery vessels that dated to the Byzantine period were discovered on the floor, including a bowl (Fig. 5:11), a cooking pot lid (Fig. 6:5) and a Gaza jar that was standing upside down (Fig. 7:2).
A dug pit (L143) was discovered along the eastern edge of the winepress. It contained Gaza jars whose upper parts were missing (Fig. 9:1-3); one of the jars contained an infan's burial. This pit damaged the eastern end of Fermentation Cell 111 and it therefore seems to postdate the winepress.
The earliest remains at the site date to the Hellenistic period and it seems that they are indicative of contemporary settlement remains located in the vicinity. The building, whose remains were exposed south of the winepress, is probably related to the activity at this installation. Based on the ceramic finds discovered on the floor of the building, it can be determined that the winepress operated during the Byzantine period. It is also possible that at some point in the Byzantine period, the winepress was damaged, as the repairs in Fermentation Cell 123 show, and parts of it, such as the removed flagstones from the treading floor, were dismantled for secondary use. The large quantity of ceramic artifacts in the area of the winepress indicates that at the end of the Byzantine period, a pottery workshop was established nearby and its production debris was discarded in the winepress area. After the winepress was no longer in use, a pit that contained infant burials in jars was dug in part of its area.


3. The winepress, looking west.

4. The collecting vat, looking west.


6. Kraters and cooking vessels.


(Volume No. HA-ESI 121 (2009
Ashqelon, Underwater Site Preliminary Report

Jacob Sharvit


1. The survey region.

2. Sling stone decorated with a winged lightening in relief.

During May-July 2007, an underwater archaeological survey was conducted within the precincts of the Holot Ashqelon site (Permit No. A-5077; a diagonal strip located within map ref. NIG 1500-55/6162-200; OIG 1000-55/1162-200). The survey, undertaken on behalf of the Israel Antiquities Authority, Marine Archaeology Unit, was funded by the Prima Gas Company, Ltd and accompanied by Tahal Engineers and Consultants Company, Ltd. It was directed by J. Sharvit, with the assistance of U. Dahari, M. Bachar, Y. Ben Hemo, H. Sal'i (divers) and S. Ben-Yehuda (GIS and drafting).
The underwater archaeological survey was conducted c. 2.4 km south of the Ashqelon National Park, along the course of the El-Arish-Ashqelon gas pipeline, which comes ashore north of the Rotenberg power station, at $115^{\circ}$ azimuth (Fig. 1). The survey area (c. $0.2 \times 2.2 \mathrm{~km}$ ) extended from the shallow water to a depth of 40 m .
The survey was performed in two stages: Stage A, before the commencement of infrastructure work along the seabed, was a visual underwater inspection along the route slated for the pipeline; Stage B, after the digging of the trench for setting the pipeline, was an underwater survey along the trench and an inspection of the site where the sand from the trench was temporarily deposited. After the gas pipeline was laid in the trench, the sand from the temporary deposition site was returned to cover the pipe.
The navigation utilized a GIS system, set on board boat Qadmonit, which was fed with vector layers of the gas pipeline (provided by the Ministry of Infrastructures), a bathymetric layer (depth map) and an aerial photograph. The system was connected to a Trimble type DGPS, at a level of accuracy less than 1 m . Marker buoys were placed at set distances (20 m ) along the course of the pipeline and the team of divers navigated between them, using a compass and a guiding cable. Each discovered underwater artifact was documented and marked with a small marker buoy. After the dive, the position of the located buoys was recorded by the DGPS.
An underwater metal detector was utilized during the survey. For efficiency's sake, namely increasing duration of diving, shortening of time intervals between dives and increasing safety, an oxygen-rich (Nitrox) mixture was used by appropriately trained divers.

Four geomorphological units typify the survey region:
Unit 1 (Holot Ashqelon). A low, narrow strip of sandy beach at whose rear is a low kurkar cliff covered with sand dunes. This narrow strip is completely inundated up to the coastal cliff during winter storms.
Unit 2 (distance of c. 150-200 m from shoreline and depth of 2-3 m below sea level). Seabed is characterized by a noncontiguous covering of kurkar rocks, which are the remains of the destroyed western kurkar ridge edge and slanting platforms of coastal rock.
Unit 3 (distance of 0.2-3.0 km from shoreline and depth of 3-32 m below sea level). Sandy seabed that gently slopes to the northwest; protruding bedrock blocks appear occasionally through the sand. The seabed covering becomes muddy and clayey the deeper one goes to the northwest.
Unit 4 (distance of c. 3 km from shoreline and depth of $30-32 \mathrm{~m}$ below sea level). Seabed is muddy and clayey; bedrock blocks that remained from a sunken kurkar ridge protrude from seabed. This ridge has a more impressive form c .1 km southeast of the survey region, at the same depth and parallel to the coastline of Ashqelon.
A noteworthy find is a lead sling stone ( $14.9 \times 18.8 \times 35 \mathrm{~mm}$, weight 47.8 g ; Fig. 2) that was found resting on the rocky clay seabed after the trench for the gas pipeline was dug, c. 200 m from the shoreline and at a depth of 3-4 m (map ref. NIG 155015/616827; OIG 105015/116827). The sling stone has a biconical pit shape and was cast in a mold. Its upper side is decorated with a winged lightening in relief and its bottom side is smooth. Sling stones of this kind, including those decorated with patterns of winged lightening, were discovered at 'Akko (M. Dothan, 1976, Qadmoniot 34-35:71-74 [Hebrew]), Tel Tanninim (D. Schlesinger, 1984, Qadmoniot 66-67:89 [Hebrew]) and Mount Gerizim (Y. Magen, 2002, Qadmoniot 120:118 [Hebrew]). At Dor and Jerusalem, similar sling stones were attributed to the armies of Antiochus VII who besieged those cities in 139-132 BCE. Their motifs (scorpion, winged lightening, staff and anchor) were considered as symbols of the army units that used them and perhaps even manufactured them. The discovery of this small-sized sling stone out of an archaeological context and the possibility that it was removed from its original location by the waves and/or by man (infrastructure work for the installation of undersea pipes) makes it difficult to date it. Based on the aforementioned excavation finds of lead sling stones, it seems that this find should probably be dated to the second century BCE.



# (Volume No. HA-ESI 121 (2009 

## Ashqelon, el-Qabu

Final Report
Ofer Sion


1. Plan and section.

2. Pottery and a marble fragment.

During July 2003, a salvage excavation was conducted at el-Qabu, within the precincts of the Elat-Ashqelon Pipeline compound in Ashqelon (Permit No. A-3944; map ref. NIG 1554/6167; OIG 1054/1167). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Elat-Ashqelon Pipeline Co. Ltd., was directed by O. Sion, with the assistance of $A$. Hajian (surveying), T. Sagiv (field photography), E. Belashov (drafting) and R. Kool (numismatics).
The remains of a building, which consisted of two construction phases that dated to the Byzantine period, were exposed ( 25 sq m ; Figs. 1, 2). It seems that the building was used as a bathhouse during the earlier of the two strata (II). A salvage excavation had been conducted in this area, in 2002 (HA-ESI 119) and remains of walls, building stones and marble fragments had been surveyed at the site in the past (Map of Ziqim [91], Site 37).
Phase II. Part of a building that comprised three rooms $(1-3)$ and two open spaces $(4,5)$ was exposed. A floor $(2.30 \times$ 3.25 m ) was revealed in Room 1 (L203). It was composed of beige-white chalk, rich in shells and founded on wadi pebbles. Two of the discovered walls of the room (W1, W7) were built of two rows of kurkar stones, with a core of stones and were preserved three courses high ( 0.6 m ); some of kurkar stones were well-dressed. The walls were coated with plaster, similar to that used on the floor. Wall 7 was short and its southern end was straight, probably due to an opening that connected the room to Open Space 4, set next to it. Room 2 was exposed in its entirety (L200; 3.1 $\times 5.7 \mathrm{~m}$ ). Its eastern and northern walls (W3, W6) built similar to the walls of Room 1, were preserved three courses high (c. 0.75 m ). The top of wall 3 protruded c. 5 cm above the floor of the room, which consisted of coarse white tesserae that were set within a border of three rows of red tesserae. Two entrances were noted in the walls of the room; one (A) was set in the northwestern corner and the other (B), in the southern side of W3. The floor next to Entrance A was paved with small stones, delimited on the north and east by dressed stones; it bordered the red tesserae of the floor in Room 2. A stone socket ( $0.25 \times 0.25 \mathrm{~m}$ ) was uncovered in situ. Entrance B (width 0.5 m ) connected Room 2 to Open Space 5 and two descending steps were built in it. A conduit (C; length 0.6 m , width 0.13 m , height 0.7 m ) that connected Room 2 to Open Space 5 was exposed in the northern part of W3. Three walls (W4-W6) that enclosed Room 3 (L205) were each built in a different manner. Wall 6 (width 0.5 m ) consisted of two rows of stones; Wall 5 (width 0.6 m ) had two outer rows of small stones and a core of elongated stones; and Wall 4 (width 0.95 , preserved height 0.74 m ) was constructed from two outer rows of large stones and two rows of small stones in-between. Room 3 was paved with large ceramic tiles ( $0.4 \times 0.5 \mathrm{~m}$ ), two of which were preserved in situ. Only the remains of two walls, which delimited the area from the north (W2; exposed length 3.3 m ) and west (W7), were exposed in Open Space 4. A stone socket was preserved in situ within a stepped opening that was set in W2. A round structure exposed in Open Space 5 (exposed area $4.0 \times 7.6 \mathrm{~m}$ ), whose outer face was built of dressed kurkar stones and the interior was a fill of small stones, rose to c. 0.8 m high above the floor (Loci 206, 208). The latter consisted of crushed and tamped kurkar and abutted W3. Next to Channel C in W3, ash remains (thickness 4 cm ) were discovered on the floor (diam. 1.2 m ), indicating that the conduit conveyed hot air.

Phase I. A few changes were made to the building. The entrances that connected Open Space 5 to Room 2 and Open Space 4 were sealed with stone construction, without bonding material. A new floor of crushed and tamped kurkar (L201) was laid down, c. 0.45 m higher than the floor of Phase II in Open Space 5.

The artifacts recovered from the excavation included numerous fragments of pottery vessels, most of which were Gaza jars, a coin, fragments of marble, roof tiles and ceramic floor tiles. The ceramic finds in the two phases dated to the Byzantine period. Above the floor of Open Space 5 in Phase II, Gaza jar sherds (Fig. 3:1-5) and saqiye jars (Fig. 3:8, 9) were discovered. Gaza jars fragments (Fig. 3:6,7) in Phase I were discovered above the floor in Open Space 5. The Gaza jars found in the excavation were common to the southern coastal plain in the fifth-seventh centuries CE. The saqiye jars, dated to the sixth-seventh centuries CE, were also popular along the coastal plain. The coin (IAA 97976) was discovered on the Phase II floor of Open Space 5 (L206). It was struck in Carthage, probably in the sixth century CE, and it bears an eight-pointed star pattern within a circle. Other coins from the same mint were uncovered in the region of Ashqelon. The marble assemblage included ten gray, light white and dark white fragments, two green fragments and another light gray fragment (length 17.5 cm ), which was discovered close to the surface (Fig. 3:10). The floor tiles were similar to the in situ ceramic tiles in Room 3.

It seems that the remains of the building in Phase II belonged to a bathhouse, of which only the western part was exposed. The plaster, mosaic, ceramic tiles and marble floors were commonly found in bathhouses. It can reasonably be assumed that the caldarium was in Room 2, although the absence of a double floor in this room makes this assertion doubtful. It is possible that such a floor was located east of the excavation and perhaps no such floor had existed at all. Caldaria with no double floor were found in a bathhouse at Qalandia (Baramki, D.C., 1933. A Byzantine Bath at Qalandia. QDAP II:105-108), in a bathhouse exposed in Be'er Sheva' that had marble and plaster floors (P. Fabian, per. comm.) and in a bathhouse exposed at Tel Sheqef, where a polychrome mosaic pavement and a plaster floor paved with ceramic tiles next to it were exposed (Y. Huster, per. comm.). Room 1 was plastered and therefore it is presumed to have been used as a frigidarium; however, the entrance that was apparently set in W7 of the room casts doubt on this supposition. Open Space 5, whose western part was only revealed, may have been a courtyard that led to the rooms in the bathhouse. The floor in Open Space 5 was raised in Phase I and the passages in its walls were closed; it seems that the building was adapted for another use, possibly as two separate residential units.



2. The excavation area, looking south.




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3. Pottery and a marble fragment.

## (Volume No. HA-ESI 121 (2009

## Ashqelon <br> Final Report

Yoram Haimi


1. Plan and section.

2. Wall 101, looking northeast.

3. Wall 102. looking southeast.
 southeast.

During February 2005, a salvage excavation was conducted at 23 Ha-Tayyasim Street in Ashqelon (Permit No. A-4382; map ref NIG 15875-90/62120-32; OIG 10875-90/12120-32). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by G. Makhlouf, was directed by Y. Haimi, with the assistance of V. Essman and V. Pirsky (surveying) and C. Hersch (drawing).
Following the removal of sand and the exposure of the area, one square was opened, in which part of a building that dated to the Early Bronze Age was discovered (Fig. 1). A wall built of fieldstones and wadi pebbles and oriented east-southeast-west-northwest (W101; length 6.4 m , width 0.6 m , height 2.4 m ; Fig. 2) was exposed in the northern part of the square; the wall continued eastward beyond the limits of the excavation area. Another wall built of mud bricks (W102; length 1.8 , width 0.7 , height 1.58 m ; Figs. 3, 4) abutted W101 from the south-southwest at a right angle. An elliptical installation built of mud bricks (L10; $0.7 \times 1.8 \mathrm{~m}$; Fig. 5) was exposed in the southwestern corner of the square. The orange color of the mud bricks indicates that they were fired. The slipped fragments of pottery vessels in the excavation were characteristic of Early Bronze I and included kraters (Fig. 6:1, 2), a jar (Fig. 6:3), a jug (Fig. 6:4) and a ledge handle (Fig. 6:5).

The orientation of the two walls suggests a connection between them and the remains of a building from the same period that had been discovered in the past c. 10 m northeast of the excavation, prior to the construction of the house at $21 \mathrm{Ha}-$ Tayyasim Street (Fig. 7; HA-ES/ 118).


2. Wall 101, looking northeast.

3. Wall 102, looking southeast.

5. Installation (L10), looking northwest.


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Ashqelon, Industrial Zone (North) Final Report


1. General view of the excavation, looking north.

2. Pool 110, looking northwest.

3. Northern square in northern area, plan.

4. Clay figurines.

5. Coin No. 4.

Pirhiya Nahshoni
26/11/2009
During September-October 2006, a trial excavation was conducted west of the Ashqelon-Yad Mordechai railroad track, east of the northern industrial zone of Ashqelon (Permit No. A-4908; map ref. NIG 16259/61904; OIG 11259/11904), following the discovery of antiquities during earthmoving works along the planned route for another railroad track. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by Israel Railways Authority, was directed by P. Nahshoni, with the assistance of H. Lavi (administration), A. Hajian (surveying), E. Belashov (drafting), L. Kupershmidt (metallurgical laboratory), C. Amit (coin photography), I. Lidski-Reznikov (find drawing), N. Katsnelson (glass), G. Bijovsky (numismatics) and laborers from Ashqelon.
Two excavation areas were opened along the course of the railroad track where ancient remains were discerned. The southern area consisted of four continuous squares and two half squares, 25 m apart, were opened in the northern area, c. 55 m away (Fig. 1). Remains of walls, a plastered pool and refuse pits of a pottery workshop from the Byzantine period were discovered in the excavation.
The Southern Area (Fig. 2). Three walls (W2-W4; width 0.6 m ) were discovered in the southern part of the area. The walls, preserved a single course high, were built of dressed kurkar masonry stones and hard roughly hewn limestone. Wall 2 (exposed length 3.5 m ), generally aligned east-west and Wall 4 (length 1.8 m ), oriented north-south, were combined together and belonged to a single building. Wall 3 (exposed length 1.25 m ) formed a $25^{\circ}$ angle with Wall 2 and stone fill was found between them; it seems that W3 was built in a later phase. No floors were found. A pit (L123; $1.5 \times$ 1.7 m , depth 0.62 m ) was exposed east of W4. It contained a layer of construction debris that included numerous fragments of floor bedding, composed of potsherds embedded in a herringbone pattern in mortar, which is characteristic of winepresses. The remains' poor state of preservation-probably due to stone looting in antiquity-and the limited scope of the excavation, do not enable us to determine the function of the building and the installation.

North of the building were the remains a plastered pool (L110; $1.45 \times 1.74 \mathrm{~m}$, preserved height 0.62 m ; Fig. 3) whose use is unclear. The walls of the pool (W5-W8; width $0.35-0.50 \mathrm{~m}$ ) were built of debesh and coated with plaster on the inside; a lining of dressed kurkar stones was applied to the exterior of W7, making it c. 0.9 m thicker. A dressed stone was found on the pool's plastered floor. Next of the pool's southeastern corner was a small section of a wall, preserved a single course high (W9; preserved length 1.8 m ; width 0.7 m , preserved height 0.25 m ). The wall, oriented east-west, was wellbuilt of dressed stones bonded with light gray mortar. A wall built in a similar manner was exposed c. 3.5 m northwest of the pool (W11; exposed length 1.3 m , width 0.7 m , preserved height 0.24 m ). It too was aligned east-west and was preserved a single course high. This wall formed a corner with a wall that abutted it from the north (W1; preserved length c. 4 m , max. width 0.5 m ), of which only the fieldstone foundation course had survived. Two surfaces of small stoneseast of W1 (L103) and southwest of the pool (L101)—and sections of a light-colored mortar surface to the south of the pool (L130), apparently belonged to floors that were not preserved. The close proximity of the finds in this part of the area and the matching directions of the walls seem to indicate that the pool, the nearby remains of the walls and the floors were all part of a single building complex.

The Northern Area yielded a thick dump (thickness 1.29 m ) of workshop debris (L106) that extended across an area (diam. c. 15 m ). A variety of pottery vessels from the Byzantine period, mostly Gaza-type jars, as well as workshop debris, glass and bones were found in a probe that was excavated in the dump ( $2 \times 4 \mathrm{~m}$ ).

The northernmost excavation square revealed another dump with workshop debris, in which reddish mud-brick material was mixed (L122; thickness 0.74 m ; Fig. 4). Within this layer and close to the surface were several small and mediumsized kurkar stones that could be the meager remains of a wall's foundation course (W10). Below this layer was a dark clayey layer ( L 125 ; thickness 8 cm ) that is characteristic of the natural soil in the region.

A rich assemblage of pottery vessels, as well as clay figurines, a carved bone item, glass vessels and coins, which dated to the Byzantine period, was discovered in the building remains and especially in the dumps of the workshop debris. The pottery consisted of vessels characteristic of the period, including bowls (Fig. 5:1, 2), a krater (Fig. 5:10) and a Fine Byzantine Ware juglet (Fig. 6:4); imported bowls included Late Roman C (Fig. 5:3, 4), Cypriot Red Slip (Fig. 5:5-8) and Egyptian Red Slip (Fig. 5:9); locally produced vessels included bowls (Fig. 5:11, 12), kraters (Fig. 5:13, 14), cooking vessels (Fig. 6:1-3), juglets (Fig. 6:5, 6), a bag-shaped jar (Fig. 6:7) and Gaza jars (Fig. 6:8-11). The fragments of two zoomorphic figurines included the head and chest of a horse (Fig. 7:1) and the round face of an animal facing forward (Fig. 7:2).
The 161 fragments of glass vessels consisted of 59 diagnostic ones. Most of the fragments belonged to vessels that dated to the Byzantine period and the variety of types is similar to that discovered in a tomb excavated in Ashqelon ('Atiqot 37:67*-82*).

A carved bone object was found on the surface (Fig. 8). It seems that the building remains and the plastered pool belonged to an industrial area that was used at the end of the Byzantine period. The concentrations of workshop debris are indicative of a nearby pottery workshop that was probably located beyond the excavated area.

## The Coins

Gabriela Bijovsky
Eight bronze coins were discovered in the excavation, five of which could be identified (Table 1). These are dated from the second half of the fourth century CE until the first half of the sixth century CE. One of the coins is a cast flan without a pattern (No. 3), characteristic of the years 450-550 CE (INJ 14, 2000-2002:202). Two five nummi coins that bear a ChiRho Christogram were found (Nos. 4, 5). These belong to a type common to the Ashqelon region and were minted until the year 537 CE, during the reigns of the Byzantine emperors Justin I and Justinian I (W. Hahn 2001. Money of the Incipient Byzantine Empire [Anastasius I - Justinian I, 491-565] [Veröffentlichungen des Instituts für Numismatik und Geldgeschichte der Universität Wien 6]. Vienna. P. 57). Coin No. 4 (Fig. 9) is probably a local imitation of a pentanummia, as evidenced by the backward pattern on the reverse (retrograde), its inferior style and low weight.
Table 1. Identified bronze coins

| No. | Locus | ldentification | IAA No. |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 118 | Constantinius II, 351-361 CE <br> FEL TEMP REPARATIO | 113559 |
| 2 | 113 | Fifth century CE | 113557 |
| 3 | 101 | An unminted cast flan, 450-550 CE | 113556 |
| 4 | 100 | Local imitation, 522-537 CE <br> 5 nummi, Chi-Rho Christogram | 113555 |
| 5 | 115 | Justinian I, Constantinople, 527-537 CE <br> 5 nummi, Chi-Rho Christogram | 113558 |



1. General view of the excavation, looking north.


2. Pool 110 , looking northwest.

3. Northern square in northern area, plan.


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6. Pottery.

7. Clay figurines.



## (Volume No. HA-ESI 121 (2009

## Ashqelon, Barne‘a <br> Final Report

Ron Toueg


1. Plan.

During December 1998, a salvage excavation was conducted on Yekutiel Adam Street in the Barne'a neighborhood of Ashqelon, opposite the Holiday Inn Hotel (License No. B-169/1998; map ref. NIG 15891-2/62190-2; OIG 10891-2/121902), prior to the construction of a traffic circle. The excavation, undertaken on behalf of A.E.S. and the auspices of the Institute of Maritime Studies of the University of Haifa and underwritten by the Ashqelon Economic Company, was directed by R. Toueg, with the assistance of T. Kenan (surveying) and D. Lipkonsky (administration).
Settlement remains from the Roman and Byzantine periods were exposed c. 300 m northwest of the current excavation area (License No. G-131/1998). Two tombs that dated to the Byzantine period (HAESI 119) and remains of a settlement and a tomb from the Hellenistic period (HA-ESI 120 ; HA-ESI 120) were discovered farther north. Settlement remains from the Byzantine period were also discovered c. 1.5 km north of the current excavation area, at an Early Bronze Age site (HA-ESI 115:58*-59*). Remains of shipwrecks that dated to the Bronze and Iron Ages and the Hellenistic, Roman and Byzantine periods were found in underwater surveys off the coast (HA-ESI 120).
One excavation square was opened and part of an agricultural installation from the Byzantine period was exposed.

Following the removal of a modern foundation layer (thickness c. 0.8 m ) with the aid of mechanical equipment, dark gray fill that contained remains of mortar mixed with lime, shells and numerous potsherds, dating to the end of the Byzantine period (sixth-seventh centuries CE) was exposed.
Two vats (Loci 2, 3; outer dimensions $2.85 \times 3.30 \mathrm{~m}$; Fig. 1) separated by a partition wall (W5) were uncovered beneath the fill. The vats' walls, of which only a single course of dressed kurkar was preserved, were coated with light pink hydraulic plaster, applied to a base layer of potsherds. The foundation, built of fieldstones that were set directly on top of the sand, was wider than the width of the walls.
Vat $2(1.3 \times 2.3 \mathrm{~m})$ was completely excavated and Vat 3 , which extended beyond the limits of the excavation area, was only partially explored $(1.2 \times 2.3 \mathrm{~m})$. The floors of the two vats were slightly inclined to the south. The northern part of the floor in Vat 3 was damaged because of stone-robbing. It was repaired at least four times and the original plaster floor was c. 0.1 m lower than the latest floor. Although no evidence was found, it can reasonably be assumed that similar repairs were made to the floor of the eastern vat. A depression in the center of the floor in Vat 3 was noted near the southern wall (W7) and an opening between the courses of the wall that had been blocked with soil and mortar was revealed. A plaster floor (L4), which continued beyond the limits of the square, extended up and onto W7 from the south.
Brown fill (L6) deposited directly on the sand was excavated east and north of the vats. It was probably a foundation trench of the installation that contained potsherds dating to the end of the Byzantine period (sixthseventh centuries CE).
It was not possible to determine the precise use of the installation due to its poor state of preservation and the limited scope of the excavation; however, these were most likely the collecting vats of a winepress. It seems that the installation was built during the sixth-seventh centuries CE and ceased to be used at the end of the Byzantine or the beginning of the Early Islamic periods.


## (Volume No. HA-ESI 121 (2009

## Azor, Ha-Histadrut Street

## Final Report


2. Plan and sections.

4. Stratum 1, Installation 105 looking southeast.

5. The excavation area, looking southwest.


6 . Pottery.

7. Glass bracelet.

During October-November 2007, a salvage excavation was conducted on Ha-Histadrut Street in Azor (Permit No. A- 5277; map ref. NIG 181586-92/659173-6; OIG 131586-92/159173-6; Fig. 1), in the wake of damage to antiquities. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Amidar Company, was directed by A. Gorzalczany, with the assistance of E . Bachar (administration), M. Kunin (surveying), T. Sagiv (field photography), D. Golan (preliminary inspection), Y. Arnon (pottery reading), M. Shuiskaya (pottery drawing), Y. Gorin-Rosen (glass), M. Ajami, D. Barkan (IAA central district) and laborers from Qiryat Gat.

The site at Azor had seen many excavations, as of the 1940s (HA-ESI 116, HA-ESI 117, HA-ESI 118; for summary list of excavations, see 'Atiqot 38:41-43). The current excavation was carried out within the precincts of the tell; however, its area (c. $2.5 \times 5.0 \mathrm{~m}$ ) and scope were extremely limited due to existing infrastructures. Three settlement strata, the earliest dating to the Mamluk period and the latest to the Late Ottoman period periodmodern era, were exposed (Fig. 2).

Stratum 1 (Late Ottoman period-Modern era)
Remains of a building that included a wall foundation, a floor and an installation were exposed. The wall (W107; width $0.3-0.4 \mathrm{~m}$; not marked on plan), discovered in the eastern part of the square, was oriented east-west and preserved a single course high; its eastern end extended beyond the excavation area. The floor (L101; Fig. 3), which was built of different size fieldstones in pale white-gray bonding material, abutted W107 and was especially well-preserved in the western part of the square. South of W107, part of a round installation (L105; diam. 0.85 m ; Fig. 4) built of a series of coarsely dressed stones, was exposed; its nature was not fully determined.
The stratum was rather disturbed and it should probably be dated to the Late Ottoman period-modern era.
Stratum 2 (Ottoman period)
A wall (W112; min. length 1 m ) built of fieldstones (c. $0.20 \times 0.30 \times 0.25 \mathrm{~m}$ ) and preserved four courses high ( 0.65 m ) was exposed. The western face of the wall was located beyond the excavation area; its southern continuation was covered by the foundation of Floor 101 and its northern extension was most likely damaged by the sewer infrastructure located north of the excavation area. The wall was not built directly on the remains of the previous stratum, but rather above an accumulation of dark brown soil that represented a short habitation hiatus.
The potsherds recovered from the fill next to the wall included fragments of bowls (Fig. 6:1, 2), kraters decorated with wavy combing (Fig. 6:3, 4, 5, 6) and jugs, some of which were handmade (Fig. 6:7). All the potsherds were of gray, inclusion-rich clay and dated to the Ottoman period. Fragments of a colored glass bracelet (Fig. 7) that prevailed in this period were also found.
Stratum 3 (Mamluk-Ottoman periods)
Floors and walls that joined up to form a general plan of a room were exposed.
The eastern wall (W110; min. length 1.8 m , width 0.3 m ) was built of roughly hewn stones (c. $0.25 \times 0.30 \times 0.50 \mathrm{~m}$ ); its southern side was preserved two courses high, whereas its northern end survived a single course high. The southern wall (W109; min. length 1 m , width 0.3 m ), built of a single row of coarsely dressed stones (c. $0.20 \times 0.25 \times 0.30 \mathrm{~m}$ ), was preserved a single course high; its eastern end, located beyond the excavation area, probably formed a corner with the continuation of W110.
Two walls, oriented east-west (W106, W111), probably represented an internal partitions of the room. Wall 111 (min. length 1 m , width 0.3 m ) was built of dressed stones (c. $0.2 \times 0.2 \times 0.3 \mathrm{~m}$ ), between which smaller fieldstones were incorporated; the eastern end of this wall abutted W110 and its western end was covered with the foundation of the later floor (L101). A single row of stones (c. $0.30 \times 0.25 \times 0.30 \mathrm{~m}$ ), standing a single course high, was preserved of W106 (min. length 0.7, width 0.35 m ; Fig. 5). Its western end was covered by the foundation of Floor 101, whereas its eastern end did not reach W110. This gap should probably be interpreted as a passage or an opening
A floor (Loci 114, 115) of small irregular stones abutted W110, but underlay Walls 106 and 111. Therefore, these walls constituted a later (technical?) phase in the construction of the building.
The ceramic assemblage included fragments of bowls (Fig. 6:8), green or yellow glazed bowls (Fig. 6:9, 10), kraters (Fig. $6: 11$ ) and cooking pots (Fig. 6:12, 13), which were characteristic of the transition phase between the Mamluk (thirteenthfourteenth century CE) and the Ottoman periods.

The scant finds recovered from the excavation was due to its small scope and the inability to investigate earlier strata, although the excavated square was within the area of their existence. A gap between the floors of Stratum 3 (MamlukOttoman periods) and the construction of W112 (Ottoman period) suggests that this area of the tell was uninhabited for a short period.
The results of the excavation contribute to the accumulated knowledge of the site and to the better understanding of the history of Azor.


1. Aerial view of excavation area.


2. Stratum 1, Floor 101, looking northeast.

3. Stratum 1, Installation 105, looking southeast.


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6. Pottery.



1. Plan and section.

2. Pottery.
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Azor
Final Report
Lior Rauchberger
During June 2005, a salvage excavation was conducted at 6 Weizmann Street in Azor (Permit No. A-4506; map ref. NIG 20899/63185; OIG 15899/13185), prior to construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by S. Haddad, was directed by L. Rauchberger, with the assistance of S. Ya'aqov-Jam and E. Bachar (administration), A. Hajian (surveying and drafting), T. Sagiv (field photography), L. Kupershmidt (metallurgical laboratory), M. Shuiskaya (drawing of finds), A. Berman (numismatics) and M. Ajami, D. Barkan and E. Yannai.
A private house that had been demolished stood on the site before the excavation; the ancient remains were poorly preserved. Four squares (A-D; 75 sq m) of different sizes were opened after A. Buchennino exposed wall remains during a preliminary inspection (designated L136). Remains of buildings and installations that dated to the Early Islamic period (seventh-eighth centuries CE; HA-ES/ 117) were discovered.
Building A. Remains of a building-a rectangular room oriented north-south ( $2.25 \times 5.70 \mathrm{~m}$ )-were exposed in Squares A and D. The walls of the room's western corner (W100, W101), built of small fieldstones and preserved two courses high, had survived. The walls of the eastern corner (W103, W104), preserved a single course high, were built of small fieldstones mixed with large coarsely dressed stones. One of the stones in W104 was a weight from an olive press, in secondary use $(0.26 \times 0.35 \times 0.53 \mathrm{~m})$. Wall 103 continued northward beyond the corner with W104. Kurkar collapse (L134) was exposed south of the building and probably belonged to it.
A shallow refuse pit (L114; diam. 0.86 m , depth 0.4 m ) was discovered at a lower level between Walls 100 and 101. It contained ashes, a Byzantine roof-tile fragment, small fieldstones and jar fragments that dated to the Early Islamic period.
The ceramic finds that dated the building to the Early Islamic period consisted of imported bowls, including Late Roman C (Fig. 2:3, 4), Cypriot Red Slip Ware (Fig. 2:5, 6), Fine Byzantine Ware (Fig. 2:7-9), as well as buff-ware bowls and jugs (Fig. 2:10-15) and a krater and a jar (Fig. 2:16, 17). In addition, a rim and body fragments of Cypriot milk bowls from the Late Bronze Age, which originated in two tombs from this period that were located in the vicinity (Fig. 2:1, 2; HA-ES) 118), were found.

Building B. A building was discovered in Square D and in the balk that separated it from Square B. Two of the building's walls (W112, W132), which were built of fieldstones and partially dressed stones, were exposed. These walls apparently formed a corner in the south that was not preserved. A floor of small fieldstones (L135; $0.1 \times 0.1 \mathrm{~m}$ ), whose remains were also found in the middle of the southern corner of the building, abutted W132 on the north. The ceramic finds included a cooking pot (Fig. 2:18), a bowl (Fig. 2:19), a krater (Fig. 2:20), jars (Fig. 2:21-24) and a buff-ware jug (Fig. 2:25), as well as an Umayyad coin that was struck in the Ashqelon mint and is dated to the eighth century CE (IAA 98100). Based on these artifacts, the building is dated to the Early Islamic period.

## Ovens between Buildings $A$ and $B$

A tabun (L120; diam. 0.51 m , wall thickness 0.2 m ), whose southern side was enclosed by a wall (W102; $0.22 \times 0.50 \times$ 1.30 m ) that was oriented east-west, was discovered in Square B. A row of small fieldstones (L130) enclosed the installation from the north. The tabun was not excavated. A rim fragment of a Cypriote dolium was recovered from the fill between the tabun and W102.
Another tabun (L133; diam. 0.4 m , thickness of clay side 2 cm , height 0.25 m ) was discovered in the preliminary trial trench, c. 0.65 m north of $\underline{T}$ abun 120 and $0.1-0.2 \mathrm{~m}$ below W132. The tabun was not excavated.

Square C. A row of fieldstones (L122; $0.1 \times 0.1 \times 0.7 \mathrm{~m}$ ), aligned southeast-northwest, was exposed in the southern side of the square. It was probably part of a wall that was mostly located at the side of the square. A jar base and worn potsherds from the Early Bronze Age, as well as jar fragments, including Gaza jars (Fig. 2:27, 28), were found in the fill (L109) that abutted the row of stones.

The excavation finds add information about the nature and spread of the settlement from the Early Islamic period, southeast of Tel Azor. The exposed buildings and installations of the Early Islamic settlement included an underground vaulted structure, which is characteristic of the period (HA-ES/ 110:43*-44*), ovens and part of a bathhouse (HA-ESI 117 [Permit No. A-2970]; HA-ESI 117 [Permit No. A-3196]).



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## Bab al-Hawa <br> Preliminary Report



1. Area C, plan and sections.

2. General view of excavation, looking north.

3. General view of excavation, looking south.

4. Arch pillar with incorporated console, looking north.

5. Two column drums in alley.

## Moshe Hartal

27/5/2009
During June-July 2007, a salvage excavation was conducted at Bab al-Hawa (Permit No. A-5165; map ref. NIG 272979-3061/783359-551; OIG 222979-3061/283359-551), in the wake of damage to the site. The excavation, undertaken on behalf of the Israel Antiquities Authority and financed by the Israel Electric Company, was directed by M. Hartal, with the assistance of E. Bron, O. Zingboym, Y. Harel and G. Jaffe (area supervision), Y. Ya'aqobi (administration), V. Essman and M. Kunin (surveying), A. Shapiro (GPS) and laborers from the village of Buq'ata in the Golan Heights.

During 1988-1990, three seasons of excavations had been conducted at the site (ESI 10:63-66), revealing building remains from the Iron Age (ninth century BCE) that were destroyed in a conflagration and from the Early Roman period (first century CE), as well as a building from the Byzantine period and a tomb from this period was excavated in the southern part of the ruin (M. Hartal, 2006, Land of the Iturians, pp. 262-282 [Hebrew]).

Two areas (C, D) were opened. A building dating to the Byzantine period, remains of a building from the Roman period and a few potsherds from the Iron Age were exposed in the four squares in Area C that was south of the building excavated in the previous seasons. The tops of walls from the Byzantine period were discovered in the single square opened in Area D, lying in the north of the site.

## Area C

Five strata were identified (Fig. 1).
Stratum 5: Bedrock was exposed in the western half of the excavation area. Dark brown soil that included a small amount of potsherds from the ninth century BCE had accumulated on top of bedrock. No walls ascribed to this period were found and the ceramic finds were rather meager. Hence, it can be assumed that the potsherds were swept here from the immediate vicinity. During the previous excavation seasons, remains of a building that was dated to the ninth century BCE were exposed.
Stratum 4: The foundations of two fieldstone-built walls, founded on bedrock, were revealed in the southwest of the area (Fig. 2). The walls themselves and the floor that abutted them did not survive. The few potsherds found next to them dated to the Early Roman period.
Stratum 3: A building from the Late Roman-Early Byzantine period, which was built according to the Hauranian tradition utilizing only roughly hewn basalt stones, was exposed (Fig. 3). The building included a courtyard, partly paved with flat fieldstones, and rooms on either side of it.
A staircase was built next to the western wall of the courtyard; three of the steps had survived (Figs. 4, 5). The staircase was erected above the pavement and therefore postdated it. Numerous fragments of Golan pithoi that dated to the Byzantine period were found near the courtyard wall. The top of the foundation course of the walls served as a threshold for the building's entrance and the openings of the rooms, whose tamped-earth floors were one step lower than the thresholds. Ovens were found in three of the rooms. The pillar of an arch in which an inverted arch console was incorporated (Fig. 6) was found in one of the rooms; this was the only ashlar stone found in the excavation. The ceramic finds dated to the fourth-fifth centuries CE.
Two coarsely dressed column drums of different heights were found ex situ in an alley at the western end of the excavation (Fig. 7); they may have been used to support the roof. Pairs of similar columns were found in the Hermon, which S. Dar identified as a representation of Iturian deities. Since no similar columns were found in the Golan to date, it is questionable whether they can be attributed to Iturian cult.
Stratum 2: The building from the previous stratum continued to be used, although a few modifications were made to it: several walls were added, one of the openings was blocked and the floors were raised and covered part of the ovens (Fig. 8). A considerable amount of destruction was discerned in this stratum, possibly the result of an earthquake; the courtyard and the rooms were filled with collapsed building stones. The artifacts from this stratum dated to the fifth century CE.
Stratum 1: Following the destruction of Stratum 2, only the eastern part of the building was repaired. A wide wall of large fieldstones, abutted by an earthen floor, was built. A complete cooking pot on the floor, dating to the sixth century CE, was surrounded on the east and north by stone collapse that miraculously did not damage it (Fig. 9).

## Area D

The tops of two walls built of basalt stones, which formed the corner of a room, were exposed below the surface (Fig. 10). A third narrower wall was one stone wide and built of limestone. Fragments of pottery vessels from the Byzantine period, including a fragment of a Phoenician lamp, were collected from the area between the walls. The excavation was suspended after the tops of the walls were exposed and the finds indicated that the Byzantine settlement extended in this area of the site.

The previous excavation exposed building remains from the Iron Age and potsherds from earlier periods. The finds from this season indicate that during those periods the size of the site was not as large. This probably reinforces the supposition that the building exposed in the previous excavation was part of a fortress. The meager remains preserved of the Early Roman-period building probably indicate the beginning of a renewed settlement at the site. It seems that the excavated area was mainly built on in the fourth and fifth centuries CE, when a large edifice was erected. Changes to the building were subsequently made until it was destroyed, most likely by an earthquake. After the destruction, the area was abandoned for a period of time and only a small part of it in the east was built in the sixth century CE. The building did not contain finds that could unequivocally indicate the religion of its occupants. Numerous finds adorned with crosses that dated to the end of the fifth and the beginning of the sixth centuries CE were discovered in the previous excavations; these pointed to a Christian settlement, probably of the Ghassan tribe. The current excavation was devoid of such artifacts and therefore, it seems that the exposed building was used by the original residents of the site-the Iturians.

2. Stratum 4 (right) and Stratum 3 (left), walls and installations, looking east.

3. General view of excavation, looking north.

4. General view of excavation, looking south.

5. Courtyard, staircase and pithoi fragments, looking south.

6. Arch pillar with incorporated console, looking north.

7. Two column drums in alley.

8. Stratum 2 stone floor above tabun from Stratum 3, looking north.

9. Stratum 1, cooking pot, looking north.

## Area D שטח


10. Area D, plan.

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## Baqa el-Gharbiya Preliminary Report



1. Plan and section.

2. Burial cave, looking south

3. Glass flask (B1009).

4. Cross-shaped copper pendant (B1012).

5. Copper finger cymbals (B1022).

## Jacob Sharvit

During August 2004, a salvage excavation was conducted in a burial cave in Baqa el-Gharbiya (Permit No. A-4244; map ref. NIG 20396/70403; OIG 15396/20403), which was severely damaged when the area was prepared for construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by J. Sharvit, with the assistance of M. Masarwa and M.A. Tabar (antiquities inspectors), N. Distenfeld (inspector with the Unit for the Prevention of Antiquities Robbery), L. Yihye (GPS), C. Amit (studio photography), R. Vinitsky (metallurgical laboratory), Y. Gorin-Rosen (glass), O. Shorr (glass restoration), and C. Hersch and S. BenYehuda (drawing).
The burial cave was hewn in the northern slope of a spur, which extends in an east-west direction and overlooks a valley, through which a northern tributary of Nahal Hadera passes. The remains of eight individuals and their funerary offerings were discovered in the cave. The excavation in the cave lasted only six hours and once the bones of the deceased were exposed they were handed over to a representative of the Ministry of Religious Affairs; consequently, no anthropological analysis was performed. The finds in the cave are dated to the end of the Byzantine and the beginning of the Umayyad periods. Winepresses, bodedot and other burial caves were discerned in the vicinity of the cave and a similar burial cave was excavated in 1956, in nearby Qibbuz Ma'anit (Map of Ma'anit [54], Site 24).

The cave was hewn in thin, hard nari that superposes soft chalk of the Senonian Formation. All that was preserved of the cave is an arched cavity (c. $1.5 \times 5.0$, max. height c. 1.5 m ; Figs. 1, 2) that was filled with modern debris and masses of stone that collapsed into it. Following the removal of modern debris (L100), a layer of clean soil (L101), which had a different color, was exposed. Upon it were large pieces of chalk bedrock that had collapsed from the ceiling. Standing stones, which formed partitions (W1, W2) that divided the space of the cave into two parts, were discovered in the eastern side of the cave.
The remains of six deceased $(\mathrm{H} 1-\mathrm{H} 5, \mathrm{H} 8)$ were exposed on the floor in the western part of the cave (L102), with funerary offerings alongside them. Individual H1 was placed with his head to the west and his face turning to the south; he was survived by the skull and long bones. The offerings next to this individual included a bronze ring (B1013), a glass bead threaded on a copper wire (B1014), an intact glass flask (B1009; Fig. 3) and two finger copper cymbals (B1018). The skull and long bones of Individual H2 were preserved but their location was disturbed. The offerings next to this deceased included a pair of copper earrings (B1011), a copper pendant in the shape of a cross (B1012; Fig. 4), a bronze bracelet (B1010) and a copper bracelet (B1015). The bone fragments of Individuals H3 and H4 were consolidated together, without any offerings. Bone fragments and parts of the skull of Individual H5 were preserved and concentrated in the western part of the cave, between the side of the cave and another stone partition (W3). Next to the deceased were fragments of cosmetic artifacts and a round lid with a perforation in its center for a kohl stick; both were made of faience (B1002, B1003; Fig. 5). At the beginning of the excavation, the removal of soil debris and pieces of rock from this part of the cave exposed an intact glass vessel (B998) and a fragment of a green-glazed faience cosmetic jar (Basket 999) on the floor. A preliminary examination has suggested that all the pieces of faience belong to the same cosmetic jar. It can also be assumed that this jar, as well as the glass vessel, belongs to Individual H5. Bone fragments and parts of the skull were preserved from Individual H8, to whom two finger cymbals (B1018, B1019) were ascribed.
The remains of two individuals (H6, H7) were exposed in the eastern part of the cave (L103), which was delimited by Walls 1 and 2. Individual H6 was placed in an articulated position, with his head in the south, his face turning to the east and his legs folded at the northern side. Four matching copper finger cymbals (B1008, B1022; Fig. 6) and a copper bracelet (B1007) were ascribed to the deceased. Individual H7 was discovered next to W1 and his skull and long bones were preserved.
After the dismantling of W1, a complete glass flask (B1023; Fig. 7), a complete glass amphoriskos (B1024; Fig. 8), the upper part of a pale green-blue bottle (B1025) and a copper ring (B1026), were discovered beneath it.

It seems that the cave was entered from the north, by way of a square, leveled courtyard, from which one descended a short staircase to an elliptical cavity (diam. c. 6 m ). Remains of the courtyard were preserved on the eastern side of the site. The poorly preserved remains of eight individuals were uncovered in the limited excavated area. Two individuals in primary burial, an adult and a child, were exposed in the eastern part of the cave. Six individuals were exposed in the western part of the cave; however, judging by the skeletons state of preservation it is unclear whether they were interred in primary or secondary burial. Finger cymbals were discovered next to four of the deceased. The jewelry discovered in the cave was simple and decorated with plain geometric designs; some of it could have been worn by either men or women. The offerings seem to indicate that both men and women were interred in the cave, which could have belonged to a Christian family that was somehow engaged in dance or music, possibly in a religious context. The glass vessels recovered from the tomb are unique to the site and were probably blown by an artisan who was employed at a loca workshop. No comparisons to these vessels have been published to date, but their form and quality of the material indicate that they can be dated to the end of the Byzantine and the beginning of the Umayyad periods (sixth-seventh centuries $C E)$.


2. Burial cave, looking south.



102/1012 $4244^{-}$

4. Cross-shaped copper pendant (B1012)

5. Faience cosmetic jar and fragment of a round bone lid.

7. Glass flask (B1023).



1. General view of the excavation area; Hula basin in upper part, Highway 90 and excavation squares in lower part, looking east.

2. Excavation plan.

3. Sickle blades and arrowheads.

4. Axes.

During April-May 2007, a salvage excavation was conducted at the Beisamoun site (Permit No. A-5107; map ref. NIG 25403-8/77682-715; OIG 20403-8/27682-715). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Department of Public Works, was directed by H. Khalaily, with the assistance of O. Barzilai, E. Bron and G. Jaffe (area supervision), Y. Ya'aqobi (administration), A. Hajian (surveying and drafting), A. Shapiro (GPS), and also D. Avshalom-Gorni and N. Bornstein.
The site is located in the western part of the Hula Valley, c. 5 km north of Yesod Ha-Ma'ale and c. 2 km west of the new Hula Preservation. It is situated alongside numerous sources of water, including Nahal 'Ayoun, which conveys water from the 'Eynan springs to the Hula Preservation and the spring of 'En Agmon, to the south of the site. A broad alluvium-covered plain that was formed as a result of draining the original Hula Lake in the 1950s extends east of the site. Several prehistoric sites in the vicinity include 'Eynan-a settlement that is dated to the Natufian culture (Perrot, J. 1966. Les gisement natufien de Mallaha (Eynan), Israel. L'Anthropologie 70/5-6:437-483) and Tel Teo (IAA Reports 13)-a site that begins in the Neolithic period. Beisamoun is one of the largest sites in the southern Levant, dating to the late phase of the Pre-Pottery Neolithic B. It is considered an especially large site as its remains extend across an estimated area of c. 100 dunams. The Beisamoun site comprises three secondary sites: Tel al-Mallaha in the south, the Pre-Pottery Neolithic site that extends across the foot of the tell to the west and north and the site of Beisamoun West, which extends across a gentle slope that continues westward to the foot of the Hills of Naftali. The site was discovered at the end of the 1950s when Qibbuz Manara had constructed fish ponds in the area. A French expedition that excavated at 'Eynan at the time, investigated the site during two long seasons, 1965 and 1969. The site was further explored in 1971-1972 (Lechevallier M. 1978. Abu Gosh et Beisamoun, deux gisements du VIlème millenaire avant l'ere Chretiénne en Israël [Mémoirs et Travaux du Centre de Recherches Préhistoriques Français du Jérusalem 2]. Paris). Four probe trenches were dug at Beisamoun West in November 2006, exposing a level of archaeological remains on sterile terra rossa soil at a depth of 0.4 m below surface. The level tapered toward the west and it therefore appeared that the area was located on the western fringes of the site.
Two excavation areas (A, B; Figs. 1, 2), 11 m apart, were opened in a narrow strip along Highway 90, in the section between Rosh Pinna and Qiryat Shemona. Four squares were excavated in Area A, the southern of the two and five squares were opened in Area B. Building remains and numerous artifacts that dated to the Yarmukian culture were discovered.

Three sediment layers were discerned in the excavation areas. The surface top soil formed the upper layer (thickness 0.5 m ), which was characterized by dark brown clayey soil that had been prepared for farming and disturbed by deep plowing over many years. This horizontal layer contained only a few archaeological finds. The middle layer (thickness over 0.6 m ) was a gray-brown clayey soil, rich in organic material and ash, which yielded most of the remains and artifacts in the excavation. Two stratified levels composed the layer. The upper level (thickness 0.2 m ) was small, mostly angular limestone gravel (length $2-5 \mathrm{~cm}$ ), as well as many basalt fragments, mostly burnt and therefore dark in color. This level was exposed in all excavation squares and it sealed the settlement level at the site. The lower level (thickness 0.4 m ) was light colored friable clayey soil mixed with small stones. All the building remains at the site were exposed in this level. The bottom layer (thickness 0.7 m ) was reddish brown terra rossa soil (heavy clay soil), without any inclusions. This was a sterile layer set above the bedrock.

Area A. Upon removal of top soil, two parallel walls (W1, W2), 1.5 m apart, were exposed in Squares X11 and X12. Wall 1 was built of different sized fieldstones to a height of three courses; the upper course was partly disturbed and several of its stones were removed. Wall 2 was constructed from large rectangular stones to a height of a single course. The walls, which probably extended eastward, delimited a long narrow area that was oriented east-west (path? small room? L102; length 4 m , width 1.5 m ). This area was paved with small stones that were set on a surface of densely packed stones. Another wall (W4), which was aligned north-south and extended southward to Square X10, abutted Wall 2. It seems that W4 enclosed the eastern side of a square building. A round hearth (L108), built of small stones, was discovered in the corner between the two walls. A wall (W3) built of two rows of stones was exposed in Square X13. To its north and close to the western end of the wall was a round installation (L105) that probably served as a column base.

Area B. Several building complexes that were of similar construction to those exposed in Area A were excavated. A square building (L202; c. 10 sq m ) was uncovered in Square X17. Two of its walls (W14, W15) were built of mediumsized fieldstones and preserved 0.3 m high, whereas the other two walls (W13, W17) consisted of large dressed stones and were preserved two courses high (c. 0.5 m ). It seems that the entrance to the building was fixed in the southern part of W15. Stones that had collapsed from the upper course of the walls were discovered inside the building, which was paved with small tamped stones (thickness 5 cm ). A circle of small burnt stones (diam. c. 0.3 m ) that were probably the remains of a built hearth was exposed next to W14. Column bases were preserved in two of the room's corners and it is reasonable to assume that originally, four column bases were in the building. The finds in the building included numerous flint tools, grinding stones and animal bones-the remains of everyday activity. Noteworthy among the flint tools were the axes in various stages of knapping, which were discarded in the wake of mistakes during the knapping process or because the axe broke. South of the building, in Square X16, another building (L203) that was apparently disturbed by deep plowing and only its northern and eastern walls had survived, was exposed. The building was paved with densely packed small stones and in its center was a large flat stone, probably a work station. A shallow depression near the northern wall (W11) contained eleven flint nodules together, surrounded by a high concentration of debitage and a few tools. The knapping debitage is especially interesting since it includes numerous extra thin flakes, which are characteristic of axe preparation. Three axes were found in the debitage; two were in the initial stages of shaping and the third was complete. A shallow depression at the fore part of the building contained a large quantity of debitage. It seems that Building 203 was a knapping spot for producing bifacial tools.
Despite the fact that the excavation area was located the along the western fringes of the site, the building remains and artifacts were well preserved. It seems that a central settlement, which extended across an extensive area (c. 20 dunams), was situated at the site whose plan, which included buildings and built complexes, is similar to that excavated at Sha'ar Ha-Golan. The finds consist of a homogenous flint assemblage that dates the site, as well as numerous poorly preserved potsherds and animal bones. The flint assemblage is dated to the beginning of the Pottery Neolithic period (Yarmukian culture; the second part of the seventh millennium BCE, cal.) and it comprises deeply denticulated and truncated sickle blades (Fig. 3), large 'Amuq-type arrowheads and many axes, some have a polished cutting edge and others are shaped by a technique known as 'the Hula blow' (Fig. 4). The economy of the residents at the site was based on the hunting and herding of domesticated animals, such as goats, sheep, cattle and pigs, as well as agriculture that is evidenced by the large numbers of sickle blades and axes.


1. General view of the excavation area; Hula basin in upper part, Highway 90 and excavation squares in lower part, looking east.


## 2. Excavation plan





1. Area A, plan and sections.

2. Locus 109 and Wall 114 looking southeast

3. Locus 110 and Wall 117. looking north.

4. Pottery: bowls.

5. Pottery.

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## Benē Yehuda

## Final Report

Oren Zingboym
During March-April 2004, a trial excavation was conducted at Moshav Benē Yehuda (Permit No. A-4141; map ref. NIG 2647/7450 OIG 2147/2450), prior to the construction of a school. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Golan Regional Council, was directed by O. Zingboym, with the assistance of Y. Ya'aqobi (administration), A. Hajian (surveying), L. Kupershmidt (metallurgical laboratory), E.J. Stern (pottery reading), H. Tahan (pottery drawing) and N. Getzov (guidance).
The site is located in the southern Golan, in the middle of Moshav Benē Yehuda, where the Skūpiyye village once stood. Architectural elements that could be ascribed to a Byzantine church and burial caves had been documented around the village mosque (M. Kochavi [ed.], Judea, Samaria and the Golan Heights, The 1968 Archaeological Survey, Jerusalem, 1972, Site 180). One of the burial caves was excavated and dated to the Byzantine period (HA-ESI 109:13*-14*). The survey of abandoned villages, conducted by D. Urman, documented numerous other artifacts at the site, including parts of an olive press (relocated to the Qazrin Park in 2008) and tombstones, while the gathered potsherds dated to the Islamic and medieval periods.
Two areas (A, B; c. 100 sq m ) were excavated. Four settlement layers from the Byzantine, Abbasid and Mamluk periods were revealed in Area A, on the southern slope. A rich assemblage of potsherds, mostly dating to the Mamluk period, was collected next to the hilltop in Area B and two cisterns were exposed.
This is the first excavation in the southern Golan that yielded significant artifacts from the Abbasid period; in the past, tombstones inscribed with Kufic script had been documented by D. Urman.

Area A (Fig. 1)
Four strata (to a depth of 1.4 m ) were identified above bedrock.
Stratum 1. Remains of the Syrian village Skūpiyye were identified and a mixed assemblage of potsherds was collected on surface.
Stratum 2. Numerous fragments of pottery vessels from the Mamluk period, without any architectural finds, were discovered.
Stratum 3 (Figs. 2, 3). Building remains that consisted of at least two rooms, separated by a long wall, were exposed. The wall (W114), built of fieldstones and roughly hewn stones in dry construction, was preserved three-four courses high. The room exposed to its southeast (L111) was delimited by a wall (W116), parallel to W114 and another wall that was perpendicular to them (W117). A pillar located to the northwest, next to W114, is indicative of a room whose roof was borne atop arches (Loci 106, 109, 113). This room was delimited on the west by a wall (W115) that was perpendicular to the continuation of W114. The burnt remains inside the room were probably those of the roof, as well as a hearth that contained wood remnants, metal and an unidentified white material.
Many fragments of pottery vessels, including bowls (Fig. 4:1-11) and bases of bowls (Fig. 4:12, 13), a frying pan (Fig. $5: 1$ ), kraters (Fig. 5:2-9), a cooking pot (Fig. 5:10), a jar (Fig. 5:11) and a lamp (Fig. 5:12), were found, as well as numerous cream-ware vessels, including bowls (Fig. 6:1), jars (Fig. 6:2-6), jug bases (Fig. 6:7, 8), a flask (Fig. 6:9), lamps (Fig. 6:10, 11) and decorated fragments (Fig. 6:12, 13), all of which dated to the Abbasid period.
Stratum 4. A stone pavement (L105) with meager ceramic finds from the Byzantine period was exposed atop bedrock, next to a presumed corner outside of the large room and southwest of W115.

## Area B

The area was c. 100 m east of Area A. The farther one ascended up the hill to the northeast, bedrock was closer to the current surface; the farther south and west one went ancient building remains were exposed. The area, excavated to bedrock (depth 0.9 m ), was severely damaged by mechanical equipment that dug down to bedrock level. No architectural remains were uncovered.
The large amount of potsherds dated mostly to the Mamluk period and included decorated and glazed vessels, as well as soft-paste ware, such as a bowl (Fig. 6:14) and a base (Fig. 6:15).

One of the two exposed cisterns was located between Areas A and B. It was discovered open and clean to a depth of c. 5 m and was destroyed after its documentation. The second cistern, north of the excavation areas, had been excavated (HA-ES/ 120). The cisterns should probably be dated to the Byzantine period, although this dating can not be certain.


2. Locus 109 and Wall 114, looking southeast.

3. Locus 110 and Wall 117, looking north.

5. Pottery.


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Bene Beraq, El Waqf

## Final Report



1. Plan.

2. Pottery.

3. Stratum II, Building 1, looking south.

4. Olive press weight, looking north.

5. Stratum III, Building 2 looking west.

Dor Golan
During May-June 2005, a trial excavation was conducted in the western part of the Bene Beraq site, el Wagf, located within the precincts of the adjutancy military base in Ramat Gan (Permit No. A-4489; map ref. NIG 18335-6/66586-8; OIG 13335-6/16586-8), prior to construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by D. Golan, with the assistance of S. Ya'aqov-Jam and E. Bachar (administration), A. Hajian (surveying), T. Sagiv (field photography), P. Gendelman (pottery reading), R. Gat (pottery restoration), M. Shuiskaya (pottery drawing), D.T. Ariel (numismatics) and E. Yannai, L. Rauchberger, D. Barkan and M. Ajami (consultation).
The site, situated on the third kurkar ridge, is named after the Ottoman cemetery that was owned by the waqf. Previous excavations at the site exposed remains dating from the Late Bronze Age until the Early Islamic period (Yediot 16:22 [Hebrew]; HA-ESI 109:96*; 111:37*-38*).
The excavation (c. $10 \times 10 \mathrm{~m}$ ), which was opened along the eastern slope of the kurkar ridge, exposed remains of buildings and installations that were ascribed to four strata (Fig. 1), dating to the twentieth century CE (Stratum I); the Abbasid period (Stratum II); the latter part of the Byzantine and the Umayyad periods (Stratum III); and the Byzantine period (Stratum IV). A few fragments of earlier pottery vessels, found on the surface and in mixed assemblages, were mostly dated to the Hellenistic period. Among these was a local imitation of a mold-made bowl (Fig. 2:1), which together with a Seleucid coin (IAA No. 102227) found on the surface, indicate the existence of earlier remains in the vicinity.

Stratum I. A wall (W103) of a modern building was exposed.
Stratum II. Three rooms of a building (1) were revealed in the northwestern part of the excavation area. The walls (W110, W120, W121, W145, W146), preserved three courses high (c. 0.5 m ), were built of kurkar stones, including fieldstones and several ashlar stones in-between (Fig. 3). Collapse that consisted of kurkar fieldstones (Loci 149, 150) was found next to Walls 110 and 145. The ceramic finds from the rooms and from other loci of this stratum were ascribed to the Abbasid period (ninth-tenth centuries CE) and included glazed bowls (Fig. 2:15, 16), bowls with a kerbschnitt decoration (Fig. 2:17, 18), bowls with black-burnished decorations (Fig. 2:19), jars (Fig. 2:20-22) and a handle with a plastic decoration (Fig. 2:23). Several fragments of pottery vessels from this period were also found in the layer of soil beneath the modern wall (W103).
The top of an earlier wall (W147) was exposed below the floor of the building's northeastern room (L116). However, the stratigraphic ascription of W147 was not ascertained because W121 was built on its southeastern continuation and severed it. An olive press weight (L129; $0.34 \times 0.60 \mathrm{~m}$; Fig. 4) was found farther along the line of W147, to its southeast, possibly suggesting that W147 was part of an oil press. This find indicates that an industrial zone existed in the area prior to the Abbasid period.

Stratum III. Sections of two buildings were ascribed to this stratum. The first (2) was exposed in the southeastern part of the area; its walls (W113, W140, W141; width 0.5 m , height c. 0.3 m ) survived two courses high. Walls 140 and 141 were built of small kurkar fieldstones, whereas W113 was constructed from kurkar stones, including ashlars incorporated together with small fieldstones. Stone collapse that probably derived from the wall was exposed in a trench (L136), opened alongside it. These walls were abutted by a floor of small stones (L131; Fig. 5) on which a coin from the Umayyad period (IAA No. 102229) was found. A similar floor (L148) abutted Walls 113 and 140 from the north. It seems that W113 and the rest of Building 2 continued northward and possibly southward as well, beyond the limits of the excavation area.
A tabun (L130; diam. c. 0.8 m ) lined with small fieldstones, which was partly damaged by a modern trench, was exposed to the west of W113. The potsherds recovered from the tabun dated to the end of the Byzantine and the Umayyad periods. Two floors abutted the tabun; the first was a tamped-earth floor with very small stones (L108), which also abutted W113, and the second was a floor of small stones (L144) that abutted the tabun from the west.
Two walls of the second building ( 3 ; W122, W123), built of small fieldstones and preserved three courses high ( 0.5 m ), were exposed in the southwest of the area. An Umayyad coin (IAA No. 102228) and numerous animal bones were found on the stone floor in the space delimited by these walls (L138).
The fragments of pottery vessels found on the floors and in the fill above them, in Trench 136 alongside W113 and in Tabun 130 included mostly bowls (Fig. 2:8-11) and cooking pots (Fig. 2:12-14) that dated to the end of the Byzantine and the Umayyad periods (sixth-eighth centuries CE).

## Stratum IV.

North of Building 3 and c. 0.5 m lower were meager and vague building remains, founded on bedrock (L142, W143) and half of a circular installation (L133; diam. c. 0.5 m ) that was dug into the ground and lined with small perpendicular stone slabs. Although only small portions of this stratum were exposed, the ceramic artifacts from the installation, the fill alongside it (L125) and the fill next to W143 (L126), which included bowls (Fig. 2:2-4) and mostly jars (Fig. 2:5-7), were homogenous and dated to the Byzantine period (fourth-sixth centuries CE). A coin from the time of Constantine I (fourth century CE; IAA No. 102230) was found on the surface.


## (51)



3. Stratum II, Building 1, looking south.

4. Olive press weight, looking north.

5. Stratum III, Building 2, looking west.

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Bet Guvrin Bypass Road, Survey
Preliminary Report
Yehuda Dagan
During June 2001, a survey was conducted along the route of the Bet Guvrin bypass road (License No. G-14/2001; central map ref. NIG 19130/61400; OIG 14130/11400), in the wake of re-planning a section of Highway 38, slated to detour the Bet Guvrin archaeological remains. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Department of Public Works south district, was directed by Y. Dagan, with the assistance of M. Haiman and L. Barda (GPS).

The planned route of the road circumvents the Bet Guvrin police station and Qibbuz Bet Guvrin from the west, ending in the vicinity of the Nehusha Junction. The northeastern part of the planned route overlaps the route that was surveyed in 1994 (ESI 16:120-121). Although the planned road is only 30 m wide, a 200 m wide strip was surveyed in accordance with the area that is likely to be damaged when the road is paved.

Some 100 survey sites were explored, most of which were inspected in the past within the framework of the Judean Shephelah survey (Map of Bet Guvrin [107], Map of Gat [94]); however, this time they were carefully documented with the aid of GPS. The surveyed sites included farming terraces, rock-hewn caves, installations for processing agricultural produce and two limekilns.


1. Plan.

2. The hypocaust floor, looking north.

3. Pottery.

During July 2001, a trial excavation was conducted in Bet Nehemya (Permit No. A-3468; map ref. NIG 19614-5/653571-601; OIG 14614-5/153571-601), in the wake of damage to antiquities caused by development work. The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Nagorsky, with the assistance of R. Abu Halaf (administration), A. Hajian (surveying), E. Belashov (drafting), L. Kupershmidt (metallurgical laboratory), I. Lidski (pottery drawing) and D.T. Ariel (numismatics).
Two adjacent squares were opened next to fifteen other squares, which had previously been excavated at the site (License No. G-59/1998), but did not produce a coherent architectural plan.

Square A (2.5 $\times 3.5 \mathrm{~m}$; Fig. 1). A section of a hypocaust floor (L12; Fig. 2), which belonged to a bathhouse from the Byzantine period, was exposed. A floor of square clay bricks $(0.2 \times 0.2 \mathrm{~m})$ that were placed atop bedrock was preserved in the southern half of the square; a gray plaster floor (thickness $3-4 \mathrm{~cm}$ ) that covered the bricks was found in the northern half, which had been repaired. The cement bases of the hypocaust columns ( $0.2 \times 0.3 \mathrm{~m}$ ), affixed to the floor with plaster and arranged in three rows, were uncovered. Three of the bases in the eastern row survived, two remained in the center and one was preserved in the western row. The floor continued beyond the limits of the square into the previous excavation area, where the excavator (Y. Haggai) claimed a kiln was found; however, it seems that this was the furnace used to heat the hypocaust.
The layer of collapse that covered the hypocaust contained fragments of ceramic pipes and potsherds that dated to the Byzantine period, including a bowl (Fig. 3:1), a krater (Fig. 3:2), a cooking pot (Fig. 3:3), holemouth jars (Fig. 3:4-6), a jar (Fig. 3:7) and jugs (Fig. 3:8, 9).

Square B ( $2.5 \times 4.5 \mathrm{~m}$ ). A white mosaic pavement that consisted of large tesserae $(2 \times 3 \mathrm{~cm})$ was exposed in the western side of the square. It was founded on bedrock and abutted a wall foundation (W14), oriented east-west. The overlying soil fill contained potsherds that dated to the Byzantine period. Two coins were found on the floor: a half-follis from the time of Justin, struck in the mint of Thessaloniki (569/70; IAA 97614) and an Abbasid follis from the ninth century CE (IAA 97615) that may have originated from a disturbance, caused by a ditch dug nearby.

The excavation finds, the hypocaust and mosaic floor attest to the existence of a bathhouse that dated to the Byzantine period.

2. The hypocaust floor, looking north.

3. Pottery.

## Bet She'an

Preliminary Report
Walid Atrash
During December 2006, a trial excavation was conducted southeast of the center of the old city in Bet She'an (Permit No. A-4982 map ref. NIG 24756/71155; OIG 19756/21155), prior to the construction of an information center. The excavation, undertaken on behalf of the Israel Antiquities Authority and sponsored by the Bet She'an Economic Company, was directed by W. Atrash, with the assistance of Y. Lavan and Y. Ya'aqobi (administration), T. Meltsen (surveying and drafting) and D. Syon (photography).
One square $(4.8 \times 5.6 \mathrm{~m})$ was excavated south of the saraya, in the southeastern corner of Independence Park (Fig. 1). Two construction layers (Figs. 2, 3) were exposed, the earlier stratum (II) dating to the Abbasid period and the later (I), to the Mamluk period (thirteenth-sixteenth centuries CE).

Stratum II. Remains a massive wall (W101; length 5.8 m , width 1.7 m ), which was founded on a fill of gray soil, were exposed (Fig. 4). The wall, oriented north-south, was built of two rows of dressed basalt stones and a core of small basalt fieldstones. It was preserved to a maximum of four courses high (c. 1.4 m ) and extended beyond the limits of the excavation. The bottom course of the wall (width 1.9 m ) was wider than the upper courses and protruded c. 0.15 m from the eastern face of the wall and c. 0.05 m from its western face. Two fragments of limestone columns (diam. of each 0.35 m ) were incorporated in the bottom course. A fragment of a limestone column, basalt stones and many potsherds from the Umayyad and Abbasid periods were discovered in the layer of fill upon which the wall was founded. Wall 101 probably belonged to a public building from the Abbasid period (eighth-ninth centuries CE). It seems that the center of the settlement from the Abbasid period, which included a large mosque, market and main street, was located in this region (HA-ES/116).

Stratum I. Two ovens (tabun; 1, 2) and two walls (W105, W106) were exposed. Tabun 1 (diam. c. $1 \mathrm{~m} ;$ Fig. 5) was built on top of W101. The side of the tabun consisted of small basalt fieldstones, as well as mud bricks (preserved height 0.15 $\mathrm{m})$. Both the floor and the side of the țabun were coated with lime-based plaster. North of the țabun and above W101, a layer of ash and gray earth, which contained numerous potsherds of the Mamluk period, was found. Iabun 2 (diam. c. 1 m; Fig. 6) was built west of W101; the western part of the tabun was located beyond the limits of the excavation. The side of the tabun (preserved height 0.7 m ) and its floor were built of mud-brick material. The tabun was filled with gray soil that was mixed with numerous potsherds from the Mamluk period. Wall 106 enclosed Tabun 2 on the east. The wall (length 2.2 m , width 0.5 m , preserved height 0.7 m ) was built of limestone and basalt fieldstones and its southern part abutted Wall 105 (length 1.75 m , width 0.6 m ), which was oriented north-south, built of limestone and basalt fieldstones and preserved a single course high ( 0.3 m ). It seems that the two ovens, as well as the two Walls 105 and 106, were related to a residential building, which was founded above the remains of walls from the Abbasid period.

5. Tabun 1, looking west.

6. Tabun 2, looking south.


1. Location map.


2. The excavation square, looking south.

3. The soil fill on which W101 was founded, looking west.

4. Iabun 1, looking west.

5. Tabun 2 , looking south.

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Bet She'an<br>Final Report



1. The excavation areas.

2. Area A, Square 1, pavement from the Crusader period, looking south.

3. Area B, plan and section.

4. Basalt bowl.

5. Ivory inlay.

7/9/2009
During June 2003, a salvage excavation was conducted south of the saraya in Bet She'an (Permit No. A-3919; map ref. NIG 24760-6/71140-50; OIG 19760-6/21140-50), prior to installing sewer infrastructures. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Bet She'an Economic Development Company, was directed by Y. Tepper, with the assistance of A. Markov (registration), Y. Ya'akoby (administration), V. Essman, V. Pirsky and T. Kornfeld (surveying and drafting), H. Smithline (field photography), N. Zak (plans), E. Altmark (metallurgical laboratory), E.J Stern (pottery reading), L. Porat (pottery restoration), H. Tahan (pottery drawing), C. Amit (studio photography), Y. Gorin-Rosen (glass), A. Berman and R. Kool (numismatics), N. Raban-Gershtal and G. Bar-Oz (archaeozoology), O. Shamir (textiles) and L. Di Segni (epigraphy).

Four excavation areas (A-C, E; Fig. 1), in which six half squares were excavated, were opened south of the saraya and east of Highway 90. Building remains that ranged in date from the Byzantine until the Ottoman periods were exposed. Due to technical limitations, only the ceramic finds from Area A are published. A large excavation that revealed a colonnaded street from the Byzantine period had previously been conducted nearby (HA-ES/116).

Area A (Fig. 2). A section excavated in the northern part of the area revealed in the bottom stratum the top of a wall (W136) and ceramic finds from the eighth century CE, including kraters (Fig. 3:1), fragments of engraved pottery vessels (Fig. 3:2) and jars (Fig. 3:3). A stone vessel and a goat's astragal, perforated in the center and most likely used in a game, were also found in the section.
The principal stratum in the area included building remains from the Crusader period (twelfth century CE). The entrance of a building (L119), whose doorjambs were built of basalt ashlar stones, was exposed in the southern part of the area (Square 1). On either side of the entrance, walls (W104, W108) were preserved four courses high. Two ancient floors were exposed west of the entrance and below them was a paved level (L140) that may have been a street. Its elevation matches that of a street that was uncovered in a previous excavation nearby (Fig. 4). A tabun (L125) filled with small stones was exposed below the paved level. Masonry debris (L106) that belonged to W108 and the building that had stood there and collapsed was discovered north of Pavement 140. A paved surface (L123; width 3.75 m) was exposed in the northern part of the area (Square 2). It was delimited by two walls (W124, W128), which had narrow stone benches of sorts next to them. Fragments of pottery, glass vessels and marble slabs, coins, an iron knife, bone implements and stone and basalt objects, including a sling stone, weight, grinding stones and bowls, were discovered in soil layers that had accumulated on the pavement to the height of the walls.
The ceramic finds included a handmade bowl decorated with red-painted stripes on the rim (Fig. 3:4), locally produced glazed bowls (Fig. 3:5,6) and imported glazed bowls from the Aegean Sea region (Fig. 3:7) and decorated with brown paint (Fig. 3:8), a frying pan (Fig. 3:9), a cooking pot (Fig. 3:10) and jars (Fig. 3:11). An intact juglet (Fig. 3:12), discovered below the entrance threshold, had been apparently placed as a foundation offering during the construction of the building. The glass artifacts included the base of a bowl from the Late Roman period and an elongated glass bead with an octagonal cross-section. Evidence of glass industry was also uncovered.
A floor from the Mamluk period (thirteenth-fourteenth century CE) was exposed above the building remains from the Crusader period. It was overlain with ceramic finds, including handmade bowls decorated with red geometric designs (Fig. 3:13), a bowl with blue and black decoration (Fig. 3:14), a glazed bowl (Fig. 3:15), an amphoriskos decorated with a pale green zigzag on the interior and exterior (Fig. $3: 16$ ) and an amphoriskos that was probably used in the manufacture of molasses (Fig. 3:17).
A layer of fill that contained ceramic finds from the ninth-eleventh centuries CE was exposed above the floor from the Mamluk period. This fill, which seems to have served as a foundation for later buildings, was brought here from an unknown location, thereby creating reverse stratigraphy. The ceramic finds in the fill included glazed bowls decorated with incising and green splashes (Fig. 5:1-3), brown-painted bowls with transparent glazing (Fig. 5:4, 5) and a buff-ware jug (Fig. 5:6). A hoard of coins from the Fatimid period (eleventh century CE), probably wrapped in a small linen bag, was also found in this fill (below).
Beneath the surface, dating to the Ottoman period and superposing the layer of fill, was another stratum from the Mamluk period, dating no later than the fourteenth century CE. The ceramic finds in this layer included handmade kraters (Fig. $5: 7$ ), imported glazed bowls decorated with incising (Fig. $5: 8$ ), similar bowls that are painted and slipped (Fig. 5:9), a vessel decorated in red, blue and black (soft paste ware; Fig. 5:10), a flask (Fig. 5:11), a buff-ware jug that was probably locally produced (Fig. 5:12) and a fragment of a clay pomegranate (Fig. 5:13).

Area B (Fig. 6). Travertine sediment, wherein fragments of pottery vessels from the latter Byzantine and the beginning of the Umayyad periods were mixed, was exposed in the bottom stratum (L227). The soil above it contained fragments of pottery vessels from the same periods, as well as a coin from the eighth century CE (IAA 80584). This layer served as a foundation for an overlying stone pavement (L221; Fig. 7) that dated to the Abbasid period. Three earthen floors belonged to the same period (eighth-ninth centuries CE), yet were cut when the Crusader building was constructed.
Two wide, well-built ashlar walls (W204, W205; width 0.7 m , preserved height 1.7 m ) from the Crusader period were exposed (Fig. 8). They formed a corner whose angle was less than $90^{\circ}$. Two stepped benches (steps?) at the top of W205, built of ashlar stones in secondary use, were placed atop a fill of medium and large stones. It became clear during the antiquities inspection, overseeing the infrastructure work for the sewer line that W205 continued further south until Area A and the two areas apparently belonged to a single context. The foundation trenches of the walls contained ceramic finds that did not postdate the Crusader period (twelfth century CE), including a buff-ware jug stamped with round seal impressions on the base of its neck, a clay lamp and bowl fragments (soft-paste ware) that are decorated in shades of red, blue and black and adorned with pseudo-writing, as well as other artifacts, including a fragment of a decorated stone chancel screen that probably originated in a church, an octagonal weight decorated with incised circles, a basalt bowl (Fig. 9), ivory inlays (Fig. 10), bone inlays (Fig. 11) and fragments of polychrome mosaics (c. 95 tesserae per 10 sq cm ) in eight colors.
Earthen floors and a fieldstone surface were built in the Mamluk period on the walls from the Crusader period. A canine burial was discovered along the edge of an earthen floor (see below). The ceramic finds from these floors dated to the thirteenth-fourteenth centuries CE.
While overseeing work at the site, a fragment of a marble slab ( $0.17 \times 0.35 \mathrm{~m}$, thickness 5.5 cm ) engraved with part of a Greek dedicatory inscription (Fig. 12), which is the lower left part of a larger inscription, was discovered. The inscription reads as follows:
[This work too...] was done [by Marinus (?)] son of Silvinus the most distinguished [count and principalis].
The decipherment of the inscription indicates that it was dedicated by the 'son of Silvinus', probably a descendent of Silvinus, son of Marinus (Silvinus' son?), one of the city leaders from the Byzantine period, in honor of some urban construction. We know from construction inscriptions that were discovered at Bet She'an in the past (Di Segni L. 1999 New Epigraphical Discoveries at Scythopolis and in Other Sites of Late Antique Palestine. In XI Congresso Internazionale di Epigrafia Greca e Latina, Rome 1997. Pp. 637-638) that Silvinus, son of Marinus, was responsible for building the Sigma in 506/7 CE, paving the road alongside the amphitheater and building the water carrier next to it in $521 / 2 \mathrm{CE}$. It is reasonable to assume that his descendant, who is mentioned in the inscription, also continued this tradition. The name of the son was that of his grandfather, as was customary at that time and hence, it was restored in the inscription as Marinus.

Area C (Fig. 13). A tamped earth floor (L316) was exposed in the bottom stratum. Above it were four floors, one atop the other, which abutted the southern side of Wall 309. The finds in this stratum, dating to the Abbasid and Umayyad periods (L325), included ceramic artifacts, such as a clay lamp, fragments of stone and basalt vessels, among them a basin that was hewn in a fragment of a granite column, and several shells. Coins that dated to the end of the thirteenth century CE (IAA 80561, 80568, 80576), two handles of a metal vessel, a thimble, a loom weight and industrial glass waste were discovered on top of the upper floor. Two walls (W310, W314) that probably belonged to a building were discovered in the level, overlying the stratum ascribed to the Abbasid and Umayyad periods. Fragments of marble columns and a Corinthian capital were incorporated in W314. A column fragment that most likely supported the roof was positioned upside down next to W310. The walls were dated to the Crusader period (twelfth century CE and no later than middle of thirteenth century CE), based on ceramic finds and coins. Building remains that dated to the Ottoman period were revealed in the upper stratum.

Area E (Fig. 14). A soil level and numerous potsherds (L512) that probably constituted a refuse pit from the Byzantine period were discovered at the bottom of the excavation. Overlaying it were the remains of a building that included a well tamped, crushed chalk floor (L508) and a wall (W510). It seems that the building was constructed at the earliest in the twelfth century CE and continued to exist in the Mamluk period (thirteenth-fourteenth centuries CE). Above Floor 508 were two levels of ash, separated by fragments of pottery vessels and coins (IAA 80578, 80583) that dated to the thirteenth-fourteenth centuries CE . A hearth from the Ottoman period, probably the remains of an oven, was discovered in the uppermost stratum. It seems that some of the ash from the hearth penetrated into the habitation levels from the Mamluk period.

## Coins and a Coin Hoard

Ariel Berman, Robert Kool and Orit Shamir
Forty-eight coins were recovered from the excavation, twenty-nine of which were completely or partially identified (Table 1; IAA 80561-80591). For the most part, the dating of the coins is consistent with that of the pottery. In addition, a hoard of coins (IAA 107931-108027; Fig. 15) in a lump, wrapped in a small white linen bag, was discovered in Area A (L115). The hoard contained one gold dinar (Fig. 16), two silver dirhams and 131 coins and fragments of silver coins with a total weight of 46.67 grams. The identified coins were struck in the Filastin mint at Ramla. The gold dinar dates to the second year of the rule of Al-Hassan Ben Ahmad Abu 'Alī Al-'Asam of the Karmatite dynasty (972/3 CE). The rest of the coins dated to the time of the Fatimid dynasty. Based on the date of the coins, it seems that they were hidden in the tenth century CE, after the beginning of Ma'add al-Mu'izzreign (953-975 CE). It seems that the silver coins (dirhams) and the coin fragments were valued by weight, due to a shortage of copper coins. It is known from manuscripts in the Cairo geniza (tenth-eleventh centuries CE) that during this period payments were frequently made by a bundle of silver that was sealed and marked with the designation of the weight, quality and number of the coins.

| $\left\lvert\, \begin{array}{\|\|l\|} \hline \text { Area } \\ \hline \text { Period } \end{array}\right.$ | A | B | C | E |
| :---: | :---: | :---: | :---: | :---: |
| Roman (1st-4th centuries CE) | Provincial |  |  | Geta, Bet She'an |
| Byzantine (4th7th centuries CE) | Late Roman; Justin I, Nicodemia | ByzantoArabic | 2 (1-Justin II, Alexandria) |  |
| Umayyad (7th8th centuries CE) | Marwan Ibn Bashir, Homs; Anonymous | 1 |  | 1 |
| CrusaderAyyubid (12th13th centuries CE) | Ghazi I, Halab; AI-Nasir II, Halab; Ayyubid, Hamat |  | Al-'Adil I, Damascus; AlMansur II, Hamat; Ayyubid, Hamat (2) |  |
| Mamluk (13th15th centuries CE) | Kitburgha, Damascus; Mamluk |  | Baybars I, Hamat; Abu Bakr, Damascus; Hajji II, Damascus; Sha'ban, Damascus; Mamluk (2) | Al-Salih Isma'il, Damascus (2) |
| Ottoman (17th century CE) |  |  | Suleyman II, Constantinople |  |
| Total | 10 | 2 | 13 | 4 |

Three hundred and one animal bones and bone fragments were discovered in the excavation, mostly coming from the Crusader and Mamluk strata. The main animals were sheep, goats and cattle, with a few camels, donkeys, fowl and pigs. Dog bones were discovered in the Mamluk strata, as well as an in situ canine burial. The composition of the animal bones and the evidence arising from the butchery marks on the sheep and goat bones indicate that during the Crusader and Mamluk periods the settlement's subsistence was predominantly based on agriculture.
The excavation has revealed a settlement in this part of the city that began in the Byzantine period and continued until the Ottoman period. Especially noteworthy is the complex from the time of the Crusader Kingdom of Jerusalem, which is located near the Crusader citadel. Remains that dated to the twelfth century CE-the First Kingdom of Jerusalem and above them were remains from the thirteenth century CE-the Second Kingdom of Jerusalem, were exposed. Remains from the Mamluk (thirteenth-fourteenth centuries CE) and Ottoman periods were found in the upper layers.


3. Area A, pottery.

4. Area A, Square 1, pavement from the Crusader period, looking south.



7. Pavement 221 and Wall 205 (left), looking south; earthen floors visible in southern section.

8. Corner of a building from the Crusader, looking north.

9. Basalt bowl.

10. Ivory inlay.


13. Area C, Square 1, plan and section.


1-1
14. Area E, plan and section.

15. Coin hoard wrapped in cloth.

16. Gold coin from the Fatimid period.

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## Bet She'an

## Preliminary Report



1. Location map.

2. Area A. Stratum II, looking west.

3. Area A, Stratum II, Room 2. looking west.

4. Area A, Stratum II, Room 3, looking west.

5. Area B, Stratum II, Wall 148, looking east.

During December 2006-January 2007, a trial excavation was conducted southeast of the Bet She'an old city center (Permit No. A4975; map ref. NIG 24782/71161; OIG 19782/51161), prior to the construction of a transportation terminal. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Bet She'an Economic Company, was directed by W. Atrash, with the assistance of F. Abu Zidan (area supervision), Y. Lavan and Y. Ya'aqobi (administration), T. Meltsen (surveying), A. Shapiro (GPS), D. Syon (field photography), D. Sandhouse-Re'em (pottery) and D.T. Ariel (numismatics)
The excavation area was located east of Highway 90, northeast of the Saraya building and near to the site of a school from the Ottoman period that stood until after 1948 (Fig. 1). Previous excavations to south and west of the current area had revealed building remains that dated to the Byzantine, Umayyad and Mamluk periods (HAESI 116:12*-16*; HA-ESI 120).
Six excavation squares were opened in two areas (A, B). A layer of debris that dated to the Byzantine period (fifth-sixth centuries CE), residential buildings from the Abbasid period (eighth-ninth centuries CE) and building remains and installations from the Mamluk period (thirteenth-fifteenth centuries CE) were exposed.

Area A. Four squares were excavated and three strata were identified.
Stratum III. A thick layer (L140; depth up to 3 m ; Fig. 2) that contained large amounts of potsherds, glass, basalt and bones from the Byzantine period was exposed in the northeastern corner of the area. This was apparently debris, which was discarded into and filled a channel that ran in an east-west direction. The channel was inside the Byzantine city walls and travertine layers that formed on its banks (Fig. 3) indicated that water flowed in it.
Stratum II. Remains of two residential buildings that had two construction phases were uncovered. The two structures were separated by a wall (W105; min. length 8 m , width 0.75 m , preserved height 1.5 m ; Fig. 4), oriented north-south and built of basalt fieldstones. The northern part of W105 was founded on Stratum III and its southern part-on travertine. Adjacent to the western side of W105 were three rectangular rooms of the western building
The northern room (Room 1; min. length c. 2.5 m , width 3 m ) continued northward beyond the limits of the excavation area. The room was delimited by Wall 141 (length 2.4 m , preserved height 1.2 m ; Fig. 5) in the west, whose eastern side was only exposed. Wall 141, founded on a layer of debris from the Byzantine period, was well-built of dressed basalt stones arranged in straight courses with wedges between them. The southern wall of the room was buried beneath a wall from Stratum I (W104). Two floors were identified: the earlier floor (L146) of gray soil mixed with small fieldstones and potsherds was founded on fill (L147) that contained potsherds and seven coins from the Byzantine period. The later floor (L114), composed of soil, small fieldstones and potsherds, was founded on a layer of brown earth (L134) that contained potsherds and a broken jar from the Abbasid period (Fig. 6). Floor 114 was covered with a layer of brown soil fill (L111) that contained fragments of pottery vessels from the Abbasid period, including a juglet and an intact bowl (Fig. 7).
The central room (Room 2; min. length 3.5 m , width 2 m ) continued westward beyond the limits of the excavation area. It was delineated by Wall 108 (length 2 m , width 0.8 m , preserved height 0.6 m ) on the south and the wall on the north, buried beneath W104, was not exposed. A pillar (W125; $0.7 \times 1.1 \mathrm{~m}$, preserved height 0.42 m ) stood in the western part of the room. An entrance (width 1.1 m ; Fig. 8) in the eastern part of W108 led to another room on the south. The room had a tamped-earth floor (L143), founded on fill (L144), which contained potsherds from the Byzantine and Abbasid periods. A ceramic pipe in a channel (L144a; Fig. 9) that sloped to the east passed through this room below the foundation of W105 and continued eastward. The remains of a tabun (L145) were exposed on Floor 143 in the southwestern corner of the room, below a layer of ash. A layer of brown earth (L117) that contained fragments of glass and potsherds from the Abbasid period was deposited on Floor 143 and around Tabun 145.
The southern room (Room 3; $2.5 \times 2.5 \mathrm{~m}$; Fig. 10) was delimited by Wall 124 (length 6 m , preserved height 1.5 m ) on the south, Wall 137 (length 2.5 m , width 0.9 m , preserved height 0.85 m ) on the west and Wall 108 on the north. The walls, built of basalt fieldstones, were founded on travertine. The floor (L136) was composed of beaten earth in the northern part and a travertine surface in its southern part. Layers of collapsed masonry stones and gray soil (L115), which contained potsherds from the Abbasid and Mamluk periods, were discovered on Floor 136.
The eastern building, to the east of W105, consisted of a room and a courtyard (Fig. 11).
The room (Room 4; $4.5 \times 10.0 \mathrm{~m}$; only its northwestern part was exposed) was delimited on the north by Walls 120 and 163 (length 10 m , width 1 m , preserved height 0.8 m ) that were built of basalt fieldstones and founded on travertine. Two openings in the walls (width of western 0.7 m and eastern 2 m ) led to a courtyard on the north. A pillar (W123) stood in the middle of the room, whose tamped-earth floor (L119) contained potsherds from the Byzantine, Umayyad and Abbasid periods. The floor was founded on a layer of soil mixed with ash (L142). A ceramic pipe that ran through a channel, oriented north-south (L142a), was discovered in the floor bedding. On the bottom of the channel was a layer of gray soil (L118) that contained bones and potsherds from the Abbasid and Mamluk periods.
The courtyard was covered with a layer of debris (L138) that contained potsherds from the Byzantine period. A channel in the southeastern corner of the courtyard was hewn in the travertine and a layer of light yellow soil (L139) on its bottom contained potsherds from the Byzantine and Abbasid periods.

The style of construction, the ceramics and the coins indicate that the two structures can be dated to the Abbasid period (eighth-ninth centuries CE).

Stratum I was severely damaged during the construction of the school in the Ottoman period. Remains of a room ( $2.7 \times$ 2.9 m ) that utilized several walls of the Stratum II building were exposed. The walls (W103, W104, W121), built of basal fieldstones, were preserved a single course high. The partly preserved floor (L113) consisted of basalt flagstones. The room was founded on the remains of walls from Stratum II and on a layer of fill that contained potsherds dating to the Abbasid and Mamluk periods. To the east of the room was a wall (W106; min. length 2 m , width 0.75 m ), preserved a single course high and oriented north-south; it extended northward beyond the limits of the excavation area. The wall, built of basalt fieldstones, was founded on fill (L107) that contained potsherds from the Abbasid and Mamluk period. Stratum I should probably be dated to the Mamluk period.

Area B (Fig. 12) was c. 6 m east of Area A; two squares were opened and two strata were identified.
Stratum II. Remains of two parallel walls (W148, W149), oriented north-south, were exposed. The walls, built of basalt and limestone fieldstones in a massive construction, were founded on travertine and extended beyond the excavation area. An opening (width 1.9 m ; Fig. 13) was set in the middle of the eastern W 148 (min. length 5 m , width 1.3 m , preserved height 1.5 m ) and another opening (width 1.1 m ; Fig. 14) was in the middle of the western W149 (min. length 5 m , width 1.1 m , preserved height 1 m ), which was c .4 .9 m distance from W 148 . A fragment of a limestone column was incorporated in the foundation course of W149. The ceramic artifacts recovered from the foundation trenches (Loci 160, 161) indicate that the walls date to the Abbasid period. A floor (L155) of mud-brick material, founded on fieldstone fragments and travertine, was discovered between the two walls. The floor was overlain with a layer of ash that contained potsherds from the Abbasid and Mamluk periods.
Stratum I. The openings in Walls 148 and 149 were sealed with rows of fieldstones and the area was converted into a courtyard. A circular tabun (oven; L131; diam. 0.7 m ), whose floor of crushed chalk was founded on a layer of basalt stones and on part of W149's eastern side, was exposed in the southwestern corner of the courtyard. A second tabun (L154; diam. 0.4 m ), which had a mud-brick material floor, was exposed in the northeastern corner of the courtyard, nex to W148. Above the blocked opening in W148 was a third tabun (L130; diam. c. 0.7 m ; Fig. 15) whose floor and sides
were of mud-brick material. Above the remains of Floor 155 in the middle of the courtyard was an installation (L153), composed of a broken limestone mortar and a floor of mud-brick material. The installation contained a large quantity of ash and was probably used for cooking. A large amount of ash and potsherds that dated to the Mamluk period was revealed inside the ovens and on Floor 155 in the courtyard.
The western part of the excavation area was severely damaged by a cesspit whose walls were built of basalt. The pit contained a few potsherds that dated it to the Ottoman period and it apparently belonged to the school that had once stood there.

The excavation has contributed to the understanding of the settlement near the Bet She'an's city walls from the Byzantine period until the end of the Ottoman period. The excavation has shown that the area was vacant during the Byzantine and Umayyad periods, whereas a residential quarter founded on virgin soil, was established during the Abbasid period. Construction in the area was resumed during the Mamluk period.


1. Location map.


2. Area A, Stratum III, travertine deposits, looking north.

3. Area A, Stratum II, looking west.

4. Area A, Stratum II, Room 1, looking south.

5. Area A, Stratum II, Room 1, a jar on the earlier floor, looking south.

6. Area A, Stratum II, Room 1, a bowl on the later floor, looking west.

7. Area A, Stratum II, Room 2, looking west.

8. Area A, Stratum II, Room 2, a ceramic pipe in the floor bedding, looking west.

9. Area A, Stratum II, Room 3, looking west.

10. Area A, Stratum II, Room 4, looking west.

11. Area B, plan and section.

12. Area B, Stratum II, Wall 148, looking east.

13. Area B, Stratum I, Wall 149 and Installation 153, looking west.


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## Bet She'an, Shikun Alef Final Report



1. Plan.

2. Stratum II, looking northeast.

3. Stratum I, looking south.

4. Wall 5, looking west.

5. Stratum I, Phase 1, pottery.

## Walid Atrash

8/10/2009
During July 2003, a salvage excavation was conducted in Shikun Alef in Bet She'an (Permit No. A-3949; map ref. NIG 2466/7125; OIG 1966/2125), in the wake of exposing antiquities while digging foundations for construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by W. Atrash, with the assistance of D. Avshalom (administration), T. Meltsen (surveying), D. Sandhouse (ceramics), A. Pikovski (pottery drawing) and D. Syon (numismatics).

The single-square excavation was southwest of the northwestern gate ('Caesarea Gate') of the Roman city and beyond the city walls. A residential building, which had survived by two rooms, was exposed. Two strata (I, II) that dated to the Roman and Byzantine periods were discerned and two construction phases were noted in Stratum I (Fig. 1).

## Stratum II

Remains of two walls, dating to the Roman period (third century CE; W19, W22; 0.73 m below surface; Fig. 2), were discovered in the northwestern corner of the square. Wall 19, oriented east-west, was preserved a single course high (exposed length 0.9 m , width 0.8 m , height 0.37 m ). It was founded on travertine bedrock and was built of different size basalt fieldstones. Wall 22, oriented north-south, was also preserved a single course high. Its construction was identical to that of W19, with which its southern end formed a perpendicular corner. The western part of W22 was completely destroyed probably when a modern sewer was installed. The walls were dismantled down to their foundation when the residential building in Stratum I was constructed. A layer of gray soil (L18) was found in the corner formed by the two walls. A few potsherds that dated to the third century CE were recovered from the foundation trenches of the walls, including a fragment of cooking bowl with a sunken rim (Fig 3:1) and a jar with an everted and thickened rim (Fig. 3:2).

## Stratum I

Remains of two architectural units (eastern and western), which belonged to a residential building that dated to the Byzantine period (fourth century CE; Fig. 4), were exposed. Two construction phases, Phase 2, dating to the Early Byzantine period and Phase 1 from the Late Byzantine period, were discerned.

## The Eastern Unit, Phase 2

Three walls of a rectangular room (W5 in west, W23 in north and W24 in south; $3.0 \times 5.5 \mathrm{~m}$ ) were exposed. Wall 5 separated between the eastern and western units. The wall, built of basalt fieldstones and oriented north-south (exposed length 5.5 m , width 0.65 m ; Fig. 5), was preserved three courses high (c. 0.96 m ) and had two symmetrical openings (width c. 0.72 m each) at its two ends. The core of W5 consisted of small basalt stones, gray soil and lime. The northern part of the wall was founded on W22 and its southern part was set on a layer of gray soil fill, which contained many small pieces of travertine and a few potsherds that dated to the end of the third century CE, deposited on bedrock. The construction of the northern W23 (exposed length 0.5 m ) and the southern W24 (exposed length 0.7 m ) was identical to that of the western W5. The floor of the unit was not preserved. A drainage channel (T2; length 5.5 m , width 0.2 m , height 0.22 m ) that crossed the unit diagonally and connected to another channel ( T 1 ) in its southwestern corner was exposed The floor of the channel (L11; Fig. 6) consisted of mud-brick pieces set on a layer of gray soil fill (L20). The fill layer comprised many small pieces of travertine and a few potsherds that dated to the end of the third century CE. The walls of the channel (east-W12, west-W13) were built of mud-brick lumps bonded with clay. The channel was covered with basalt slabs (W9; length 0.6 m , width $0.25-0.50 \mathrm{~m}$ ), many of which were building stones in secondary use whose dressed surface was placed facing the interior of the channel (see Fig. 4).

## The Eastern Unit, Phase 1

A mud-brick drainage channel (T1; width 0.19 m , height 0.2 m ) lined with potsherds (see Fig. 6) was built next to Walls 5 and 23. The floor of the channel (L16) was founded on a layer of small flat basalt stones (height 0.1 m ). The covering of the channel was composed of fieldstones (W6; length $0.3-0.4 \mathrm{~m}$, width $0.15-0.20 \mathrm{~m}$ ), some of which were missing. The channel was sealed with a layer of light gray alluvium (L14) that contained several potsherds from the first half of the fourth century CE, including a cooking pot with a triangular rim (Fig. 7:8), jars with a long neck and folded rim (Fig. 7:12), a jar with a ribbed body and thickened and folded rim (Fig. 7:13), a juglet with a ribbed body and high disk base (Fig. 7:16) and five coins from the third century CE (see table below). Between the two channels was a layer of tamped light gray soil (Loci 4, 10; see Fig. 6) that contained small chunks of limestone, lime, four coins from the third century CE and potsherds from the fourth century CE that included a handmade basin with four grooves in its rim (Fig. 7:1), a krater with a ledge rim and an incised wavy decoration (Fig. 7:2), a carinated cooking krater with a wide everted rim and two prominent grooves (Fig. 7:3), a cooking krater with a ribbed body, plain rim and two horizontal loop handles (Fig. 7:4), cooking pots that have a rim with two grooves (Fig. 7:5, 6), a jar with a molded rim that has an inner groove (Fig. 7:11), a jar with a flat, slightly everted rim and a ridge at the base of the neck (Fig. 7:14), a jar with a long neck and a cut, inverted rim (Fig. 7:15) and two lamp fragments, the first has a radial design (Fig. 7:17) and the second is adorned with stamped triangles (Fig. 7:18), both dating to the first half of the fourth century CE. The two channels were covered with a layer of gray soil fill (L1; thickness 0.2 m ) that contained mud-brick pieces, lumps of plaster, potsherds, tesserae, a coin and modern material. The ground level of the excavation area had been removed in the past, probably during development works and re-covered again with soil fill that contained archaeological material from the immediate vicinity.

The Western Unit, Phase 2
The eastern wall (W5) and a small section of the floor (L17F; $0.3 \times 0.5 \mathrm{~m}$ ) were preserved. The entrance to the unit was via the openings in W5. The floor was a plain white mosaic, laid atop a bedding of small flat basalt stones; the northern and western parts of the floor had been destroyed in the past during the installation of a sewer pipe.

## The Western Unit, Phase 1

During this phase, slight changes were made to the plan of the unit. A bench (W3; length 3.3 m , width $0.45-50 \mathrm{~m}$, preserved height above floor 0.26 m ) that was built next to W5 blocked the southern opening in the wall (L15) and a mosaic floor (L2F) was set on the remains of the floor from Phase 2 (see Fig. 4). The bottom part of Bench 3 was mostly built of broken mud bricks ( $0.23 \times 0.23 \mathrm{~m}$, thickness c .4 cm ) and small pieces of basalt were incorporated in its upper part. The bench was coated with plaster. Remains of white plaster survived in the seam where the bench was joined to the mosaic floor. The pottery recovered from the blockage of the southern opening in W5 was dated to the first half of the fourth century CE and included cooking pots with two grooves and a triangular rim (Fig. 7:7, 9, 10). The floor of the unit $(1.6 \times 3.3 \mathrm{~m})$ was a white mosaic. The tesserae (c. $1.5 \times 1.5 \mathrm{~cm}$ ) were cut of indigenous pink-white limestone. Four layers were discerned in the floor bedding (L17; Fig. 8). The first upper layer (thickness 0.3 m ) was lime in which the tesserae were embedded. The second layer (thickness 7 cm ) consisted of stone-dressing debris, small stones and gray sand and contained a few potsherds that dated to the first half of the fourth century CE, including a cooking krater with sloping sides and a cut, inverted rim (Fig. 9:1), a jar with a folded rim (Fig. 9:2) and a jar with a thickened rim that has a rhomboid-shaped cross-section (Fig. 9:3). The third layer (thickness 0.1 m ) was composed of square mud bricks ( $0.23 \times$ 0.23 m ), round mud bricks (diam. 0.24 m ) and pieces of mud bricks. The fourth and bottom layer (thickness $1-2 \mathrm{~cm}$ ) was fine gray soil that probably meant to level out and fill in the depressions in the earlier mosaic.
On the floor was a layer of gray soil (L2, see Fig. 5) that contained lumps of white tesserae and potsherds that dated to the first half of the fourth century CE, including a cooking krater with a ledge rim (Fig. 10:1), a cooking pot with a gutter rim and large loop handles (Fig. 10:2), a ribbed jar (Fig. 10:3), a jar with a thickened rim and an arched neck with a ridge
at its base (Fig. 10:4) and a jar with a tall neck, folded rim and a ridge at the base of the neck (Fig. 10:5).
The Coins
Eleven poorly preserved coins were found; six are illegible but appear to be Roman city-coins from the third century CE

| Locus | Ruler | Date of coin | Mint | $\\| \begin{aligned} & \text { IAA } \\ & \text { No. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Elagabalus (218-222 CE) | 219-222 CE | Tyre | 106092 |
| 4 | Probably a city-coin | Third century CE |  |  |
| 10 | Elagabalus (218-222 CE) or Gordian III (238-244 CE) | Third century CE | Bet She'an | 106094 |
|  | City-coin | Third century CE |  | 106093 |
|  | Probably a city-coin | Third century CE |  |  |
| 14 | Illegible | Third century CE | SusitaHippos | 106095 |
|  | Probably city-coins | Third century CE |  | 4 coins |
| 15 | Julia Domna | 215/6 CE | Bet She'an | 106096 |



2. Stratum II, looking northeast.

3. Stratum II, pottery.

4. Stratum I, looking south.

5. Wall 5, looking west.

6. The eastern unit, Channels T1, T2, looking north.

7. Stratum I, Phase 1, pottery

8. The western unit, phase 1, floor (L2) and its bedding, looking south.

9. The second layer in the bedding (L17), pottery.

10. Pottery above the floor (L2).

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## Bet She'an (West) <br> Preliminary Report



1. Mausoleum, plan and sections.

2. Mausoleum, looking east.

3. Phase I, the burial cells looking east.

4. Phase II, the northern and southern wall casing, looking south.

5. Phase III, the burial cells, looking east.

## Walid Atrash

During December 2006, a salvage excavation was conducted west of Shikunim Gimel and Daleth in Bet She'an (Permit No. A4971; map ref. NIG 24618/71265; OIG 19618/21265), in the wake of damage to antiquities during the installation of a sewer line The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Bet She'an Economic Company, was directed by W. Atrash, with the assistance of Y. Lavan (administration), T. Meltsen (surveying), A. Shapiro (GPS) and D. Syon (photography).

An almost complete rectangular mausoleum was exposed in the excavation (100 sq m); its eastern part remained buried beneath a modern path. Three building phases were identified in the structure (Figs. 1, 2). The mausoleum was erected as a single rectangular burial chamber in Phase I, which dated to the Roman period (third-fourth centuries CE); it was reinforced with a new wall casing in Phase II (second half of the fourth century CE) and a burial chamber was added to its western side in Phase III (fifth-sixth centuries CE). By the end of the Byzantine or the beginning of the Early Islamic periods, the building was destroyed and no longer used.

Phase I. The mausoleum was constructed in the third century CE as a rectangular hall that was oriented east-west (exposed length c. 7 m , outer width 5.7 m , inner width 3.5 m ). The walls, preserved to floor level height, were built of basalt fieldstones and founded on a clean layer of travertine deposits. The entrance, probably set in the eastern wall that was not exposed, faced the old city of Bet She'an.
Six rectangular burial cells were exposed below the floor level in the western part of the hall (E, F, G, K, L, M; $0.8 \times 1.9$ m , depth 1.4 m ; Fig. 3). The cells, built of fieldstones and mud bricks, were paved with small flat stones set in place upon a clean layer of travertine deposits. Although the cells were found plundered and filled with stones and gray soil, several of them had heaps of bones mixed with a few potsherds from the Late Roman period on their floors. The burial cells were covered with bitumen slabs, a fragment of which was preserved in situ (Cell E). The slabs rested on the outer foundation walls of the mausoleum and on the partition walls of the cells, serving as a floor for the hall. It can be assumed that sarcophagi, which did not survive, sat on the floor of the hall; the sarcophagus fragments found near the structure may have possibly come from the mausoleum.

Phase II. Minor changes to the plan of the mausoleum occurred in the middle of the fourth century CE, probably after the earthquake of 363 CE. A wall casing of basalt fieldstones (W109, W124; width 0.9 m ) was added to the structure, rendering the building c. 7.3 m wide (Fig. 4).

Phase III. A rectangular burial chamber was joined to the western side of the mausoleum (outer dimensions $3.5 \times 6.0$ m ) in the fifth or sixth centuries CE. Its outside walls consisted of basalt fieldstones and were preserved to floor level. Four rectangular burial cells (A-D; $0.7 \times 2.2 \mathrm{~m}$ ) whose walls were built of mud bricks (width 0.25 m ; Fig. 5) were installed below the floor level of the room. The cells were found robbed and filled with stones and gray soil.

The mausoleum, located c. 500 m west of the old city walls and alongside the ancient road that led from Bet She'an to Samaria, was probably part of a large cemetery that extended along both sides of Nahal Harod and west of Bet She'an.


1. Mausoleum, plan and sections.

2. Mausoleum, looking east.

3. Phase II, the northern and southern wall casing, looking south.

4. Phase III, the burial cells, looking east.

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## Be'er Ora

Final Report
Yigal Israel

2. Building 1, looking east.

3. Pottery.

4. Copper bell with iron clapper.

5. Glass gem.

6. Building 2, plan.

During September 2002, an excavation was conducted at a site c. 300 m southwest of Be'er Ora (Permit No. A-3730; map ref. NIG 19730/40235; OIG 14730/90235), as part of activities to perpetuate the memory of the late Benny Meisner. The excavation, on behalf of the Israel Antiquities Authority and in cooperation with the Elat Field School, was directed by Y. Israel, with the assistance of V. Essman and V. Pirsky (surveying and drafting), N. Sneh (field and studio photography) and I. Dudin (pottery drawing).
The site is situated on both sides of a wadi channel. Four buildings were discerned on surface, as well as cleared areas, stone clearance heaps and installations next to them. Three of the buildings (1-3) were excavated. The artifacts recovered from the excavation dated to the Early Islamic period (Umayyad and beginning of Abbasid periods; 650-820 CE).

Building $1(5 \times 9 \mathrm{~m}$; Figs 1, 2), at the western end of the site, consisted of two rooms. The walls (W300-W303; width 0.7 m , preserved height 1.2 m ) were built of two rows of fieldstones bonded with soil and stones and plastered with mud; the floor was tamped earth. The building was covered with acacia branches, to which wattle and daub were applied; remains of the roof were discovered on the building's floor and in its collapse. Three entrances (width 0.5-0.7 m) were noted in the eastern room (L100; $3.5 \times 3.5 \mathrm{~m}$ ). Two of them, in the northern and western walls, were discovered blocked by narrow walls and it therefore seems that at some point in time they were converted for use as niches. This change in the use of the entrances probably indicates two sub-phases in the building. A built threshold was discovered in the entrance set in the room's southern wall. A niche (L106; $0.4 \times 0.5 \mathrm{~m}$ ), probably used for storage, was in the wall that separated the two rooms, c. 1 m above the floor. Next to the southern entrance and on the floor of the room, a hearth was found (L123). An entrance was discovered in the western wall of the western room (L101; $3.5 \times 3.7 \mathrm{~m}$ ). Installations (L103- $0.3 \times 0.5$ m ; L107-0.5 $\times 0.6 \mathrm{~m}$; L108- $0.9 \times 1.4 \mathrm{~m}$; L109- $0.5 \times 0.5 \mathrm{~m}$ ), set on the floor and surrounded by stones, were discovered in all the corners of this room. Collapse and four hearths (Loci 116-119) were exposed outside the building. A rectangular installation $(2.5 \times 3.0 \mathrm{~m})$ built of a single course of stones was discerned c .35 m north of the building. It resembled the built installations that were uncovered in the previous excavation season at the site (HA-ES/ 121, Loci 49, 61) and may have been used for prayer.

On the floor in Building 1, two fragments of a rim from a bowl of Mahesh Warethat probably originated from Ayla in Aqaba (Fig. 3:1) and a base of a jug (?; Fig. 3:2), both dating to the Early Islamic period, were discovered. A meager amount of organic material that included the remains of textiles and cordage, acacia remains, date pits, almond shells and several animal bones was found below the building collapse. A copper bell with an iron clapper (Fig. 4) was discovered hidden next to Installation 107; nearby were sheep droppings, indicating that the local residents were engaged in raising sheep, among other things. A smooth glass gem (Fig. 5) that apparently dated to the Early Islamic period was discovered on the floor of the eastern room. A copper slag and a nail were found on the floor in the building.

Building $2(3.3 \times 4.8 \mathrm{~m}$; Figs. 6, 7) was at the eastern end of the site, c. 140 m east of Building 1 and next to the water source of Be'er Ora on the west. It consisted of a single room whose walls (W306-W309; width 0.5 m , preserved height 0.9 m ) were built of two rows of fieldstones and wadi pebbles, bonded with soil. The floor (L122) was tamped earth and above it were three pottery body fragments that could not be dated and sheep droppings. The entrance (width 0.5 m ) had a stone-built threshold and was set in the eastern wall. The collapse in the center of the building concealed a hearth (L131) located 0.15 m above the floor, which indicates that after the building was abandoned and some of its walls had collapsed, the structure was still being used. Additional collapse, which included earth and stones, was exposed outside the building. Another hearth (L127) was discerned outside of the building and next to the western wall. An area cleared of stones was observed in the front of the building, opposite the entrance. Two other cleared areas were noted north of the building and on a wadi terrace higher than the building.

Building 3 ( $3 \times 3 \mathrm{~m}$; Figs. 7, 8) was 20 m east of Building 2. It consisted of a single room whose curved walls (W310W313; width 0.5 m , preserved height 0.7 m ) were built of fieldstones and bonded with earth. The floor (L130) was tamped earth and the entrance (width 0.5 m ) was set in the northern wall. Based on the preserved height of the walls and the relatively meager amount of stone collapse, it seems that the building was not roofed. Two hearths (Loci 128, 132) were exposed outside, next to the western wall of the building. A cleared area (L120) was discerned east of the building and a round stone-built installation was noted to its northeast. Installations built of fieldstones and wadi pebbles were to the northwest of the building. The plans of Buildings 2 and 3 resemble those of other structures that had previously been exposed and documented in the vicinity (HA-ES/114:102*-104*, HA-ES/121).


2. Building 1, looking east.

3. Pottery

4. Copper bell with iron clapper.

5. Glass gem.

6. Building 2, plan.

7. Buildings 2,3 , looking south.

171.52


8. Building 3, plan.

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## Be'er Ora

Final Report
Yigal Israel
25/6/2009
During October 2001, an excavation was conducted at a site located c. 600 m northeast of Be'er Ora (Permit No. A-3498; map ref NIG 19825/40285; OIG 14825/90285), as part of activities to perpetuate the memory of the late Benny Meisner. The excavation, on behalf of the Israel Antiquities Authority and in conjunction with the Elat Field School and the Hevel Elot Regional Council, was directed by Y. Israel, with the assistance of V. Essman and V. Pirsky (surveying and drafting), N. Sneh (field photography), I. Dudin (pottery drawing), Y. Gorin-Rosen (glass finds) and U. Avner and A. Holzer.
The site $(50 \times 350 \mathrm{~m})$ is located at the foot of a spur, on the northern bank of a tributary of Nahal Ora. The western part of the site was excavated (Fig. 1) and an open mosque (L52), a square building (L56), a round structure (Loci 53, 55), four courtyards (Loci 59, 60, 62, 63), which contained two installations (Loci 49, 61) and two open cells (Loci 44, 48) were exposed.
Open Mosque (Figs. 2, 3). A square building (L52; $1.75 \times 2.00 \mathrm{~m}$ ) whose four walls (W290-W293; width 0.4 m ) were built of small fieldstones and preserved a single course high ( 0.2 m ) was exposed. It seems that the walls were originally constructed to a height of two-three courses, without a roof. A semicircular mihrab (c. $0.50 \times 0.75 \mathrm{~m}$ ) was installed in the middle of the southern wall (W292). The small dimensions of the mosque indicate that it was used for prayer by one or two people. An area cleared of stones was discerned to the northwest of the mosque and three cairns were observed to its north.

SquareBuilding (Fig. 4). The remains of a square building ( $3.8 \times 4.9 \mathrm{~m}$ ), which had been damaged in the past by mechanical equipment, were excavated. The walls (W294-W297; width 0.6 m , preserved height 0.3 m ) were built of two rows of stones, bonded with earth mixed with gravel. The building's entrance (width c. 0.6 m ) was probably set in the southern wall (W294). The collapsed walls reached a height of 0.65 m above the floor (L51), which was composed of tamped earth with spots of ash above it. Potsherds dating to the Early Islamic period were discovered on the floor, including the base of a jug (Fig. 5:1), as well as a fragment of a glass vessel handle that probably belonged to a juglet from the Byzantine period. Olive and plum pits were found on the floor in the corner of the building. The collapsed walls (L57) were excavated around the building and a hearth (L58) was near the building's southwestern corner.

Round Building (Figs. 6, 7). The structure was built of fieldstones and wadi pebbles set around a dugout pit (W285; diam. 3.5 m , depth 0.51 m ). Two occupation levels (lower-L55, upper-L53) with ash and charcoal above them were discerned. A deposit between the occupation levels (L54) consisted of eolian soil and wadi soil that was washed into the dugout pit.
Courtyards. Four courtyards, cleared of stones and delimited by fieldstone-built walls, were excavated (Loci 59, 60, 62, 63). The earth in the courtyards served as floor and installations were exposed in most of them. Two other courtyards could be seen within the precincts of the site but were not excavated.
Courtyard $60(240 \mathrm{sq} \mathrm{m} ; 12 \times 20 \mathrm{~m})$ was delimited in the south by a line of small clearance stones (W270) that were piled several centimeters high. A fieldstone-built wall (W267; length 8 m , width 0.4 m , height c .0 .25 m ) enclosed the courtyard on the eastern side. Potsherds dating to the Early Islamic period, including a bowl (Fig. 5:2), were exposed in the courtyard. A built installation (L61; $1 \times 2 \mathrm{~m}$ ) in the northern part of the courtyard was enclosed within two walls (W288, W289; width 0.2 m , height c. 0.25 m ). A non-examined heap of stones was visible within the courtyard, south of the installation. Three walls (W268, W269, W271; width 0.25 m ), built a single course high, enclosed a cell (L48; $2 \times 3 \mathrm{~m}$ ) in the southeastern part of the courtyard, which was open to the north.
Courtyard 59 ( $72 \mathrm{sq} \mathrm{m} ; 6 \times 12 \mathrm{~m}$ ) was surrounded by walls on four sides. The eastern and northern walls (W276, W277; width 0.75 m , preserved height 0.3 m ) had been damaged in the past by mechanical equipment. On the western side of the courtyard was a short section of a wall built of fieldstones (W275) and its continuation was a wall of small clearance stones. The southern wall (W283) was built of a single course of stones. A hearth (L64) was discovered in the northeastern corner of the courtyard and several non-diagnostic potsherds and copper slag were found on the floor
Courtyard $62(200 \mathrm{sq} \mathrm{m} ; 10 \times 20 \mathrm{~m})$ was delimited by two walls (W286, W287; width 0.25 m ) that formed a corner. The walls were built of a single course of fieldstones and small clearance stones.
Courtyard 63 (c. $45 \mathrm{sq} \mathrm{m} ; 5 \times 8 \mathrm{~m}$ ) was delimited by two walls (W278, W279). Wall 278 was built of two-three stone courses (width 0.4 m , preserved height 0.15 m ). Only several stones of W279 were preserved, but its construction seems to resemble that of W278. A square installation (L49; $1 \times 1 \mathrm{~m}$ ) whose fieldstone-built walls (W280-W282; width 0.2 m ) abutted W278 was exposed at the northwestern edge of the courtyard.
The second built cell (L44; Fig. 8) was exposed in the middle of the area, between Courtyards 59 and 62 . Walls built of small clearance stones (W272-W274; preserved height 0.17 m ) enclosed the cell on three sides, leaving it open to the north. A flint Levallois point and a copper concentrate on limestone were discovered in the cell, whose plan and dimensions were similar to Cell 48. It seems that the two were used as open prayer cells.

The building remains at the site point to a settlement of several families that existed around a source of water at Be'er Ora. The various structures and the different building materials suggest that each family determined the shape of its living quarters and decided on the materials used in its construction. Building complexes that included both courtyards and round buildings, which are characteristic of a semi-nomadic population, were exposed at the site; alongside were complexes of square buildings that are dominant in permanent settlements. The residents were probably one large tribe that consisted of several families, perhaps the same number as the cleared courtyards. These families possibly lived in tents and buildings of organic materials that did not survive and stood in the area of the cleared courtyards. It is assumed that the square building was erected during a later phase of the site. Scant ceramic finds dating to the Early Islamic period were discovered in the excavation, as well as at other sites in the vicinity of Be'er Ora. These indicate a society that produced little refuse and its domestic ware was made of wood and perishable woven plants. It is also possible that the settlement lasted for only a short period or the site was abandoned and its residents took all their possessions with them.


3. The mosque, looking south.



6. The round building, plan and section.

7. The round building, looking northwest.

8. Cell 44, looking south.
(Volume No. HA-ESI 121 (2009
Be'er Sheva‘ Park, Survey Final Report
Flavia Sonntag and Nir-Shimshon Paran
21/3/2009


1. Survey map.

2. Terrain characteristic of the survey region looking west.

3. The railroad embankment, looking southeast.

During July 2007, an archaeological survey was conducted in the Be'er Sheva' Park, west of the city, near the zoological gardens (Permit No. A-5172), in an area designated for foresting. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Jewish National Fund, was directed by F. Sonntag and N.S. Paran, with the assistance of S. Gal (GPS).

An area of 750 dunams was surveyed in the Nahal Solelim basin. This is a region of gentle chalk hills that are covered with loess soil and are crossed by ravines with desert flora (Figs. 1, 2). The survey area is delineated in the north by the railroad embankment that was constructed in the Ottoman period (Fig. 3). The southern part of the area is covered with trees planted by the JNF.

Six sites were identified:

1. NIG 175986/573609; OIG 125986/073609. Watchman's hut ( $5 \times 5 \mathrm{~m}$ ).
2. NIG 175859/573361; OIG 125859/073361. Two structures (farm? $15 \times 15 \mathrm{~m}$ ).
3. NIG 175567/573821; OIG 125567/073821. Structure $(4 \times 6 \mathrm{~m})$.
4. NIG 175542/573833; OIG 125542/073833. Structure $(3 \times 3 \mathrm{~m})$.
5. NIG 175526/573897; OIG 125526/073897. Structure $(4 \times 5 \mathrm{~m})$
6. NIG 174987/574381; OIG 124987/074381. Small stone mounds (Bedouin tombs?); encampment site and potsherd scattering ( $30 \times 30 \mathrm{~m}$ ).

The potsherds collected at each of these sites were all dated to the Byzantine period. They are consistent with other finds-a farmstead and agricultural installations-known in this region, which was the agricultural hinterland of Be'er Sheva' during the Byzantine period.


1. Survey map.

2. Terrain characteristic of the survey region, looking west.

3. The railroad embankment, looking southeast.

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## Be'er Sheva', Survey

## Final Report

Emil Aladjem and Simeon Gendler


1. Survey map.

During July 2006 a survey prior to development was conducted at Ketef Be'er Sheva', the Negev Brigade Junction and Ketef Betarim (Permit No. A-4866; map ref. NIG 1838-62/5740-80; OIG 1338-62/0740-80). The survey, undertaken on behalf of the Israel Antiquities Authority and financed by the Jewish National Fund, was directed by E. Aladjem and S. Gendler, with the assistance of S. Gal (GPS).

Three areas, northeast of Ketef Be'er Sheva', southeast of the Negev Brigade junction and the Ketef Betarim hills, were surveyed.

## Northeast of Ketef Be'er Sheva‘

Site 301: A wall ( $0.8 \times 4.0 \mathrm{~m}$ ) built of undressed chalk fieldstones.
Site 302: Ancient cistern whose opening was renovated with cement and it is still being used. To its west are the remains of a structure ( $15 \times 15 \mathrm{~m}$ ) built of chalk fieldstones. An installation of chalk slabs was discerned in the building, embedded in the ground.

Southeast of the Negev Brigade Junction
Site 303: A renovated cistern that is still being us
Site 311: A terrace built on a slope along a contour line $(0.6 \times 0.8 \times 30.0 \mathrm{~m})$.

## The Ketef Betarim Hills

Site 304: A rock-hewn cistern (diam. of opening 0.4 m ).
Site 305: A building ( $4 \times 4 \mathrm{~m}$, thickness of walls $0.4-0.5 \mathrm{~m}$ ) on the southern bank of the wadi, in whose vicinity potsherds dating to the Late Byzantine period were scattered.
Site 306: A scatter of flint flakes (diam. 20 m ) from the Middle Paleolithic period.
Site 307: A bedrock-hewn round opening (diam. 0.5 m ) that leads to a void-a cistern or a cave.
Site 308: A cistern whose opening was renovated with cement and is still being used.
Site 309: A renovated cistern that is still being used today and a trough is located alongside it.
Site 310: A scatter of flint flakes (diam. 30-40 m) from the Middle Paleolithic period.


1. Survey map.

## (Volume No. HA-ESI 121 (2009

## Be'er Sheva', Shazar Boulevard

 Final ReportYigal Israel


1. Plan.

2. Pottery.

3. Tomb T7 at the time of exposure: Gaza jar fragments at the foot of the tomb, looking north

4. Tomb T7 prior to being raised: Tomb T9 behind it looking south.

During April 2002, an excavation was conducted on Shazar Boulevard in Be'er Sheva', below the eastern parking lot of the municipal building (Permit No. A-3631; map ref. NIG 18097/57314; OIG 13097/07314), in the wake of exposing two tombs when installing a conduit for runoff. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Housing and Construction (surveying), was directed by Y. Israel, with the assistance of F. Sonntag (field photography), A Inbar, A. Sabah-Shahar and E. Kaho (conservation work) and A. Pikovski (pottery drawing). Other participants included S. Spiegel and employees of the Technical Department of the Ministry of Housing, Southern District, A. Ron and Y. Griff - project directors, Eng. K. Leibowitz, Shomroni Construction Company and workers of the Ministry of Religious Affairs and its volunteers under the guidance of Rabbi Schmidel.

Thirteen cist tombs were discovered and documented (Fig. 1). The outline of seven tombs (T3-T7, T9, T11) was excavated and the outline of one tomb (T8) was partially exposed. The cist tombs were part of a burial field, the likes of which surrounded the old city of Be'er Sheva' in the Byzantine period. Past excavations close to this concentration of burials had been conducted at Migdale Qeren (HA-ESI 116), the Courthouse (HA-ESI 109:89*90*) and the Civic Center (ESI 19:90*-91*). Other tombs were discovered and documented in the vicinity during the course of antiquities inspection.

The cist tombs $(0.8 \times 0.9 \times 2.0 \mathrm{~m})$, characteristic of burial in the Byzantine period, were dug in loess soil (depth 1.5 m ), along a northwest-southeast axis. The sides and the covering slabs of the tombs consisted of dressed soft limestone, which is the typical masonry stone in Be'er Sheva'. Based on the position of the deceased in Tomb T8, it seems that the individuals were interred with their heads at the northwest.
Fragments of Gaza-type jars (Fig. 2) were found alongside several of the tombs and nearby. The jars were probably used as grave markers or as gravestones, similar to the amphorae that served as tombstones during the Hellenistic period. Late Ottoman cemeteries in the Gaza to Ashkelon region use ceramic pipes as tombstones. It seems that placing a Gaza jar as a grave marker is a distinct phenomenon of the tombs in this burial field and it is presumed that the same or a similar custom was practiced in tombs that were damaged or not completely exposed.
Tombs T1 and T2, in the side of the trench, were damaged during the digging of the water conduit.
Tombs T3 and T4, whose outlines were excavated, were damaged in their southeastern parts while digging the conduit. Tomb T5, whose outline was excavated, had been damaged in the past during the installation of infrastructures.
Tomb T6, whose outline was excavated, was surrounded by fragments of a barrel-shaped Gaza jar (Fig. 2:7).
Tomb T7, whose outline was excavated (Figs. 3, 4), was surrounded by fragments of a barrel-shaped Gaza jar (Fig. 2:6). Tomb T8 was discovered during work on the side of the conduit's trench. A skull was observed between its covering stones. Only part of the tomb's outline was excavated and the course of the conduit was diverted to the west. Fragments of a Gaza jar were found around the tomb (Fig. 2:4).
Tomb T9, whose outline was excavated, was surrounded by fragments of a barrel-shaped Gaza jar (Fig. 2:1).
Tomb T10 was discovered while working next to the side of the conduit and only part of the tomb's outline was exposed. Tomb T11, whose outline was excavated, was surrounded by fragments of a barrel-shaped Gaza jar (Fig. 2:2, 3, 5). Tombs T12 and T13, exposed while working next to the sides of the conduit, had been damaged in the past during the installation of infrastructures.
The exposed tombs were apparently part of a family funeral plot that belonged to the residents of Be'er Sheva' in the Byzantine period, and was one of many plots that surrounded the city. Anthropological evidence regarding the population could not be obtained since the tombs were not opened
The funerary practice that characterizes the cemetery is the placement of a Gaza-type jar outside, at the foot of the tomb. This choice is surprising, as the local jars in the Be'er Sheva' region are bag-shaped vessels. Following the outline exposure of seven tombs (T3-T7, T9, T11) they were raised, the soil beneath them was excavated and they were returned to their original locations.

5. The raised tombs and the excavation beneath them looking south.


1 Plan

2. Pottery.

3. Tomb T7 at the time of exposure; Gaza jar fragments at the foot of the tomb, looking north.

4. Tomb T7 prior to being raised; Tomb T9 behind it, looking south.

5. The raised tombs and the excavation beneath them, looking south.

# (Volume No. HA-ESI 121 (2009 

## Binyamina

Final Report


1. Area A, plan and section.

2. Area A, looking east.

3. The cells in the building, looking west.

4. Pottery.

5. A wild boar-shaped zoomorphic vessel.

Mordechai Haiman
During February 1999, a salvage excavation was conducted at Giv'at Ha-Po'alim in Binyamina (Permit No. A-3008; map ref. NIG 19460/71462; OIG 14460/21462), in the wake of damage to ancient remains caused by earthmoving operations. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Construction and Housing, was directed by M. Haiman (photography), with the assistance of V. Essman (surveying and drafting) and N. Ze'evi (drawing).
Two areas (A, B) were opened, 200 m apart. Remains of a building that was probably a mausoleum from the Roman period (second century CE) were exposed in Area A and remains of tombs that dated to the Ottoman period or the time of the British Mandate were documented in Area B.

Area A. Remains of a rectangular building (c. $4.5 \times 8.5 \mathrm{~m}$ ) with an adjacent courtyard of similar dimensions along its northern side were exposed (Figs. 1, 2). The structure was damaged by a bulldozer and seems to have been disturbed in antiquity as well. The outer walls (W208, W209) were built of dressed kurkar stones (0.4-0.9 $\times 0.4 \mathrm{~m}$ ). Wall 209 comprised three rows of stones (width 1.2 m ) and was preserved one-four courses high (max. 0.85 m ). Only the western part of the wall was preserved in its entirety. Its eastern side ended in a straight line and beyond it was a plastered floor (L105) that appears to have been an entrance. The continuation of the wall to the east (W202) was severely damaged; it rested on top of a foundation wall (W201). Wall 208 was built of a single row of dressed kurkar stones ( $0.3 \times 0.6 \mathrm{~m}$ ), except for its southern end, which was built of two rows of kurkar stones and preserved three-four courses high (max. 0.9 m ). The eastern wall was not preserved; however, part of its foundation (W200) had survived. The building was divided into narrow elongated cells without openings (Loci 101, 102, 104; width 0.8 m ), which were separated by partition walls (W203, W204, W205), built of a single row of kurkar stones ( $0.3 \times 0.4-0.8 \mathrm{~m}$ ) and preserved one-two courses high (Fig. 3). The floors of the cells and the bottom part of the partition walls were coated with a thick layer of plaster. Fragments of human bones were discovered in all the cells and it is presumed that they were used for burial.
The courtyard (L100) was severely damaged by the earthmoving work. Sections of a plaster floor and a cupmark (diam. 0.3 m , depth 0.3 m ) that was embedded in it were discovered. A row of crumbling kurkar stones (W207) was exposed in the northern part of the courtyard; it possibly testifies to an early disturbance in the building.
The remains of foundation walls built of kurkar stones were exposed below the building and the courtyard. A corner of the foundation walls (W200, W201), built of one course of large roughly dressed kurkar stones, was uncovered in the southeastern corner of the building. It seems that the foundation walls protruded c. 0.2 m beyond the walls of the building. Below the level of the courtyard was a section of another foundation wall (W206) whose corner was discovered below the floor of Cell 102. Fill of tamped black soil mixed with stones and potsherds (max. thickness c. 0.7 m ) was discovered between and below the foundation walls. The overall thickness of the mausoleum's foundation reached a height of c. 1.3 m . It is assumed that the reason for such a massive foundation was the unstable ground of dunes and marshes in the region.
The ceramic finds in the building dated to the second century CE and included a cooking krater (Fig. 4:1), a jug with a square rim that is dated to the end of the first century and the second century CE (Fig. 4:2), saqiye jars of the second century CE (Fig. 4:3, 4), bag-shaped jars (Fig. 4:5-8) that are dated to the first-second centuries CE, except for the jar in Fig. 4:8 that continues into the third century CE and discus lamps from the second century CE (Fig. 4:9-11). A zoomorphic vessel in the shape of a wild boar (Fig. 5; length 12 cm , width 5.5 cm , height 8.5 cm ), made in a mold of reddish gritty clay, was also discovered in the building. The head of the boar was composed of parallel strips that formed gentle ribbing, and the body was fashioned with diagonal parallel lines and punctured with a sharp instrument. The vessel was probably used to hold liquid, as a pouring-in opening is set on the back of the boar and pouring-out apertures are in the nose and the head. Similar vessels of levigated clay with a lustrous slip, probably imported, were discovered at Tel Dor. The boar-shaped vessel from the site, which is coarser and not slipped, was probably of local manufacture. Burial in mausoleums was customary mainly among pagans, although Jews also practiced this form of interment and placed their dead inside sarcophagi, of which no evidence was found in the excavated building. It seems that the elongated cells served as burial cells. A mausoleum with a similar internal partition, dating to the Early Roman period, was discovered in the Pelusium cemetery in northern Sinai (E. Oren, 1980. The Survey of Northern Sinai, 1972-1978. In Z. Meshel and I. Finkelstein [eds.], Sinai in Antiquity. Tel Aviv, p. 126 [Hebrew]).

Area B. Eight cist tombs, aligned northeast-southwest and built of flat stone slabs, were documented; human bones were discerned. Three of the tombs were severed during the earthmoving operations and the other five were preserved in their entirety. The tombs should apparently be dated to the Ottoman period or the time of the British Mandate.


3. The cells in the building, looking west.

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5. A wild boar-shaped zoomorphic vessel.
(Volume No. HA-ESI 121 (2009
Biq'at Yaval
Final Report
Emil Aladjem and Nir-Shimshon Paran


1. Location map.

2. Dam, Locus 10, plan.

3. Dam, Locus 11, plan.

In June 2005 a salvage excavation was conducted at Biq'at Yaval (Permit No. A-4513, map ref. NIG 18960/58690; OIG 13960/08690; Fig. 1), following the discovery of ancient remains along the route of the separation fence. The excavation, on behalf of the Antiquities Authority and with the financial support of the Ministry of Defense, was directed by E. Aladjem and N.S. Paran, with assistance from A. Hajian (surveying).
Two dams, located c. 25 m apart, were excavated in a tributary of Nahal Yaval (cf. HA-ESI 120). The eastern dam (L10; Fig. 2) consisted of two fieldstone-built walls. The first (W3; $1.0 \times 1.0 \times 0.5 \mathrm{~m}$ ), which was oriented along a north-south axis, was built perpendicular to the southern bank of the stream while the second (W2; $1.0 \times 2.5 \times 0.8 \mathrm{~m}$ ), aligned in a northeast-southwest direction, was built parallel to the stream's bank. The western dam (L11; Fig. 3) was located on the northern bank of the stream and it too consisted of two walls. The first (W5; $1.2 \times 6.0 \times 0.6 \mathrm{~m}$ ) was oriented in a northsouth direction and was built of small and large fieldstones; its continuation (W4), whose remains were found to the south of it, was destroyed by the flow of water in the stream. The second wall (W1; $1.5 \times 3.0 \times 0.3 \mathrm{~m}$ ) was perpendicular to Wall 5 and was built of small stones.
The two dams were part of a system that was meant to divert the flow of the stream to a cultivated plot.


1. Location map.


(Volume No. HA-ESI 121 (2009
Dabayib et-Tuwal (North)

## Final Report

Walid Atrash


1. Plan.

2. Area A, plan and section

3. Area $A$, looking east.

4. Area B, plan and section.

5. The water reservoir, W110 and the floor, looking south.

During September-October 2003, a salvage excavation was conducted north of the Dabayib et-Tuwal site, southeast of Kibbuts Hamadya (Permit No. A-3987; map ref. NIG 24930-40/71340-5; OIG 19930-40/21340-5; ESI 9:172), after ancient remains were damaged when a communications cable was installed. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Kave Zahav Company, was directed by W. Atrash (photography), with the assistance of Y. Ya'aqobi and D. Avshalom (administration) and T. Meltsen (surveying and drafting).
The excavation was conducted along the eastern edge of the Bet She'an-Tsemah road. Two excavation areas (A, B; Fig. 1) were opened. A square ( $3 \times 5 \mathrm{~m}$ ) was excavated in the eastern Area A and part of an agricultura installation was exposed. Two squares were excavated in the western Area B, closest to the road, revealing a built water reservoir that dated to the Byzantine and Early Islamic periods. The installation and reservoir were built along a stream channel that extends from west to east.

Area A (Figs. 2, 3). Two walls (W101, W111) that formed a corner were exposed. Wall 101 (exposed length 5 m , width 1.4 m ), founded on travertine bedrock, was oriented north-south. Built of large undressed basalt stones with smaller basalt stones between them, it was preserved to maximum two courses high, extending beyond the limits of the excavation. The western face of the wall was coated with hydraulic lime plaster and the eastern face was incorporated into a floor bedding of small basalt stones (L102). A small section of W111, also founded on travertine bedrock, was exposed. The wall was aligned east-west and its northern side was built similar to W101. A floor (L107) of lime plaster was exposed between the two walls. The floor bedding consisted of basalt stones, placed on the travertine bedrock. Floor 107 was built in two levels, whereby the southern part was c. 0.18 m higher than the northern part. Basalt stones and gray soil collapse (L103) that contained a few potsherds from the Byzantine period was exposed on the floor. It seems that the walls and the floor were part of an installation connected with water, which dated to the Byzantine period (sixth-seventh centuries CE), based on ceramic finds.

Area B (Fig. 4). Two parallel walls of a water reservoir, 6 m apart, were discovered (W106, W110). They extended beyond the limits of the excavation and thus the full width of W106 was not exposed. The walls, founded on travertine bedrock and aligned north-south, were built of basalt and mud bricks (Wall 106-exposed length 4 m , preserved height 2.45 m ; Wall 110-exposed length 4 m , width 1.3 m , preserved height 1.92 m ; Fig. 5). The western face of W110 and the eastern face of W106 were coated with hydraulic lime plaster, which was applied to a base layer of potsherds that dated to the Byzantine and Early Islamic periods (Fig. 6). The reservoir's floor, which abutted both walls, was composed of mud bricks $(0.22 \times 0.22 \mathrm{~m})$ that were coated with lime plaster. Gray alluvium, devoid of potsherds, was exposed on the floor (L114; thickness 1 m ). Collapse from Walls 106 and 110 (Loci 112,113) and several potsherds from the Byzantine and Early Islamic periods were found on the alluvium. A lump of travertine sediment was exposed in the southern part of W106, on top of the plaster. This sediment indicates the location of the reservoir's feeder channel, which apparently came from the west. It seems that the exposed remains in the area belonged to a large water reservoir (width 6 m , depth c. 2.5 m ), whose length is unknown. Based on the ceramic finds, the reservoir was apparently used from the Byzantine until the end of the Umayyad periods (500-749 CE).

Area B





5. The water reservoir, W110 and the floor, looking south.

6. Plaster remains and the potsherd base layer on the reservoir's wall, looking west.

# (Volume No. HA-ESI 121 (2009 

## Dabburiya

Final Report
Rafeh Abu Raya
30/4/2009


1. Plan.

2. Pottery.

3. A beaten chalk floor
(L103). looking south.

During July 2004, a salvage excavation was conducted in the center of Dabburiya village, south of the local council building (Permit No. A-4225; map ref. NIG 235155-65/732955-65; OIG 185155-65/232955-65), subsequent to the discovery of antiquities in a lot slated for construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the contractor, was directed by R. Abu Raya, with the assistance of Y. Lavan (administration), N. Getzov (field photography) and H. Tahan (pottery drawings).
Small-scale excavations and surveys that had previously been conducted in Dabburiya have uncovered fragmentary remains and potsherds that ranged in date from the Iron Age until the Ottoman period (Map of Mount Tabor [41] and Map of En Dor [45], Site 63; ESI 15:126).
Two squares (A, B; Fig. 1) were opened in the current excavation, revealing building remains from the Late Roman or Byzantine periods and a wall foundation that may be dated to the Middle Bronze Age or the Roman period.

Square A. A layer of soil (L104; thickness c. 0.5 m ) that overlay virgin soil was exposed. It contained fragments of pottery vessels, including a cooking pot (Fig. 2:4) and jars (Fig. 2:5-7) from the Late Roman period. A cluster of fieldstones (L111) in the western part of the square contained similar ceramic finds that included a krater rim, dating to the Late Roman period (Fig. 2:3).
A beaten chalk floor (L103; thickness c. 0.1 m ; Fig. 3) that extended across most of the square area was exposed above Loci 104 and 111. Potsherds from the Roman or Byzantine periods were found within the floor. A square pit (L106; $1 \times 1$ m , depth 0.5 m ) and the foundation of a modern wall (W1) penetrated Floor 103. Potsherds that dated to the Early Roman period, including a jar rim (Fig. 2:2), as well as potsherds from the Umayyad (eighth century CE) and Mamluk (thirteenth-fourteenth centuries CE) periods were collected from these disturbances.

Square B. A cluster of fieldstones (thickness c. 1 m ), c. 4 m north of Square A, was exposed in the middle of the square $(2 \times 3 \mathrm{~m})$. The cluster sealed three large fieldstones $(0.5 \times 0.5 \times 0.6 \mathrm{~m})$, arranged in a row above a layer of natural silt, which were probably part of an ancient terrace wall. Fragments of pottery vessels that dated to the Middle Bronze Age, including a pithos rim (Fig. 2:1) and the Roman period, were found above and within the cluster of stones.

(A)


1. Plan.

2. Pottery.

3. A beaten chalk floor (L103), looking south.
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## Dafna

Final Report


1. Plan.

2. Wall 1, looking east.

Abdalla Mokary

During April 2005, a salvage excavation was conducted in Qibbuz Dafna (Permit No. A-4440; map ref. NIG 2593-5/7928-30; OIG 2093-5/2928-30), prior to construction. The excavation undertaken on behalf of the Israel Antiquities Authority and underwritten by Qibbuz Dafna, was directed by A. Mokary, with the assistance of O. Zingboym (surveying and photography).
One square was opened and its half was excavated to bedrock. Remains of a field wall (W1; min. length 2.7 m , width 0.6 m ; Figs. 1, 2), preserved two courses high, were exposed at a depth of 1 m below surface. A layer of travertine covered the wall, indicating that water flowed here over a long period of time. Fragments of pottery vessels that dated to the Early Roman period were recovered from both sides of the wall.


1. Plan.

(Volume No. HA-ESI 121 (2009
Dalton, Survey Final Report
Hendrik (Enno) Bron

2. Survey map.

3. Survey area, looking southwest.

During July 2207, a survey preceding development was conducted in the western part of Moshav Dalton (Permit No. A-5174; map ref. NIG 24475-530/76878-920; OIG 19475-530/26878-920), prior to expansion of the Moshav. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Moshav, was directed by H. Bron, assisted by A. Shapiro (GPS).
Settlement remains and agricultural installations from the Chalcolithic and Early Bronze periods, which included a dolmen (Fig. 1:17) that was surveyed by Y. Stepansky, had previously been discovered in the western part of Moshav Dalton. Remains from the Mamluk and Ottoman periods had been identified at the site of Teitaba to the south. Terraces, animal pens and building remains had survived of a small Arab village that existed at the site to modern times. Today, the area serves as pasture.
Terrace walls (Fig. 1:1-11, 18) and animal pens (Fig. 1:13-15) whose date is unknown were surveyed, as well as a scattering of flints and potsherds (Fig. 1:16), which mostly dated to the Mamluk and Ottoman periods and probably derived from the neighboring settlement. The feature in Fig. 1:12 is a modern field tower.
It appears that the area was used for agriculture during two main periods, the Chalcolithic and Early Bronze Age in the Dalton site and the Mamluk and Ottoman periods in Kh. Teitaba.


2. Survey area, looking southwest.
(Volume No. HA-ESI 121 (2009
Devira Forest, Survey
Final Report
Emil Aladjem and Simeon Gendler


1. Survey map.

During July 2006, a survey was conducted in the Devira Forest (Permit No. A- 4865; map ref. NIG 18620-85/59110-55; OIG 13620-85/09110-55), prior to ground preparation work. The survey, undertaken on behalf of the Israel Antiquities Authority and financed by the Jewish National Fund, was conducted by E. Aladjem and S. Gendler, with the assistance of S. Gal (GPS).
Eight sites were documented in the survey area, which extended across a hilly region north of the Devir-Lahav Junction and south of the Lahav Forest.
Site 501: A terrace wall, oriented east-west (length 20 m , width 1 m ), which was preserved a single course high.
Site 502: A terrace wall (length 25 m ), oriented north-south.
Site 503: A rectangular structure/field tower $(2 \times 10 \mathrm{~m})$ situated on the ridge. The walls, preserved two courses high, were built of two rows of medium-sized fieldstones and a core of small stones. A partition wall divided the structure into two rooms.
Site 504: A rectangular structure/field tower $(2 \times 8 \mathrm{~m})$ whose walls were preserved a single course high.
Site 505: A terrace wall (Length 40 m ) built of two rows of stones, without a core. The wall extended along the side of a hill that sloped to the northeast and was preserved two courses high.
Site 506: A terrace wall (length 40 m ), preserved two courses high, which was the northeast continuation of the terrace wall at Site 505 .
Site 507: A rectangular rock cutting ( $1 \times 2 \mathrm{~m}$, depth 1 m ).
Site 508: A dwelling cave whose opening was partly blocked by a fieldstone-built wall.


1. Survey map.

## El-Burj

Final Report
Mordechai Haiman


1. Area A1, plan.

2. Area A1, quarrying steps, looking north.

3. Area A2, the interior of Cave 106.

During October-November 2004, an excavation was conducted north of the El-Burj village (Permit No. A-4270; map ref. NIG 1901-16/593-5; OIG 1401-16/093-5), along the route of construction for the separation fence. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by M. Haiman, with the assistance of E . Aladjem and N.S. Paran (area supervision) and A. Hajian (surveying).
Three areas (A1, A2, B) were opened over a distance of c. 200 m on the northern slope of the El-Burj village. Caves and quarries were exposed, as well as potsherds that dated mostly to the Roman and Byzantine periods and had been swept into the area. The paucity of finds indicates that this area was on the outskirts of an ancient settlement, which was probably located within the precincts of the village (c. 0.5 km to the south).
Area A1. Two zones of rock-cuttings (Loci 102, 104; c. $20 \times 20 \mathrm{~m}$; Figs. 1-3) were exposed on a bedrock surface. They included quarrying steps of rectangular bedrock blocks (max. dimension $0.4 \times 0.6 \mathrm{~m}$; Fig. 4), severance channels (width c. 0.1 m ) and other rock-cutting marks. A cave opening ( $\mathrm{L} 101 ; 1.30 \times 1.65 \mathrm{~m}$ ) was located on the eastern part of the bedrock surface. The non-excavated cave was filled with alluvium to c .1 m high below its ceiling and it appears to have been used as a dwelling up until c. 50 years ago.
Area A2. A cave (L106) that had a rectangular opening ( $0.4 \times 0.6 \mathrm{~m}$ ) was discovered c. 50 m northeast of Area A1. A hewn courtyard ( $4 \times 8 \mathrm{~m}$, depth c. 2.5 m ; Fig. 5) fronted the cave, in whose chamber (c. $4 \times 6 \mathrm{~m}$, height 1.5 m ; Fig. 6) were a burial kokh and other openings. The cave was not excavated, yet similar burial caves were common to the Late Roman period.
Rock-cut steps and in situ stone blocks (c. $0.4 \times 0.6 \mathrm{~m}$; Fig. 7) in the front of the cave point to its likely usage as a quarry at a later period.
Area B. A bedrock surface $(7 \times 8 \mathrm{~m})$ was excavated c. 150 m west of Area A1. Signs of quarrying were visible on the surface and at its bottom was a natural cave, whose opening $(1.1 \times 1.7 \mathrm{~m})$ led to an inner cavern ( $3.0 \times 4.5 \mathrm{~m}$ ).


2. Area A1, looking south.

3. Area A1, Locus 104, looking north.

4. Area A1, quarrying steps, looking north.

5. Area A2, courtyard fronting the cave, looking south.

6. Area A2, the interior of Cave 106.

7. Area A2, rock-cuttings near opening of Cave 106, looking south.

## El-Burj

Preliminary Report
Ilan Peretz and Pirhiya Nahshoni


1. Winepress from the Early Roman period, looking south

During July-August 2006, a trial excavation was conducted at the site of El-Burj (Permit No. A-4847; map ref. NIG 19071-86/59429-46; OIG 14071-86/09429-46), in the wake of paving Highway 358 from Shomeriyya to Moshav Sheqef. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Department of Public Works, was directed by I. Peretz and P. Nahshoni (photography, Area A supervision), with the assistance of A. Freiberg (Area B supervision), H. Lavi and Y. Ohayon (administration), V. Essman and V. Pirsky (surveying), C. Amit (studio photography), O. Shorr (restoration), C. Hersch (drawing of finds), Y. Gorin-Rosen (glass), R. Kool (numismatics) and D. Varga, Y. Israel and Y. Baumgarten of the IAA southern region.

The site is located in the southern Judean Shephelah, at the foot of the Hebron Highlands, c. 2 km northeast of Shomeriyya and c. 1 km south of Tell Beit Mirsim. The indigenous bedrock is an easily quarried soft limestone. The region had been surveyed during the nineteenth and twentieth centuries CE; it was surveyed again after the Six Day war of June 1967 (M. Kochavi, 1968, Archaeological Survey of Judaea, Samaria and the Golan, Site 203); The crusader fortress was documented (A. Kloner 1982, Two Crusader Sites in the Southern Judean Shephelah, Tevah V'Aretz 24, p. 256 [Hebrew]) and numerous installations were excavated in 2004-2005 on the slopes of the hill near the tomb of Sheikh Abu Toq (Permit No. A-4270).
Two areas (A, B) were opened in the current excavation.
Area A was the southern area (c. 94 sq m ), where a bathhouse whose remains dated to the Late Roman and Byzantine periods was excavated. Other buildings were discovered to its north and pottery vessels from the Roman, Byzantine and Mamluk periods were found.
The large Roman-period bathhouse was built of large dressed stones and included three rooms, as well as a section of another building that was added to its south in a later phase. The southern and center rooms were probably the hypocaust and the furnace; the use of the northern room was unclear.
Alterations to the building were done during the Byzantine period. The hypocaust was destroyed and its remains, which included parts of a mosaic pavement, columns, ceramic pipes and plaster remains, were discarded in the region of the furnace. A room or tower, built of roughly hewn stones, was added in the southeastern corner.
The meager remains of another wall were exposed to the north of the complex and the remains of a massive structure were documented to the west of the bathhouse. This was probably a white mosaic-paved pool, which belonged to a saqiye well. It seems that the bathhouse went out of use sometime in the Byzantine period and the later remains in the area were pottery vessels from the Mamluk period.

Area B (170 sq m) was north of Area A. Remains of two winepresses, a cave or a rock-hewn installation, a pottery workshop; limekiln remains (?) and scant remains of a building were exposed and several agricultural walls were examined. Potsherds dating to the Chalcolithic period, the Middle Bronze Age and the Late Roman and Byzantine periods were found.
A large winepress $(5.3 \times 9.4 \mathrm{~m})$ from the Early Roman period that included a treading floor and two collecting vats was exposed on a hilltop in the northeast of the area. Settling depressions were noted at the bottom corners of the collecting vats and a hewn, plastered central column was in the western vat. The winepress was partly built inside the remains of a cave or an ancient installation that was bedrock hewn. Three layers of hydraulic plaster were applied to the collecting vats and the treading floor. The pottery and stone vessels recovered from the winepress indicate that it ceased to be used in the Early Roman period.
The ancient installation consisted of a plastered staircase and the inside of a cave. Fragments of pottery vessels and stone vessels that dated to the Chalcolithic period, the Middle Bronze Age and the Early Roman period were found.
The remains from the Byzantine period included three walls of a structure that were built of small fieldstones and preserved a single course high. The building superimposed the remains of the Roman winepress, mostly the western part of its treading floor. Meager finds were recovered from the building.
On the southern slope of the hill, south of the winepress, a pottery workshop was located where the remains of a pair of curved walls that probably functioned as a corridor that led to the kiln's heating chambers were exposed.
On the northern fringes of Area B was another rock-hewn winepress that consisted of a shallow treading floor and a shallow channel that led to a rectangular collecting vat. A circular settling depression was in the northern corner of the collecting vat. Several cupmarks of different sizes were noted on the treading floor and east of the winepress. No datable finds were discovered.
Remains of walls, some of which were used as enclosure walls, were uncovered to the east of the Roman winepress.
The remains of a plastered pool, a bell-shaped cistern and a well from the time of the British Mandate were documented, but not excavated. The well included remains of a pumping installation that incorporated stone construction and concrete, as well as iron or steel rods.

The finds from the excavation contribute important data to the settlement in the area, prior to the construction of the Crusader fortress in the modern village of el-Burj. The location of the site in Biq'at Yeval, near sources of water, ensured the existence of a permanent settlement and habitation from as early as the Chalcolithic period; however, most of the remains were from the Roman and Byzantine periods. The large winepress and possibly the small press as well attest to a settlement in the Early Roman period. The Roman road from Bet Guvrin to Be'er Sheva' had passed through the region and the bathhouse was built in this period. Alterations to the bathhouse were done in the Byzantine period, at which time its operation ceased. A pottery workshop, in which the southern type of bag-shaped jars was manufactured, was built north of the bathhouse. The farming enclosure walls were probably from this period. The wells and cisterns continued to be used in the Middle Ages and some of them were adapted for use in the British Mandate and are still used today.


1. Winepress from the Early Roman period, looking south.

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El-Judeida
Final Archive Report
Yoav Lerer
During March 2007, a trial excavation was conducted in a cave next to Highway 70, between Judeida and Tal-El Junction (Permit No. A-5039; map ref. NIG 215241/759312; OIG 165341/259312), prior to widening the road. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel National Roads Company, was directed by Y. Lerer, with the assistance of A. Shapiro (GPS) and Y. Ya'aqobi (administration).

The cave $(2.5 \times 3.5 \mathrm{~m})$ was damaged in the past when a drainage channel was quarried in bedrock. While excavating the fill in the cave, human bones were discovered and the excavation was suspended; hence, it was not possible to obtain a plan of the cave or date the time of its use.


## (Volume No. HA-ESI 121 (2009 El-Maghara, Yad Benyamin Final Report

Dalit Weinblatt Krauz
24/12/2009
During December 1998, a trial excavation was conducted east of Yad Benyamin (License No. B-168/1998; map ref. NIG 184403-08/634000-05; OIG 134403-08/134000-05), at the bottom a trench for a water pipe. The excavation, undertaken on behalf of the Hebrew University in Jerusalem, was directed by D. Weinblatt Krauz(surveying, photography and drawing).
The trench was dug by the Meqorot Water Company, west of and parallel to Highway 3, which extends from Shimshon to Re'em junctions (south of the railroad crossing). The trench damaged the middle of the upper half of an ancient cistern, whose date is unknown. The cistern, hewn in soft limestone bedrock (Fig. 1), was used as a refuse pit in the Byzantine period. Although it was not possible to reconstruct its outline, it was feasible to estimate the circumference of the cistern, which did not exceed 3 m . Numerous and varied potsherds, dating to the end of the sixth-seventh centuries CE, were found in the upper 1.5 m of the cistern and included bowls (Fig. 2:1-6), a krater (Fig. 2:7), jars (Fig. 2:8-10), handles (Fig. 2:11, 12), a small bowl (Fig. 2:13), large animal bones, glass fragments and layers of ash. The last 0.5 m down to the bottom of the cistern consisted of a sand deposit that was devoid of finds.
Two cavities near the cistern that initially looked like the remains of an underground hiding refuge complex turned out to be geological pockets that resulted from water percolating through the soft limestone. It can be assumed that the cistern was related to the rich site nearby (HA-ESI 112:98*-100*).


1. The cistern at the conclusion of the excavation, looking west.


# (Volume No. HA-ESI 121 (2009 

## Elrom Junction

## Final Report

Hendrik (Enno) Bron


1. Plan and section.

2. General view, looking west.

3. Pottery from the Ottoman and Mamluk levels.

4. General view, looking east.

5. Iron arrowhead.

During February-March 2007, a salvage excavation was conducted near Qibbuz Elrom in the northern Golan Heights (Permit No. A5046; map ref. NIG 272677-89/786429-789; OIG 222677-89/286429-789), prior to the setting of an electrical pole. The excavation, undertaken on behalf of the Israel Antiquity Authority and financed by the Israel Electric Company, was directed by H. Bron, with the assistance of Y. Ya'aqobi (administration), A. Hajian (surveying and drafting), H. Smithline (photography), N. Getzov (pottery consultation), L. Porat (restoration), H. Tahan (pottery drawing) and workers from the Druze village of Buq'ata.
The site at Elrom junction is situated c. 200 m south of Qibbuz Elrom, on a small basalt hill, to the west of Road 98. Local residents from the nearby village of Buq'ata call the site Khirbat el Khazal, after the name of the deserted Arab village 'Ein el Khazal that was located near the site.

A single rectangular area ( $4.00 \times 6.25 \mathrm{~m}$; Fig. 1) was opened in the excavation and three levels were distinguished: Level 1 was surface soil with Ottoman building remains; Level 2 was dated to the Mamluk period and Level 3 was above bedrock and contained Middle Bronze II pottery.

Level 1 (Fig. 2). At the western side of the area, a wall (W10) was discovered. The wall (length 4.5 m , width 1.15 m ), oriented north-south, was built of undressed basalt fieldstones and preserved two courses high ( 1 m ). Wall 10 was part of a building, visible on surface and partly covered with modern architectural remains. It was not completely excavated as it extended beyond the excavation area.
The pottery recovered from the wall and its proximity indicates that W10 was probably constructed during the Ottoman period (sixteenth-seventeenth centuries CE) and was in use until the village was abandoned in 1967. The pottery included a large number of Rashaya el-Fukhar potsherds of the later Ottoman period, including a bowl (Fig. 3:1) and a jug's neck (Fig. 3:2), originating from South Lebanon (Fig. 3:1, 2).

Level 2. A layer of dark brown soil below the foundation of W10 (L102); it included two walls (W11, W12; Fig. 4) and a large amount of potsherds. Wall 11 (length 1.4 m , width 0.7 m ), oriented northwest-southeast, was badly preserved to a single course high ( 0.22 m ). It was part of the Mamluk level and most likely served as part of a terrace wall. Wall 12 ,constructed from partly dressed, medium-sized fieldstones, was preserved two courses high ( 0.3 m ). It was oriented north-south and basically divided the excavation area into two parts. It seems that Wall 12 was part of a retaining or terrace wall. No floor levels abutted the walls and the potsherds retrieved from their vicinity were dated to the Mamluk period (thirteenth-fourteenth centuries CE), including bowls (Fig. 3:3, 4), a cooking pot (Fig. 3:5) and a jar (Fig. 3:6), as well as fragments of two handmade vessels of light brown-orange clay with numerous grits (Fig. 3:7, 8). These vessels have protruding ledges with dented rope decoration. Although dating to the Mamluk period, they are virtually unknown in other Mamluk assemblages.
Close to W11 and within the stone collapse, an iron arrowhead was discovered (Fig. 5). It could imply the reason for the abandonment of the site.
Below L102 was a sterile basalt layer on bedrock (L103).
Level 3. A dark and very compact soil layer (L104) was exposed below Walls 11 and 12, lying directly above bedrock. This layer (thickness c. 0.2 m ) yielded no architectural remains, but contained a large quantity of MB II potsherds that consisted mostly of jar rims (Fig. 6:1, 2) and a cooking pot fragment with a rope decoration (Fig 6:3).

The excavation at the Elrom junction shows that the currently excavated area is situated on the fringes of a small tell that was occupied during the Mamluk and Ottoman periods. The site was apparently larger during these periods than it was during the MB Age, although the potsherd layer from MB II is a novelty in the modern research of the northern Golan Heights.

2. General view, looking west.

4. General view, looking east.

5. Iron arrowhead.

6. Pottery from the MB II level.


1. Location map.

2. Pottery from the Iron Age, Hellenistic and Middle Roman periods.

3. Wall 3, looking south.

4. Stone collapse (Locus 8) looking north.

5. Slab from bottom of furnace, covered with layer o raw glass.
(Volume No. HA-ESI 121 (2009
'llut
Final Report

## Edna Amos

15/2/2009
During October 2007, a trial excavation was conducted in the village of 'llut in the Lower Galilee (Permit No. A-5266; map ref. NIG 224714/735878; OIG 174714/2358781; Fig. 1), in the wake of exposing ancient remains while building a new house. The excavation, on behalf of the Israel Antiquities Authority, was directed by E. Amos, with the assistance of Y. Ya'aqobi (administration), T. Kornfeld (surveying), H. Smithline (photography), M. Hartal (guidance), D. Avshalom (pottery consultation), H. Tahan (pottery drawing), Y. Gorin-Rosen (glass) and D. Syon (numismatics).
The ancient village of 'llut is located c. 6 km north of Zippori (Sepphoris), on the northern slope of the hill that descends toward wadi 'llut. The flowing spring in the center of the village was probably the core around which the ancient settlement may have been built. Numerous stone structures, some dating to the Ottoman period, are still standing in situ. A few open areas are left in the cemetery near the western mosque, where remains of ancient walls and numerous potsherds from various periods are visible. The village is identified with 'Ayyatalu (Z. Safrai, 1981. The Galilee in the Time of the Mishna and Talmud, p. 261). A survey conducted in the village by D. Edwards, on behalf of Puget Sound University (License No. G-55/2007), documented rock-hewn tombs and sarcophagi from the Roman and Byzantine periods. To date, no archaeological excavations had been undertaken within the village.
An area ( $4.0 \times 6.5 \mathrm{~m}$; Fig. 2) was opened in the center of the village, c. 50 m north of the spring. Dense and wellpreserved building remains that dated to the Hellenistic (end of third-second century BCE), Middle Roman (second-third centuries CE) and Byzantine (fifth-sixth centuries CE) periods were exposed. Potsherds dating to Middle Bronze II, the Iron Age and the Early Roman period were discerned in each of the excavation strata.

Early periods. Potsherds from MB II, such as a krater (Fig. 3:1) and the Iron Age, found in the upper strata, were apparently swept over from the slope.
Hellenistic period. A wall preserved five courses high (W3; length 2.7 m . width 0.5 m , preserved height 1.9 m ; Fig. 4) was exposed. It was oriented east-west and built of coarsely hewn hard limestone ( $30 \times 38 \times 48 \mathrm{~cm}$ ), with smaller stones fitting between them and arranged in courses. A floor (L21; Fig. 5) of flat fieldstones (c. $10 \times 15 \mathrm{~cm}$ ) abutted the northern side of W3. A bronze coin dating to the reign of Ptolemy II (286-245 BCE; IAA 106436) was found on the floor, as well as pottery vessels, which were also discovered beneath the floor, including a bowl (Fig. 3:2), cooking pots (Fig. 3:3, 4) and jars from the Hellenistic period (Fig. 3:5-8). The floor was covered with a layer of soil (L20) after it and W3 were no longer in use.
Early Roman period. Potsherds dating to the first century CE attest to the settlement's occupation in this period.
Middle Roman Period. Two construction phases ascribed to this period were discerned. In the early phase, a wall (W17; length 2.1 m , width c. 1 m , preserved height 1.5 m ; Fig. 6) of limestone fieldstones ( $30 \times 30 \times 35 \mathrm{~cm}$ ), was built next to the northern face of W3. A floor (L19) of tamped chalk abutted it. A niche dug into the floor contained Kefar Hananya-type bowls (Fig. 3:9-11), a Sikhin-type bowl (Fig. 3:12), a jar (Fig. 3:13) and jugs (Fig. 3:14, 15) that dated to the Middle Roman period.
In the later phase, surface was leveled with a thick fill layer of soil, building stones and fieldstones (L18) and another floor of crushed chalk (L15; Fig. 7) was installed. The ceramic artifacts in the fill layer and on Floor 15 were similar to those recovered from the lower chalk floor (L19).
Byzantine period. The southeastern corner of a building was exposed. A wall (W2; length 3.25 m , width 0.8 m , preserved height c. 2.5 m ; Fig. 8) was built of well-dressed large stones ( $35 \times 40 \times 60 \mathrm{~cm}$ ) with smaller stones between them that were arranged in courses. The bottom course was built of even larger stones and the western face of the wall was built of small stones and seems to have been the inside of the wall. The wall was founded within a deep foundation trench that had cut through the remains of the Middle Roman and Hellenistic periods (L7; Fig. 9). Two courses of large masonry stones were exposed of the corner wall ( W 12 ; length 2 m , width 0.7 m , preserved height 1 m ) that was perpendicular to W2. Collapse of large building stones (L8; Fig. 10) that probably originated from these walls was exposed inside the structure.
The ceramic finds dated to the end of the Byzantine period and included Late Roman Red Ware bowls (Fig. 11:1-3) cooking pots and a lid (Fig. 11:4-6) and jars (Fig. 11:7, 8). Fragments of glass vessels that dated to the end of the Byzantine period or the Umayyad period were also found (Gorin-Rosen, below).
The impressive remains of the wall point to a large building had stood there. It seems that the building collapsed and was abandoned still within the Byzantine period. It was not possible to evaluate the nature of the building due to the limited scope of the excavation.
Mamluk period. A short section of a wall, one stone wide (W6; $0.5 \times 1.1 \mathrm{~m}$ ), which was built of different size stones, some in secondary use, was exposed. The wall was built on the severed western end of W3 (Hellenistic) and rested on the southeastern corner of the Byzantine building. A crushing stone (memmel) that belonged to an olive press was incorporated, in secondary use, in the eastern end of W3 (Fig. 12). A shallow channel was hewn across half of the crushing stone, draining into its center hole. A few potsherds from the Mamluk period were collected, including bowls (Fig. 11:9, 10) and a cooking pot (Fig. 11:11).
Ottoman period. Two pits (Loci 9, 10; Fig. 13) that were probably used as refuse pits were found. They contained an assortment of potsherds, including a pipe (Fig. 11:12) and a fragment of a Rashaya el-Fukhar jug (?; Fig. 11:13).

## Glass Artifacts

Yael Gorin-Rosen
Forty-three glass fragments were discovered, fifteen of which could be identified and dated. Most of the vessels dated to the latter part of the Byzantine period. Four vessels from L8 are illustrated, including two rims of wine goblets, one undecorated (Fig. 14:1) and the other decorated with blue glass trails on the edge of the rim and below it (Fig. 14:2); a solid base of a wine goblet with a cylindrical stem (Fig. 14:3) and a small fragment of a mixing stick made of a wound glass trail (Fig. 14:4). The wine goblets are dated to the end of the Byzantine and the beginning of the Umayyad periods The mixing stick should be dated to the Umayyad period, although sticks of this kind also occurred in the Early Roman period.
In addition to the vessels, glass industrial waste was found. It consisted of three different size lumps of raw glass and a slab from the bottom of the furnace that was covered with a layer of raw bluish greenish glass (Fig. 15). The appearance of industrial debris, together with glass artifacts that are dated to the end of the Byzantine period, prompt us to suggest that a workshop for producing glass vessels operated in the settlement at the same time.

Despite the limited scope of the excavation, it is apparent that the modern village of 'llut is situated on a tell that was occupied during several periods. The earliest periods-Middle Bronze II, Iron Age and Early Roman period-were only represented by ceramic artifacts, although the settlement remains are probably located close by. During the Hellenistic Middle Roman and Byzantine periods a dense settlement was at the site. The plethora of finds from the Middle Roman period, which included bowls and jars that were produced in Kefar Hananya and Sikhin, confirms the existence of a settlement at a time to which the baraita refers to the Gate Priesthood in 'Ayyatalu.


1. Location map.


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3. Pottery from the Iron Age, Hellenistic and Middle Roman periods.

4. Wall 3, looking south.

6. Wall 17, looking south.

8. Wall 2, looking northwest.

9. Foundation trench (Locus 7), looking south.

10. Stone collapse (Locus 8), looking north.


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11. Pottery from the Byzantine, Mamluk and Ottoman periods.

12. A crushing stone (memme), looking north.

14. Glass artifacts from Locus 8 .


## 'En Hemed Final Report

Rina Avner
During September 2007, a salvage excavation was conducted within the 'En Hemed National Park (Permit No. A-5257; map ref. NIG 21189-92/63368-70; OIG 16189-92/13368-70; Fig. 1), after a wall was discovered when a trench for a sewer was dug. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Nature and National Parks Authority, was directed by R. Avner, with the assistance of M. Kunin (surveying), L. Belashov (drafting) and R. Kool (numismatics).

A wall, perpendicular to the stream channel that flows from the 'En Hemed spring to the southwest and c. 37 m from the southern corner of a Crusader-period building, was discovered (Fig. 2). The wall, built of large dressed limestone with a core of soil and small fieldstones, was preserved four courses high; three of them were foundation courses set on bedrock and built of medium and large fieldstones; the fourth course consisted of carelessly dressed stones. A coin minted in 1949, which was discovered in the core of the wall, indicates its date. The wall is probably a farming terrace.


1. Location map.

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'En Tut Interchange
Final report

2. Location map.

3. Fill on top of bedrock, looking south.

Murad Anton Tabar
During January-February 2006, a trial excavation was conducted along the northeastern fringes of a site near the 'En Tut interchange (Permit No. A-4698; map ref. NIG 204526-56/723924-48; OIG 154526-56/223924-48; Fig. 1), after ancient remains were discovered during earthworks. The excavation, on behalf of the Israel Antiquities Authority and underwritten by the Derekh Eretz Company Ltd., was directed by M.A. Tabar, with the assistance of A. Hajian and T. Kornfeld (surveying and drafting) and T. Sagiv (field photography).
A number of strata from Iron II and the Early Roman period, as well as several tombs from the Mamluk period (Permit No. A-4389) had previously been exposed to the southwest of the current excavation area. Two excavation squares were opened (Fig. 2), revealing the foundations of a wall from Iron II, which was probably the remains of a building that belonged to the settlement exposed nearby.
The wide massive wall (W7; length 9 m , width 1.87 m ; Figs. 3, 4) was oriented east-west. It was built of fieldstones (up to $0.13 \times 0.17 \times 0.40 \mathrm{~m}$ ) in dry construction and founded on bedrock as a series of rectangular 'boxes' that were filled with fieldstones of various sizes and dark brown soil (L112). The northern face of W7 was preserved five courses high, whereas its southern side had survived to three courses high. The wall had no openings and no stones in secondary use were found. To the north of the wall was a cluster of different size stones (L107; Fig. 5) that probably collapsed from the wall.

Potsherds were found on either side of the wall (Loci 107, 114), including a bowl (Fig. 6:1), a cooking pot (Fig. 6:2), and jars (Fig. 6:3, 4), dating to Iron II (eighth-seventh centuries BCE).

6. Pottery.


1. Location map.

2. The excavation area, looking west.

3. Plan and sections

4. Wall 7, looking west.

5. Fill on top of bedrock, looking south.

6. Pottery.

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‘En Ziwan, Survey
Final Report
Oren Zingboym


1. Survey map.

During August-September 2007, a survey prior to development was conducted west of Qibbuz 'En Ziwan (Permit No. A5209; map ref. NIG 27295-332/77817-70; OIG 22295-332/27817-70), prior to the allocation of land for an orchard. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by Moshav Keshet, was directed by O. Zingboym and A. Shapiro.

The survey (Fig. 1) was carried out in a dolmen field along the lower southwestern slopes of Mount Avital. A similar survey had been performed nearby in the past (HA-ES/120). Twenty sites with ancient finds were documented, primarily dolmens, stone heaps, building remains, walls and farming terraces.

1. Stone heap.
2. Farming terrace.
3. Remains of a modern rectangular building ( 52 sq m ), whose opening faces east.
4. Remains of an ancient rectangular building ( 28 sq m ), beneath Building 3.
5. A defensive peripheral trench and military outposts; this system seems to be several hundred years old.
6. Stone heap, possibly a ruinous dolmen.
7. A dolmen enclosed within a peripheral wall, built of a single course of stones.
8. Dolmen.
9. Built wall, possibly ancient.
10. Dolmen (?).
11. Farming terrace.
12. Stone heap (diam. c. 2.5 m ).
13. Tops of walls (?).
14. Fence delimiting a new orchard.
15. Farming terrace wall that is built of large stones, possibly ancient.
16. Large stone heap inside an orchard.
17. Small stone heap.
18. Large stone heap inside an orchard.
19. Five elongated stone heaps (length c. 4 m ).
20. Pit, possibly ancient.

21. Survey map.

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Er-Rama
Final Report

Gilad Cinamon

During July 2007, a trial excavation was conducted at the modern village of Er-Rama (Permit No. A-5175; map ref. NIG 234460-74/760030-42; OIG 184460-74/260030-42), prior to construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by G. Cinamon, with the assistance of Y. Ya'aqobi (administration), M. Hartal (archaeological consultation) and laborers from the village of Yafia'.

A single square was excavated in the southern part of the village, adjacent to the remains of a winepress, residential buildings, a church and a Roman bathhouse (HA 44:7; HA-ESI 113:10*). Numerous potsherds that dated to the Late Roman period were discovered on surface and the foundation of a wall, which was not preserved, was uncovered.

Bedrock was exposed at a depth of 2.4 m below surface ( 354.1 m above sea level) and ground water, which is part of the aquifer that includes the three nearby springs of 'En Zarar, 'En Hadim and 'En 'Izzim, emerged.
An ancient, east-west oriented, channel (width 1.5 m , depth 0.33 m ) was exposed in the middle of the excavation area, running its entire length. It was dug into a layer of loose soil, which was a later fill that comprised medium and large roughly hewn fieldstones, with no potsherds.
Numerous fragments of pottery vessels that dated to the Late Roman period (fourth-fifth centuries CE) were found above the stones on the surface.
Above the surface in the southeastern part of the excavation area was a uniform surface of flat roughly hewn stones that served as the foundation of a wall (length 1.2 m ), which did not survive. The stones of the wall's foundation, fragments of glass and pottery vessels, as well as traces of ancient plaster on the roughly hewn stones were probably the remains of the structure that was not preserved, whose building stones were scattered across the surface.

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## Es-Sawafir esh-Sharqiya (Shapira Center)

 Final Report

1. Plan and section

2. Wall 8 and Wall 13, looking south.

3. The water conduit (L2), looking south.

4. Pottery.

5. Pottery.

Daniel Varga
During June-July 2004, a salvage excavation was conducted at Es-Sawafir esh-Sharqiya in the Shapira Center, c. 20 m from the Qastina-Ashkelon road (Permit No. A-4195; map ref. NIG 17230/62309; OIG 12230/12309), following the discovery of antiquities during infrastructure work. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Meqorot Water Company, was directed by D. Varga, with the assistance of H. Lavi and Y. Haimi (administration), A. Hajian (surveying), T. Sagiv (field photography) and C. Hersch (pottery drawing)
The village of Es-Sawafir esh-Sharqiya had been located in the past on the southeastern bank of Nahal Lakhish. Remains from the Byzantine period had been exposed in previous excavations at the village of EsSawafir el-Gharbiya (HA-ESI 113:106*-107*; HA-ESI 117).

The excavation area ( 140 sq m ) revealed buildings remains that dated to the Late Roman (third-fourth centuries CE) and Byzantine (fifth-beginning of seventh centuries CE) periods. Pottery vessels from the Abbasid period (eighth-tenth centuries CE) were discovered on surface. The limited size of the excavation, which consisted of a strip of half squares and one square that was excavated in its entirety, hampered the understanding of the site, yet it was possible to evaluate several of its characteristics.
Throughout all the habitation periods at the site, it seems that the settlement's buildings were oriented north-south and constructed according to a proper plan (Figs. 1, 2). The walls of the structures were mostly built of dressed kurkar stones $(0.15 \times 0.30 \times 0.20 \mathrm{~m}$; Fig. 3), with a few mud bricks. No mud-brick walls survived; however fragments of collapsed mud bricks were found mostly in the eastern squares. The buildings had stone, plaster or tamped earth floors. On one of the floors in a building from the end of the Byzantine period were remains of a delicate white mosaic (L8; c. 0.2 m below surface) that was hardly preserved, except for several tesserae that survived in situ. An aqueduct (L2; width 1.2 m , height 1.35 m ; inner dimensions $0.80 \times 0.95 \mathrm{~m}$ ) was exposed below an alley that passed between the houses of the settlement in the Byzantine period; only its covering protruded above the pavement of the alley. The walls of the aqueduct and its floor were built of kurkar stones and coated with hydraulic plaster (Fig. 4), whereas its covering consisted of a kurkar and mortar casting mixture. Potsherds, wadi pebbles and fragments of coins were discerned in the components of the covering that had partly collapsed. Control openings that were intended to provide access for cleaning the aqueduct were discovered in the covering.
The aqueduct's foundation trench was dug at the level of a floor (L17), which abutted the wall of the building to its west. The course of the aqueduct was parallel to the walls of the structures on either side of the alley (W7 to the east and W8 to the west) and it therefore seems to have been founded together with the building complex and the alley. Based on the northerly direction of the water flow, the aqueduct's source was located south of the exposed section.
The poorly preserved remains of an industrial installation (winepress?) and a tabun (diam. 0.7 m ) were discovered at the western end of the area. The installation had a plastered floor that sloped slightly to the west. After the installation was no longer in use, it was converted into a refuse pit and fragments of pottery vessels from the Byzantine period, mostly cooking pots and Gaza jars, as well as animal bones were found in it. Several fragments of cooking pots, ash and organic material were found in the tabun.
Most of the recovered pottery was characteristic of the sixth-seventh centuries CE and included bowls (Fig. 5:1, 3, 4, 6, 7), kraters with a horizontal and wavy combed design (Fig. 5:8-10), a juglet (Fig. 6:11), cooking pots (Fig. 6:1, 2, 5) and jars, mostly baggy shaped (Fig. 6:6). A few of the vessels dated to the fourth century CE, namely bowls (Fig. 5:2, 5), cooking pots and a lid (Fig. 6:3, 4), a jar (Fig. 6:7) and amphorae (Fig. 6:9, 10). Pottery vessels, mostly jars that dated to the Abbasid period (Fig. 6:12), were found on the surface at the eastern end of the excavation, as well as a few glass fragments and animal bones.

It seems that the settlement, of which only a small part was excavated, existed from the fourth to the beginning of the seventh centuries CE. It was well-planned and built on top of properly organized infrastructures. Only a few potsherds that dated to the Abbasid period were found.


1. Plan and section.

2. Wall 8 and Wall 13 , looking south.

3. The water conduit (L2), looking south.


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10

5. Pottery.

6. Pottery.
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Eshel Ha-Nasi, Survey in the Junction Area
Final Report
Emil Aladjem


1. Location map.

During July 2006, an archaeological survey was conducted for the Jewish National Fund (Permit No. 4867; map ref. NIG 1717-27/5792-820; OIG 1217-27/0792-820), prior to preparing the ground for development. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the JNF, was directed by E. Aladjem, assisted by S. Gal (GPS).
The survey extended across a flat region east of Highway 25, adjacent to Eshel Ha-Nasi Junction. Most of the area was cultivated and three sites were found.

Site 201 (map ref. 171767/581597). A cistern with a square opening ( $0.4 \times 0.4 \mathrm{~m}$, depth c. 6 m ), built of kurkar stones Site 202 (map ref. 172406/580554). Remains of a rectangular building (length 20 m , width 10 m ), built of undressed chalk stones. The walls could not be clearly identified because the building was destroyed and most of the masonry stones visible on surface had been robbed.
Site 203 (map ref. 172618/579228). A cistern (diam. of opening 0.5 m ) that was renovated with cement in the modern era and is still in use to date.


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## Eshta'ol

## Preliminary Report



1. Location of excavation areas.

2. Square E2 at the end of excavation, looking west.

3. Entranceway in W203.

4. Surface with crushed ceramics (L58).


6 . Building 2, looking west.

Amir Golani and Dan Storchan

During June-July 2008, a salvage excavation was conducted along the western side of Highway 38 and north of the Eshta'ol junction (Permit No. A-5458; map ref. 251383/631928; OIG 131928/151383; Fig. 1). The excavation, undertaken on behalf of the Israel Antiquities Authority and funded by the Public Works Bureau, was directed by A.Golani and D. Storchan, with the assistance of Y. Lender and Y. Ohayon (administration), M. Kunin and A. Hajian (surveying), T. Sagiv (field photography), O. Ackerman (geomorphology), A. Nagorsky (district archeologist) and P. Betzer (district archaeological inspector)
The site is located on the western bank of Nahal Eshta'ol, near its junction with Nahal Kesalon. Previous salvage excavations along the western side of Highway 38, had exposed portions of the site, revealing settlement remains of Early Bronze Age IB and the Intermediate Bronze Age (HA-ESI 120).
The present excavation (Area F; Fig. 2), adjacent to and northeast of Area E, appears to represent a continuation of the Intermediate Bronze Age (henceforth IBA) settlement. It included architectural remains along with ceramic and flint material. Although not found in situ, ceramic and flint artifacts of the Early Bronze period (henceforth EB) were also found. Three distinct occupational strata of the IBA were identified (Strata IV-II) and Stratum II was found to have two building phases.

## Stratum IV

The earliest architectural remains were exposed only in a limited area (Sq E2) and included two walls (W218 and W219) that were separated by a meter-wide gap, interpreted as an entranceway that was later blocked by W212 in Stratum III (Fig. 3). A beaten-earth surface (L62) associated with the base of these walls was found to their south and included a large flat stone with a hewn circular cup.

## Stratum III

The architectural remains of this stratum comprised two structures of unclear plan.
Building 1. This structure is scantly defined by a few wall remains. The structure is enclosed to the south by W203/W209 and to the north by the reused W218 of Stratum IV. A large boulder that abutted the western end of W203 may indicate an additional wall, which possibly continued northward to join W218. A line of flat-topped stones and W212, which formed a corner with W218, may indicate an eastern division of Building 1. The eastern side of this area, although not clearly demarcated by a wall and its specific nature could not be determined with any certainty, suggests that the flat-topped stones functioned as pillar bases, supporting a roofed space further to the east.
An entranceway in W203 (Fig. 4) was built of two large stone jambs, an adjoining stone threshold and a door socket, indicating the entry was from the south. East of the entranceway and adjacent to the supposed continuation of W203, a roughly circular built stone installation was revealed. Several beaten-earth surfaces, one of which was integrated around a bedrock outcrop, were found within the area circumscribed by Building 1. These surfaces contained a limited amount of ceramic material that may be associated with the IBA.
To the south and parallel to Building 1, another wall (W216) may indicate an alleyway or a side room. Further east, a beaten-earth surface upon bedrock was found strewn with numerous smashed store jars (Fig. 5). The surface, associated with Building 1, was observed to run underneath architectural elements of Stratum II.

Building 3. To the north of Building 1, partial remains of another building were revealed, consisting of a corner formed by two roughly built stone walls (W214, W215). Beaten-earth surfaces outside the structure revealed both IBA and EB ceramics

## Stratum II

Architectural remains associated with this stratum were identified primarily in the southern portion of the excavated area, where two building phases ( $A$ and $B$ ) were defined. A large stone clearance heap that had covered the remains of both Strata IV and III was discovered in the north of the area. This stone pile was attributed to Stratum II, as its stones were found to directly overlay surfaces associated with Stratum III. This fact, in addition to the observation that architectural remains of Stratum II were not found in this area, posits the association of the stone heap with Stratum II as likely, although not certain.

## Building 2

Phase A. The remains of Building 2 were composed of at least three separate rooms (Rooms 1-3) arranged in a row. The walls of this structure were founded upon an artificial fill of small stones that contained IBA ceramics.
Phase B. In the later phase, Building 2 continued to function along with several architectural additions to its north and west. Both building phases of Stratum II could have been contemporaneous with those associated with Stratum III, although the exact nature of any possible coexistence is not completely clear. During Phase B, two walls (W201, W202; Fig. 6) that formed a corner were constructed and appear to have joined Building 1 to Building 2. The inner corner of W201 and W202 was strengthened by a fill of stones that created a raised platform, built directly upon a stone fill that covered the Stratum III surface. Further additions to the construction of Phase B were found to the west of Building 2 (Sq A1).

Stratum I
A single wall (W217), badly damaged by modern construction, was exposed at the southern end of the excavation (Sq A1). It could not be associated with any of the other strata, yet it clearly post-dated Stratum II. Lack of any associated floors prevented its dating

The present excavation revealed remains of the IBA period and is an extension of the IBA occupation that had previously been exposed in Areas C and E to the south. The results from these two excavation areas along with the remains uncovered in Area F imply that the IBA site had possibly existed in a wide and elongated strip along the western bank of Nahal Eshta'ol. The lack of in situ settlement remains of the EB period in Area F also serves to define the extent of the EB site, so far identified in the excavation of Areas A, B and D. The general lack of excavated settlements from the IBA period in the Judean Shefelah highlights the importance of this site in the understanding of this period.


2. Area F, Strata I-IV, plan.

3. Square E2 at the end of excavation, looking west.

4. Entranceway in W203.

5. Surface with crushed ceramics (L58).

6. Building 2, looking west.
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## Eshta'ol Junction

## Final Report

Gideon Solimany


1. Location map.

2. The excavation area, looking south.

3. Sections.

4. Northern square, looking southeast.

During November 2005, a trial excavation was conducted next to the intersection at the entrance to Moshav Eshta'ol (Permit No. A4624; map ref. NIG 20120-5/63180-90; OIG 15120-5/13180-90; Fig. 1), prior to the widening of Route 38. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Department of Public Works, was directed by G Solimany, with the assistance of R. Abu Halaf (administration), V. Pirsky (surveying) and a team of the Judea District antiquities inspectors.
The site is situated at the confluence of Nahal Kesalon, descending from the east and a channel that descends toward it from the northeast. The site had previously been damaged by electricity and sewer lines, as well as the planting of trees adjacent to Route 38. Probe trenches at the site exposed a stone level, potsherds and numerous flint implements. Two excavation squares were opened (each of $4 \times 4 \mathrm{~m}$; Fig. 2).
Below a fill of modern soil (L100; Fig. 3), a level of small and medium-sized broken limestone appeared in both squares. The stone level extended across the entire area of the southern square (L103; Fig. 4) and only in the southern and western parts of the northern square (L102; Fig. 5). Numerous potsherds and flint implements were found in a horizontal layer above the stone level, which was dismantled and a dark soil fill that contained a few potsherds and flint emerged below it.
It seems that most of the ceramic finds dated to Early Bronze I and the stone level belonged to a large settlement from this period, which was exposed in other excavations at the site (B-311/2006, B-322/2007; $\underline{H A-E S / 120, ~ H A-E S / 121) . ~}$


1. Location map.

2. The excavation area, looking south.

3. Sections.

4. Southern square, looking south.

5. Northern square, looking southeast.

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Fakhura
Preliminary Report
Oren Zingboym and Dina Avshalom-Gorni


1. Plan.

2. General view of the site, looking east.

3. Eastern room, looking north.

4. Western room, looking north.

5. Installation in northern corner of western room. looking north.

During July 2005, a salvage excavation was conducted at Fakhura, northwest of Qazrin in the Golan Heights (Permit No. A-4528; map ref. NIG 264260/767450; OIG 214260/267450), prior to the installation of an electric pole and the laying of an underground electric line. The excavation, undertaken on behalf of the Israel Antiquities Authority and financed by the Israel Electric Company, was directed by O. Zingboym and D. Avshalom-Gorni, with the assistance of Y. Ya'aqoby(administration), V. Essman and V. Pirsky (surveying) and H. Smithline (photography).
The site, which is located on a basalt plain next to the Nahal Meshushim channel, is known from the Golan survey (Epstein and Guttman 1972. Judea, Samaria and the Golan, p. 269). An excavation had been conducted at the site (License No. K-7/1972), revealing building remains, fragments of pottery vessels from the second and third centuries CE, pared lamps and coins as well as a Tyrian coin from the year 182/3 CE (HA 45:1; 47:1 [Hebrew]). The site was resurveyed recently (H. Ben David, 2005. The Jewish Settlement in the Golan during the Mishnah and Talmud Times in Light of the Finds from the Survey in the Southern Golan Heights. Qazrin. pp. 71-73) and a trial excavation was conducted in its northern part (License No. G-90/2002).
An area (122 sq m; Figs. 1, 2) was excavated; bedrock was exposed in its southeastern part where hardly any finds were traced, suggesting that this part of the site was located beyond the bounds of the settlement. In the northwestern part of the area, a section of a building whose walls were built of roughly hew basalt stones was excavated. A number of rooms that were connected by doorways and had floors paved with basalt flagstones were exposed (figs. 3, 4). The lower millstone of an Olynthus mill that was set on top of a built installation was discovered in the southwestern room (Fig. 5). The finds included fragments of locally produced pottery vessels, cooking pots and cooking bowls, which were similar to the vessels manufactured at Kefar Hananya and in the Golan workshops, and jars that are also known from local workshops. In addition, fragments of lamps and a number of coins were found. The artifacts were dated to the second and third centuries CE.

The building exposed in the excavation, which dated to the second and third centuries CE, was apparently destroyed by an earthquake at the beginning of the fourth century CE. The excavation finds join previous evidence that was uncovered in surveys and excavations at the site. The pottery vessels indicate that the residents of the site were Jewish and they used locally produced vessels. This is consistent with the results of excavations at sites, such as Qazrin and 'En Nashut, even though no synagogue remains were found at Fakhura, probably because it did not exist at the time when synagogues were built in the region.


1. Plan.

2. General view of the site, looking east.

3. Eastern room, looking north.

4. Installation in northern corner of western room, looking north.

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## Fassuta

Final Report


1. Plan.

2. The cover stones, looking northwest.

3. The cover stones, looking south.

4. Pottery.

Hagit Tahan
In March 2005 a salvage excavation was conducted at Fassuta (Permit No. A-4399; map ref. NIG 2292/7728; OIG 1792/2728) following the excavation of probe trenches in which building stones were discovered. The excavation, undertaken on behalf of the Antiquities Authority with the financial support of the contractor, was directed by H. Tahan Rosen (pottery drawing), with the participation of Y . Lerer and Y . Ya'aqobi (administration).
Horbat Pazelet (Khirbat Fasil Danyal) is an ancient tell located within the precincts of the village of Fassuta. In the past two tombs and a rich stratum from the Middle Bronze Age II were excavated there (ESI 9:92) and a cave containing finds from the Early Bronze Age and the Hellenistic period (HA-ES/ 119).

A single square was excavated, at first by means of a backhoe and afterwards manually (Fig. 1). At a depth of 1.2 m , roughly-hewn covering stones $(0.65 \times 0.90 \mathrm{~m})$ belonging to at least three cist tombs were exposed; the tombs were not excavated (Figs. 2, 3). In the northern part of the square a sewage pipe was exposed that had damaged one of the tombs and shifted some of the stones that covered it. The fill layer above the tombs yielded a cooking pot from the Roman period (Fig. 4:1), a bowl (Fig. 4:2) and a krater (Fig. 4:3) from the Byzantine period, and bowls (Fig. 4:4,5) and a krater (Fig. 4:6) from the Mamluk period.


1. Plan.

2. The cover stones, looking northwest.

3. The cover stones, looking south.


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## Ge'alya

## Preliminary Report


2. Tomb 105 (Subtype A1)
plan.

3. Tomb 105, looking south.

5. Tomb 113, looking southeast.

6. Tomb 114 (Type B). looking south.

9. Area B, Tomb 220, looking west.

Amir Gorzalczany
5/5/2009
During September 2006, a trial excavation was conducted at the site of Ge'alya (Permit No. A-4899; map ref. NIG 178129-774/643303-904; OIG 128129-774/143303-904), in the wake of discovering antiquities while widening Road 410 (Kefar GevirolYavne junction). The excavation, undertaken on behalf of the Israel Antiquities Authority and financed by the Department of Public Works, was directed by A. Gorzalczany, with the assistance of J. Marcus (area supervision), S. Wadinski (registration), E. Bachar (administration), T. Kornfeld and A. Hajian (surveying), A. Dagot (GPS), T. Sagiv (field photography), Y. Nagar (physical anthropology), Y. Assam (mechanical equipment), I. Taxel (survey advisor), R. Vinitzki and L. Kupershmidt (metallurgical laboratory), P. Gendelman, F. Vitto, M. Avissar and K. Cytryn (pottery reading), M. Molokondov (Tel Aviv district) and workmen from Qiryat Gat and Rehovot

The site of Ge'alya (Fig. 1) consists of two ancient ruins, Kh. el-'Ajjuri to the west of the road and Kh. edDuheisha (BIES 21:199-207; BASOR 350:13-16) to its east. Previous excavations at the site had revealed tombs from MB II, the Middle Ages and the late sixth century CE (ESI 4:119; 16:89-90).
The excavation area was located on a low hill on the western side of Road 410, east of Moshav Ge'alya. Two areas were opened: Area A (the northern area) consisted of five squares and Area B (c. 250 m south of Area A) had a single square (Fig. 1). A cemetery that dated to the later part of the Mamluk or the beginning of the Ottoman (fifteenth century CE) periods was discovered, as well as tombs and an occupation level that probably dated to the Roman-Byzantine periods.

## Area A

This area was located on the northern gentle spur of the hill. The tombs at the top of the hill were found close to surface level, whereas the tombs along the northern slope were exposed beneath a thick layer of hamra soil. The latter was devoid of archaeological finds and probably deposited in modern times, prior to the planting of an olive grove that covered the area.
Thirteen tombs of three main types, which were oriented east-west and constituted part of a large burial field, were exposed. Since the tombs were not excavated, it was impossible to draw any demographic conclusions or ascribe the interred to a specific gender, age or social rank.
Type A. Single-burial graves, built of undressed stones and covered with ceramic jars filled with earth. Stones were positioned at the edges of the tomb; in one instance, an especially conspicuous stone was probably a burial marker. The Type A tombs were divided into two subtypes.
Subtype A1. The jars were lying perpendicular to the longitudinal axis of the tomb. The jar rims alternately faced north and south and the jar bodies were set in a fitting arrangement to cover the tomb, e.g., L105 (Figs. 2, 3). It was covered with six jars of three different types, the easternmost jar lacked handles. A skull and a few neck vertebrae were found beneath two broken jars in one of the tombs.
Subtype A2. The covering jars were alternately standing upright and upside-down. The only tomb of this subtype was L113 (Figs. 4, 5), which included three jars. A stone placed on its narrow side at the eastern end of the tomb was probably a burial marker.
Type B (Fig. 6). The most common tomb type was a simple cist tomb, oriented east-west and covered with stone slabs $(0.2 \times 0.3 \times 0.5 \mathrm{~m})$.
Type C (Fig. 7). A skeleton placed in a pit dug in the ground, without any construction or covering. A single tomb of this type was found. The skeleton was anatomically articulated and several jars were placed nearby, although their connection to the tomb is unclear.
It should be noted that tombs of Types B and C were located on a higher level than Type A tombs. The cemetery was probably used over a long period of time; Type A tombs may be representative of an early phase (Mamluk?) while Type $B$ and C tombs may belong to a later phase (Ottoman?).

Sixteen jars from the Mamluk period were discovered above the various tombs. The jars belong to three main types: bagshaped jars ( $\mathrm{N}=10$ ), jars that were used as beehives ( $\mathrm{N}=4$; Levant 38:203-212) and saqiye jars ( $\mathrm{N}=2$ ). The bag-shaped jars are made of light colored fabric with delicate ribbing and have round handles on the shoulder. Some have a thickened rim or a ridge on the neck of the vessel. This jar is particularly characteristic of the latter part of the Mamluk and the beginning of the Ottoman periods. Similar jars were found in tombs at Azor (HA-ES/ 113:66*-67*, Fig. 151:3-5). Other finds included a bead (glass?) and a bone comb fragment of the type known from the end of the Byzantine period and throughout all the Islamic periods ('Atiqot 46:37-47).

Remains that attested to an earlier phase of the cemetery were found in the northern part of Area A. A pavement of square flagstones was exposed in the northwestern corner of the area. The ceramic finds included ribbed jars, some of which were Gaza-type jars that dated to the third-fourth centuries CE. A rectangular burial structure (L132) built of stone was exposed in another square. The occupation level that abutted the tomb included potsherds from the same period. However, since the tomb was not excavated, its date is not certain.

## Area B

A cist tomb (L220; $0.8 \times 1.9 \mathrm{~m}$; wall thickness 0.3 m ; Figs. 8, 9) built of ashlar stones (average dimensions $0.20 \times 0.25 \times$ 0.60 m ) and oriented northwest-southeast was exposed. No covering above the tomb was found and no similar tombs were detected in Area A, except perhaps for the tomb in the section of one of the squares

The burial site at Ge'alya represents a new type of cemetery from the end of the Mamluk or the beginning of the Ottoman periods (fifteenth century CE). The use of intact pottery vessels to cover the tombs has not been fully documented in the literature. Similar tombs were discovered at Azor, Kafr 'Ana (Or Yehuda) and in the vicinity of Ramla (TAU Salvage Excavation Reports 4; Permit No. A-4854). This apparently is a phenomenon characteristic of the central Coastal Plain in the Late Islamic period. The results of the excavations at Ge'alya contribute important data to the study of funerary customs in the Late Islamic period.


1. Location map.


[^1]
3. Tomb 105, looking south.


5. Tomb 113, looking southeast.

6. Tomb 114 (Type B), looking south.
7. Tomb 134 (Type C), looking west.

8. Area B, Tomb 220, plan and section.

9. Area B, Tomb 220, looking west.

# (Volume No. HA-ESI 121 (2009 <br> Giv'at Avni (South) <br> Final Report 

Butrus Hana
During March 2006, a salvage excavation was conducted c. 1 km south of Giv'at Avni (Permit No. A-4760; map ref. NIG 24075-135/74123-65; OIG 19075-135/24123-65), prior to the construction of a youth village.

Two squares ( 50 sq m ) were excavated 50 m apart. Close to a stone clearance heap in the western part of the southern square was a layer of brown clay soil with a few small and medium-size fieldstones, which contained several potsherds from the Roman period. A layer consisting of brown agricultural soil and a few fieldstones was excavated in the eastern part of the square.

A stone clearance heap ( $10 \times 12 \mathrm{~m}$; height c .1 m ) in the northern square was composed of small and mediumsized stones. Agricultural soil that had been deposited on bedrock was exposed below the stone heap.

## (Volume No. HA-ESI 121 (2009

## Giv'at Hamudot, Survey <br> Final Report

## Yoav Lerer



1. Survey map.

During October 2007, a survey prior to development was conducted in the northern part of Giv'at Hamudot and in adjacent agricultural areas (Permit No. A-5251; map ref. NIG 213480-4638/772113-4548; OIG 163480-4638/272113-4548), prior to the construction of a new residential neighborhood. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Construction and Housing, was directed by Y. Lerer, with the assistance of E. Stern (surveyor) and A. Shapiro (GPS).

Two low chalk hills (Northern-Spot Height 74; Southern-Spot Height 79.9) and a valley with alluvium soil, which extends south of Nahal Bezet and west of the hills, were surveyed. The region had been surveyed in the past within the Archaeological Survey of Israel (Map of Akhziv [1] and Map of Hanita [2], p. 123). One hundred and ten sites were discovered (Fig. 1); the soft chalk bedrock was utilized for quarrying building stones, as well as hewing different agricultural installations and a water reservoir. The remains of three settlement sites were also recorded. The installations are described below (Tables $1,2)$ :
Table 1. Installations on the southern hill

| Installation | Number | Site No. (Fig. 1) |
| :--- | :--- | :--- |
| Winepresses | 3 | $1,5,49$ |
| Ashlar-stone quarries | 37 | $2,4,8,10,11,12,14-32,35-45,48$ |
| Farming terrace | 1 | 3 |
| Hewn caves | 6 | $6,7,9,13,33,46$ |
| Limekiln | 1 | 34 |
| Stone heap | 1 | 47 |
| Cup marks | 2 | 50 |
| Tether installation | 1 | 51 |

Table 2. Installations on the northern hill

| Installation | Number | Site No. (Fig. 1) |
| :--- | :--- | :--- |
| Ashlar-stone quarries (scattered | 40 | $52,54,55,57,58,60,65-67,70-73$, <br> across 15 dunams) |
| Hewn caves | 6 | $53-81,83-86,89,92-98,101-108$ |
| Farming terrace | 1 | 61 |
| Rock-hewn winepress | 1 | 62 |
| Limekiln | 1 | 63 |
| Water reservoir | 1 | $90 / 91$ (see below) |
| Tether installation | 1 | 99 |

Since only a small part of the cave's chamber was examined in those caves where signs of rock-cutting were detected, it was not possible to determine whether the caves were used for quarrying chalk stones, for dwelling, or for burial. However, in Cave 53, located at the foot of the western slope of the northern hill, signs of quarrying were clearly apparent on the inside walls, which seem to indicate that it was used as an underground olive press. The water reservoir (Nos. 90/91; c. 100 cu m), hewn in the northern slope of the hill, was completely plastered and comprised two cavities $(4.0 \times 4.5 \mathrm{~m}$ and $3.0 \times 3.5 \mathrm{~m}$, height c. 3 m ). A rock-hewn staircase paved with tesserae led to the northern one. A narrow passage was hewn between the northern and southern cavities and a shaft was cut in the ceiling of the southern cavity for drawing water.

The remains of three settlement sites included sections of walls and heaps of ashlar stones on the surface at the top of the northern hill (No. 59, 68, 74, 82, 87, 88); the collected pottery fragments were dated to the Roman period. Settlement remains (No. 109) from the Hellenistic period, first observed in the survey of the Map of Hanita (Site No. 81.2), extended across an area of c. 2 dunams in the valley, which is planted today with bananas. The third site is a prehistoric settlement (No. 110), also known from the survey of the Map of Hanita (Site No. 80.2). It extends over an area of c. 10 dunams north of the northern hill and south of Nahal Bezet; it was excavated by O. Marder in 2003 (Permit No. A-4010) and was dated to the Pre-Pottery Neolithic B-C, Pottery Neolithic and the Early Chalcolithic periods.

(Volume No. HA-ESI 121 (2009
Giv'at Pazra, Survey on the Southeast Final Report

16/2/2009
During October 2007, a survey prior to development was conducted southeast of Giv‘at Pazra in the Golan Heights (Permit No. A 5278; map ref. NIG 2784-91/7680-915; OIG 2284-91/2680-915), prior to the allocation of land for agriculture. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the World Zionist Organization, was conducted by O. Zingboym and A. Shapiro.
The survey (c. 500 dunams; Fig. 1) was conducted along a basalt plain that gently descends to the west, within the precincts of an extensive dolmen field. The survey area is divided by a path, leading to a well that belongs to the Mēy Golan Association. The area to the south of the path had been prepared and cleared of stones over many years and only a few ancient remains were preserved on that side. Only a few stones were cleared from the area to the north of the path and therefore, more ancient remains had survived. Eighteen sites with ancient finds, including field walls, animal pens and stone heaps, were documented.

1. A long field wall.
2. Stone heap (diam. 2.5 m ).
3. Small stone heap.
4. A field wall built in a naturally high area.
5. Stone heap (diam. c. 3 m ).
6. Concentration of twelve stone heaps of different sizes, probably piles of stone clearance.
7. Concentration of seven stone heaps, probably piles of stone clearance.
8. A circular field wall (diam. c. 4 m ).
9. A large stone circle (diam. c. 40 m ) that may delineate an animal pen. Several small stone heaps were documented inside the circle.
10. A dolmen enclosed within a circle of stones (Fig. 2). A tree is growing in the middle of an open, plundered burial cell; the cover stones are lying alongside the cell.
11. A built stone circle (diam. c. 5 m ), probably a robbed and ruinous dolmen.
12. A ruinous dolmen enclosed within a stone circle (diam. c. 3 m ; Fig. 3).
13. A field wall delineating an animal pen (diam. c. 15 m ).
14. A field wall delineating an animal pen (diam. c. 25 m ).
15. Two dolmens enclosed within stone circles, which were partially preserved (Fig. 4). The burial cell of one of the dolmens was robbed and the cell of the other was filled with soil and open, without any cover stones $(2.0 \times 2.8 \mathrm{~m})$.
16. A field wall that delineates an animal pen, within which several small stone clearance heaps were documented.
17. A low stone heap that may be a robbed and ruinous dolmen.
18. Stone heap (diam. c. 4 m ).

19. The survey map.

20. Dolmen (10), looking north.

21. Dolmen (12), looking west.

22. Two dolmens (15), looking south.

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## Giv‘at Rabi (East), Survey

## Final Report



1. Survey map.

2. Plot 3, finds from knapping
pits.

3. Plot 8. Mousterian finds.

Hamudi Khalaily and Ofer Marder

During October 2006, a survey prior to development was conducted in the eastern part of Giv'at Rabi (Jebel al-'Ayin; Permit No. A4921; map ref. NIG 2260-70/7366-72; OIG 1760-70/2366-72), where the Nazareth industrial zone is slated to be built. The survey, undertaken on behalf of the Israel Antiquities Authority and financed by the Government Development Company, was directed by H. Khalaily and O. Marder, with the assistance of S. Golan and O. Barzilai (field survey) and A. Shapiro (surveying).
Sites from the Wadi Rabah culture of the Late Neolithic period were discovered in the vicinity of Giv'at Rabi (S. Sadeh. 1994. Pottery of the 5th Millennium BC in Israel and Neighbouring Regions. Ph.D. diss., Tel Aviv University, pp. 134-137). At the foot of the hill, remains dating to Early Bronze I were uncovered (Permit No. A4648) and when the 'llut Junction was being widened, a rich habitation layer that dated to the Pre-Pottery Neolithic B and included knapping pits and remains of buildings was exposed (License No. 137/1995). Recent excavations at nearby 'En Zippori (HA-ESI 117) revealed a settlement level from the Late Neolithic period/Wadi Rabah culture

To the east of the 'llut road, the region had not been previously surveyed but several probe trenches dug in the area caused severe damage to several knapping pits that contained vast numbers of cores and waste material. A preliminary examination of the trench sections revealed that these knapping pits dated to the Pre-Pottery Neolithic B and were located in a leveled area covered with a high density of flaked flint. The exposure of the pits and the flint density necessitated a thorough survey whose aims were to locate prehistoric sites; to characterize the sites and the centers of activity in the area where the worked flint is extensively scattered and to identify the flint industry and its chronological association.
The area was divided into ten plots (1-10; Fig. 1), which were measured by GPS and separately surveyed; the finds were sampled and recorded on a map. The survey of the agricultural area proved inefficient and required a random sampling of the density of the finds and their preliminary sorting, to locate the main activity center and areas with scattered flint that were not necessarily within the site's limits. The probe trenches were marked and measured and their finds were examined within the framework of the different plots.

## Plot 1

A plowed plot of triangular shape, whose base is in the west and its surface is leveled and higher than the surrounding area. A high-density flint scatter of c .220 items per $s q m$ was found. The plot was sampled in two spots $(11,12)$ and the flint scatters revealed in both were identical. The preliminary sorting shows that most of the flint items ( $72 \%$ ) are rolled natural chunks, while the flaked items constitute $28 \%$ of the sorted finds. These include Neolithic artifacts (bipolar cores, bi-facials and a polished axe), as well as those of the Mousterian culture (Middle Paleolithic period).

Plot 2
A recently cultivated plot whose outline is rectangular and its area is c. 8 dunams. Like Plot 1, it is also covered with flint. The distribution is less dense and the items are larger, but without chips. The plot was sampled in three spots (21-23) and the density of the finds was c . 180 items per sq m , of which 145 were natural items and the rest-flaked. The finds were mixed and their date is similar to the finds of Plot 1.

## Plot 3

The plot is square and 0.5 m lower than Plot 2. Its western part is situated within the declared antiquities area and its eastern part is located along its fringes. The surface descends gently to the south, toward the wadi. The flint density is especially high as is the number of worked flint implements. The finds are homogenous and mostly man-made. The high number of bifacial items and cores in various stages of preparation should be noted. Three probe trenches, aligned north-south, were dug (101/1-3), damaging a large number of knapping pits. Two knapping pits of naviform cores were damaged in Trench 101/1 (Fig. 2) and in Trenches 101/2, 101/3, three knapping pits were harmed. The distance between the pits did not exceed 1 m and their depth is presumed to be similar.

## Plot 4

This plot, to the west of Plot 3 , is its natural continuation. A rocky hill on its western border has a soil cover whose thickness does not exceed 0.4 m . The plot's area is c .8 dunams and in spite of its stone clearance and cultivation, it was covered with a high density of flint. Two probe trenches (102/1, 102/2) were dug in the plot and knapping pits were noted at their northern ends. The finds included mostly knapped flint products, among them numerous cores that were discarded in various stages of production, mainly perform and exhausted cores. In addition, many bifacial tools that were discarded in different stages of production were identified. The high density of flaked flint, as well as the presence of several knapping pits indicates that intensive prehistoric activity took place in the area of the plot, including both knapping, shaping tools and dumping into waste pits; hence, it seems that the center of the site was located in this plot.

## Plot 5

This plot is situated on a low rocky hill whose eastern and western slopes were moderate compared to its steeper southern slopes. The hill is covered with seasonal vegetation that caused difficulties in performing a systematic survey. That notwithstanding, a number of installations, wall stumps and a large stone clearance heap (5/1), whose stones were apparently gathered originally from a nearby field, were located at the top of the hill. Limestone bedrock with elongated flint lenses was exposed in several places and many natural flint chunks were scattered nearby.

Plots 6, 7
These two plots in the western part of the area differ in their soil and finds. Topographically speaking, Plot 6 is similar to the previous plots. It is leveled, except for its northeastern corner, which is in the hill area of Plot 5 . On its higher part, a stone clearance heap (6/1) and the remains of a square building (6/2) nearby, are found. The flint artifacts are of average density and their concentration is well defined (c. 2 dunams). The majority of the flint is natural chunks; however, items of the Mousterian industry were also identified.
Plot 7 lies next to the approach road leading to 'llut. The soil is a dark colored sediment and judging by the nature of the finds (Pottery Neolithic), it seems that this plot is, in fact, the continuation of the Giv'at Rabi site, west of the road.

## Plot 8

This plot is parallel to Plot 1 in the southern part of the surveyed area. Crossing the center of the plot is a broad, eastwest oriented, drainage ditch, which was mostly dug in heavy clayey soil (terra rossa), but has a pale yellow spot that stands out prominently in its middle, which contained a large amount of flint (8/1). An examination of the spot raised the possibility that this was an ancient stream channel that flowed from south to north and mostly drained flint into it. Analysis of the flint revealed that this was a homogenous assemblage that included cores (Fig. 3), waste material and numerous tools from the Middle Paleolithic period (the Mousterian culture). The flint was not abraded and its sharp ends indicate that the Mousterian site was most likely in the immediate vicinity of the stream, whose channel probably flowed into the area of the site.

Plots 9, 10
These two plots, on the southern side of the surveyed area, are cultivated and have a thick clayey soil (in excess of 2 m
deep); both plots have no archaeological remains
Three important prehistoric sites and numerous flint localities were documented in the survey:
(1) A unique knapping site from the Pre-Pottery Neolithic B in Plots 3 and 4. The finds in the waste pits provide an excellent tool for the reconstruction of the knapping technologies during the PPNB.
(2) A Pre-Pottery Neolithic and Pottery Neolithic site in Plot 7 and in part of Plot 6, most likely along the eastern fringes of the Giv'at Rabi-llut site. The new road divided between the western and eastern parts of the site
(3) A well-defined locality in Plot 8 with finds from the Mousterian culture.


1. Survey map.


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## Giv‘ati Junction

## Final Report



1. Location map.
 south.

2. Niches in W5, looking north.

3. Area B, plan.

4. Area A, pottery.

Nir-Shimshon Paran
During July-August 2004, a salvage excavation was conducted near Giv'ati Junction in the western Negev (Permit No. A-4212; map ref. NIG 16816/61799; OIG 11816/11799; Fig. 1), prior to the widening of Highway 35. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Department of Public Works, was directed by N.S. Paran, with the assistance of Y. Haimi and E. Aladjem (administration), V. Essman and V. Pirsky (surveying) and C. Hersch (drawing).

The excavation was located c. 20 m north of a potter's kiln ('Atiqot 42:43*-50*) and c. 1 km southeast of Giv'at Arnon (Kh. 'Ajjis er-Ras; Permit Nos. A-854, A-1251), where a Byzantine settlement was partially exposed; it included an industrial winepress that was excavated and reconstructed.
Two areas were opened; a winepress that probably dated to the Byzantine period (sixth-seventh centuries CE) was uncovered in Area A and in Area B, c. 20 m west of Area A, a number of walls that did not form a coherent plan, the base of a tabun and a refuse pit of a pottery workshop from the latter Byzantine period (sixth-seventh centuries CE), were exposed.

## Area A

An industrial winepress that consisted of several components was exposed (Fig. 2).
The pavement in the two cells (L128, L142; $1.5 \times 3.0 \mathrm{~m}$ ) consisted of mortar bedding on a lime base, with stone slabs above it that were mostly robbed. The floors slanted to the east at a $3 \%$ gradient. The walls of the cells, built of fired mud bricks ( $5 \times 25 \times 25 \mathrm{~cm}$ ), were coated with hydraulic plaster whose lower part overlapped the margin of the paving slabs. The northern cell (L142; Fig. 3) was enclosed within Wall 15 on the north (length 3.75 m , width 0.25 m , height $0.2-0.3 \mathrm{~m}$ ), Wall 14 on the west (length 1.7 m , width 0.25 m , height $0.20-0.25 \mathrm{~m}$ ) and Wall 10 on the south (length 3.75 m , width 0.25 m , height $0.15-0.25 \mathrm{~m}$ ). The walls were preserved three-six courses high.
The southern cell (L128) was similar in construction and measurements to Cell 142 and its walls (W9, W17, W18) were preserved four-nine courses high $(0.20-0.45 \mathrm{~m})$. The two cells were bordered by Wall 12 on the east, preserved threefive courses high (length 5.75 m , width $0.45-0.50 \mathrm{~m}$, height $0.15-0.25 \mathrm{~m}$ ), in which the remains of two channels that connected between the cells and the treading floor were discerned.
The space between W10 of Cell 142 and W9 of Cell 128 was blocked with a wide wall of medium fieldstones (W11; length 3.6 m , width 1.2-1.3 m), whose western end was incorporated within the exterior wall of the winepress, preserved three-six courses high (W4; length 8.8 m , width $0.50-0.65 \mathrm{~m}$, height $0.4-0.8 \mathrm{~m}$ ).
Soil fill (L144) to the north of Cell 142 contained numerous potsherds. A concentration of fieldstones at the western end of L144 was probably wall remains, although the exposed section was too small to determine if it extended beyond the excavation area.
The southwestern part of the treading floor (Loci 124, 133; presumed measurements $4.7 \times 6.5 \mathrm{~m}, 6.5 \times 6.5 \mathrm{~m}$ ) was exposed. The northern part was not excavated and the eastern part had been destroyed by earthmoving works. The pavement of the floor was robbed, but the bedding survived with imprints of the stone slabs. The treading floor sloped southward ( $2.5 \%$ gradient). Wall 12 in the west and Wall 13 in the south, preserved five-eight courses high (length 4.2 m , width $0.50-0.55 \mathrm{~m}$, height $0.25-0.40 \mathrm{~m}$ ), were built of fired mud bricks and coated with hydraulic plaster whose lower part overlapped the margins of the floor slabs.
A round recess (L130; Fig. 4) in the center of the treading floor was intended for a stone screw base (not found). A plastered channel (L141; length 3.5 m , width $0.2-0.3 \mathrm{~m}$, depth $0.4-0.6 \mathrm{~m}, 3 \%$ gradient) extended from the recess to the settling vat, crossing W13 where it was damaged. It seems that originally, he channel was covered with the pavement slabs of the treading floor. Another opening at the base of W13 was probably used for a pipe that also linked the treading floor to the settling pit.
The settling pit was only partially exposed in its northern part (L121; 1.4-1.6 $\times 1.5 \mathrm{~m}$ ). It had a trapezoid plan and its floor consisted of stone slabs that were coated with hydraulic plaster (thickness 4 cm ), probably as a repair. A circular recess in the center of the pit (diam. 0.2 m , depth 0.15 m ) was the lower part of a clay jar, embedded in the floor. The settling pit was enclosed within Wall 8 on the west (length 1.75 m , width $0.70-0.75 \mathrm{~m}$, height 0.5 m ), Wall 7 on the east (length 1.8 m , width 0.45 m , height 0.4 m ), preserved seven-nine courses and a mud-brick built step along W13 on the north. The pit's walls were coated with hydraulic plaster.
A collecting vat on each side flanked the setting pit. The channels leading to the collecting vats were not exposed, probably because they were in the southern part of the settling pit that was not excavated. Only the northern part of the western collecting vat (L127; Fig. 5) was excavated. It had a rectangular shape ( $2.4 \times 3.0 \mathrm{~m}$, depth 1.3 m ) and its floor and walls were coated with hydraulic plaster. Two concentric and plastered depressions (L136; diam. 0.3 and 1.2 m , depth 0.3 and 0.4 m respectively) were cut in the center of the floor. A step was built around the vat, continuing the top level of W8. At the western end of the vat was a working surface $(1.2 \times 1.4 \mathrm{~m})$, whose elevation corresponded to that of the step.
Only the northwestern corner of the eastern collecting vat (L122) had survived; it was apparently similar to the Vat 127. Between the step around Vat 127 and Cell 128 was a thick wall (W5; length 3.4 m , width $1.1-1.2 \mathrm{~m}$, height 0.6 m ), built of fieldstones. Two circular niches (Loci 140, 146; diam. 0.9 m , height of base 0.2 m ; Fig. 6) were in the southern side of the wall; the western (L140) was plastered and the eastern (L146) was blocked with stones.

The ceramic finds from Area A, mostly dating to the end of the Umayyad and the Abbasid periods (end of the eighthninth centuries CE), included small bowls and bowls with incurved or upright rims (Fig. 8:1-5), bowls with an upright wall (Fig. 8:6-9), kraters with an inverted thickened rim and a wavy pattern below it (Fig. 8:10, 11),
ampulla of cooking-ware fabric (Fig. 8:12), Khirbat el-Mafjar jugs and juglets (Fig. 8:13-15), jars (Fig. 8:16-19) and a flask (Fig. 8:20). However, a small number of potsherds, mainly jars from the Byzantine period, point to a mixed fill that penetrated into the winepress from the adjacent site after the press was no longer in use.

## Area B

The area (Fig. 7), located to the west of the winepress, was severely damaged by earthmoving works, hence no coherent plan of the remains could be formed. A number of walls and between them-the base of a tabun and a refuse pit, which contained numerous potsherds that apparently derived from a pottery workshop, were discovered.
A wall (W1; length 3.4 m , width $0.65-0.75 \mathrm{~m}$, height $0.15-0.25 \mathrm{~m}$ ) at the northern side of the square was oriented eastwest. Another wall (W2; length 9.25 m , width $0.6-0.7 \mathrm{~m}$ ), preserved up to two courses high, was parallel to and c .1 .75 m south of W1.
The base of an elliptical tabun (L112; 1.0-1.2 m) full of ash, whose perimeter consisted of small stones, was found between the western ends of these walls
A pit (L110), adjacent to the center of W2 northern side, was filled with jar fragments to its top, most likely the debris of a pottery workshop.
Abutting the eastern part of W 2 from the south was another wall ( W 16 ; length 1.8 m , width 0.75 m , height 0.25 m ), preserved two courses high. The western side of W16 and the southern side of W2 were coated with hydraulic plaster, indicating perhaps that this was a levigating pool of a pottery workshop. The eastern end of W2 intersected with W6 (length 1.3 m , width 0.7 m , height $0.1-0.2 \mathrm{~m}$ ) that continued north and the refuse pit (L110) seems to have reached it.

The ceramic finds from Area B included a large number of Gaza jars from Refuse Pit 110 that dated to the latter part of the Byzantine period (sixth-seventh centuries CE).

The exposed building remains in the current excavation constituted part of an industrial compound that most likely belonged to the Byzantine settlement on Giv'at Arnon. It seems that Refuse Pit 110 in Area B was associated with the kiln that had been exposed in the past. It also seems that at least some of the installations, particularly the winepress, continued to be used in the Early Islamic period.


1. Location map.


2. Cell 142, looking east.

3. Recess for press screw and drainage channel, looking south.

4. Collecting Vat 127 , looking south.

5. Niches in W5, looking north.

6. Area B, plan.


10

$\sum_{-20}$
8. Area A, pottery.


1. Stratum VI, floors and a wall from Stratum IV, looking northwest.

2. Stratum VI, artifacts, from right: a sickle blade, obsidian bladelet and arrowheads.

3. Stratum V. chalk floor and two burials beneath it looking southwest.

4. Amphoriskos fragment.
(Volume No. HA-ESI 121 (2009
Ha-Gosherim Preliminary Report

Nimrod Getzov
14/9/2009
During December 2007-January 2008, a limited trial excavation was conducted at the Ha-Gosherim site (Permit No. A-5323; map ref. NIG 2585/7923; OIG 2085/2923), prior to the installation of an electric pole. The excavation, on behalf of the Israel Antiquities Authority, was directed by N. Getzov, with the assistance of A. Grishna (field registration), Y. Ya'aqobi (administration), A. Shapiro (GPS), E. Bron (preliminary inspections), Y. Nagar (physical anthropology), D. Syon (numismatics) and M. Hartal (guidance).

Previous excavations at the site had revealed habitation strata that ranged in date from the Pre-Pottery Neolithic C until the end of the Early Chalcolithic periods (HA-ESI 110:2*-3*; HA-ESI 118).
The current excavation was carried out along the fringes of the site, at the top of a slope east of Nahal Koren. Evidence of habitation, present throughout all six strata that had been discovered in previous seasons, was exposed in the opened rectangular area (c. $4 \times 8 \mathrm{~m}$ ).

Stratum VI (Pre-Pottery Neolithic C period). Evidence of this period was only found in a very limited area. Three superposed floors of small stones were discerned (Fig. 1). Since virgin soil was not clearly exposed, it could not be determined with certainty that no earlier remains had existed in this area. The three habitation levels, one above the other, reinforce the supposition that the Pre-Pottery Neolithic settlement at the site extended over a prolonged period of time.
Noteworthy finds from this stratum were deep and densely denticulated sickle blades, obsidian bladelets and arrowheads (Fig. 2).
Stratum V (Pottery Neolithic period). Two floors were discerned; below the bottom one, two individuals were buried in a flexed position (Loci 986, 998; Fig. 3). Numerous fragments of pottery vessels were discovered, including an amphoriskos that attested to ties with the Lodite culture (Fig. 4).
Stratum IV (beginning of the Early Chalcolithic period). The corner of a building, abutted on the outside by a floor, was exposed. Most of the building was beyond the limits of the excavation and the finds from this period were meager. Stratum III (Early Chalcolithic period). Only a small number of potsherds could be ascribed to this layer.
Stratum II (end of the Early Chalcolithic period). A rich accumulation, containing potsherds and stone tools, but no architectural remains, was discovered. The importance of the finds from this period is considerable, since only a few artifacts from this period had been found in previous excavations.
Stratum I. A Roman coin from the middle of the fourth century CE was found on surface.
A vertical accumulation of assemblages from all the known strata at the site is unique to this area; assemblages of only a few strata were found in most other areas.


1. Stratum VI, floors and a wall from Stratum IV, looking northwest.

2. Stratum VI, artifacts, from right: a sickle blade, obsidian bladelet and arrowheads.

3. Stratum V , chalk floor and two burials beneath it, looking southwest.

4. Amphoriskos fragment.
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Hadera, Bet Eli'ezer
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5. Plan.

6. Pottery.

Abdallah Masarwa

During February-March 2007, a salvage excavation was conducted in the Bet Eliezer neighborhood of Hadera (Permit No. A-5044; map ref. NIG 194583-610/704315-31; OIG 144583-610/204315-31), prior to paving a road. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ziyyune Derekh Company, was directed by A. Masarwa (photography), with the assistance of S. Ya'aqov-Jam (administration), V. Essman (surveying), M. Shuiskaya (pottery drawing) and M. Peilstöcker (guidance and dating of ceramic finds).
The excavation was located in a flat area covered with $\underline{h} a m r a$ soil, south of the Nahal Hadera channel. Previous excavations nearby exposed the remains of a winepress that was paved with a mosaic (ESI 20:39*-40*).

An excavation square was opened, revealing an east-west oriented wall (W510; length 3.4 m , width 0.3 m ; Fig. 1) that was built of a single row of ashlar stones. The wall, preserved a single course high, was partly damaged as a result of modern infrastructure work. Jar fragments that dated to the Byzantine period (sixth-seventh centuries CE; Fig. 2) were recovered from the wall, between the stones and from either side of it. The function of the wall could not be determined because of the limited scope of the excavation and the modern disturbances.


1. Plan.


1


5

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## Haluzit, Survey

## Final Report

Pirhiya Nahshoni and Emil Aladiem


1. Survey map.

2. Surface level characteristic of the survey region and Site 14 , looking west.

3. Pottery.

4. Site 13 , millstone.

5. Site 18, grindstone.

During April 2006, an archaeological survey was conducted in an area scheduled for the establishment of the Halutsit 1 and 4, Shelomit and 'Atsmona settlements (Permit No. A-4770; map ref. NIG 1328-70/5592-640; OIG 0828-70/0592-640), prior to preparing the area for cultivation. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Jewish National Fund, was conducted by E. Aladjem and P. Nahshoni, with the assistance of S. Gendler, I. Peretz and O. Feder (surveyors), C. Amit (studio photography) and C. Hersch (drawing).
An area covering 11,500 dunams (Fig. 1), which extends south of the area that had been surveyed the previous year (HA-ESI 121), was surveyed. The area, like the former one, is characterized by moderately stable sand dunes that are separated by shallow valleys oriented generally east-west (Fig. 2). Numerous remains of shepherd encampments scattered in the area evidence intensive grazing that has transpired in the region since the end of the Ottoman period. Twenty sites were inspected; three of the sites (7, 9, 12) had no archaeological finds, whereas in the rest, potsherd and flint flake scatters, without any building remains, were found. These sites were therefore used as temporary encampments, most of which were multi-period. This region of the country is conducive for grazing and traveling; in addition to the shepherds and their flocks, caravans probably passed through the region on their way to Gaza. Probe trenches dug with a backhoe at each of the sites yielded no archaeological remains beneath the sand dunes; yet, this is insufficient to determine conclusively that no other sites, which are not visible on surface, occur in the region.

| Site No. | Map References (NIG) | Site | Date of finds (periods) |
| :---: | :---: | :---: | :---: |
| 1 | 133537/563830 | Potsherds scattering (diam. $5-10 \mathrm{~m}$ ) in a natural hollow between the sand dunes | Early Islamic |
| 2 | 132864/563802 | Stone-built hearth and lumps of burnt potsherds, with a potsherd scattering (diam. 15 m) |  |
| 3 | 135546/563102 | Potsherd scattering (diam. 510 m ) | Early Islamic and Ottoman; British Mandate era (black Gaza ware) |
| 4/5 | $\begin{array}{\|\|l\|l} 135669- \\ 785 / 561751-801 \end{array}$ | Scattering of flint flakes and potsherds (length 100 m , width $10-15 \mathrm{~m}$ ) on a plain protected from the wind by a ridge that rises above it to the north | Paleolithic; Iron I: jar (Fig. 3:5), Byzantine: LRC bowl (Fig. 3:8), jar (3:9); Early Islamic: jar (Fig. 3:10); British Mandate era: balck Gaza jars (Fig. |
| 6 | 136504/562614 | Scattering of broken pottery vessels (diam. 10 m ) | Ottoman; British Mandate era (black Gaza ware) |
| 7 | 135850/562409 | Small mounds of sand checked by a backhoe; no antiquities were found |  |
| 8 | 135615/562330 | Potsherd scattering (diam. 15 m) | Byzantine |
| 9 | 135832/562205 | Small, uniform size mounds of sand checked by a backhoe; no antiquities were found |  |
| 10 | 135334/561978 | Scattering of flint flakes and potsherds (diam. 100 m ) | Paleolithic; Iron II: krater (Fig. 3:7); Early Islamic; Middle Ages: jar (Fig. 3.11); British Mandate era |
| 11 | 135422/561891 | Continuation of Site No. 10; body fragments of Nabatean vessel (not drawn) |  |
| 12 | 135151/562944 | Small mounds of sand checked by backhoe; no antiquities were found |  |
| 13 | 134450/563048 | A round millstone (upper stone; diam.0.4 m; Fig. 4) |  |
| 14 | 134329/562652 | Potsherd scattering (diam. 15 m; see Fig. 2); retouched flint blade (Fig. 5) | Upper Paleolithic (Ahmarite culture); Byzantine and Ottoman |
| 15 | 133635/562324 | Potsherd scattering (diam. 10 m) | Isalmic and Ottoman |
| 16 | 133381/563357 | Scattering of flint flakes and potsherds (diam. 10 m ) on a plain that is protected from the wind and located between two ridges, which rise above it to the north and south | Paleolithic; Roman-Byzantine |
| 17 | 133317/563357 | Scattering of potsherds and small pebbles (diam. 15 m ) | Iron I, II: cooking pot (Fig. 3:4), krater (Fig. 3:6); <br> Byzantine and Middle Ages |
| 18 | 133264/562389 | Grindstone fragmnet of hard sandstone (Fig. 6) |  |
|  |  | Grindstone Eocene flint |  |


| 19 | $133040 / 562795$ |  | (Fig. 7) |
| :--- | :--- | :--- | :--- |
| 20 | $133459 / 560383$ | Potsherd scattering (diam. 5 <br> $\mathrm{m})$ | Mamluk; jugs (Fig. 3:12, <br> 13); No. 12 is handmade |



1. Survey map.

2. Surface level characteristic of the survey region and Site 14, looking west.


3. Site 13 , millstone.



## (Volume No. HA-ESI 121 (2009 <br> Haluzit, Survey <br> Final Report

Yeshayahu Lender and Pirhiya Nahshoni


1. Survey map.

2. Pottery.

During January and December 2005, two archaeological surveys were conducted in areas slated for the establishment of the Shlomit and Haluzit 4 settlements and for the agricultural area of Haluzit 4 in the northwestern Negev, south and southeast of Moshav Dekel and Moshav Yevul, next to the border with Egypt (Permit No. A-4367; map ref. NIG 132900-6995/563350-9200; OIG 082900-6995/063350-9200). The surveys, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Eshkol Regional Council and the Jewish National Fund, were conducted by Y. Lender and P. Nahshoni (the settlement areas) and by P. Nahshoni and V. Carmel (the agricultural area) with the assistance of C . Hersch (pottery drawing).
The survey area (c. 8,000 dunams; Fig. 1) consisted of stabilized sand dunes, oriented generally east-west, with shallow valleys between them. The differences in elevation between the top of the dunes and the bottom of the valleys spanned $5-15 \mathrm{~m}$. The remains of temporary encampments and animal pens were clearly visible in the area, located in shallow hollows and in the valleys, indicating intensive grazing activity in the area during different periods. Twenty-three sites were recorded in the survey: ten in the area of Shelomit, six in the area of Haluzit 4 and seven in the agricultural area. Potsherd and flint scatterings of different sizes were found at the sites, as well as the remains of hearths; no building remains were detected. The sites are described below (Tables 1-3); their numbers match those in Fig. 1.

Table 1. Sites within the precincts of Shelomit.

| Site <br> No. | Map Reference (NIG) | Site | Ceramic Finds and Dating (periods) |
| :---: | :---: | :---: | :---: |
| 1 | 133387/563970 | Scattering of potsherds, flint flakes and small stones (diam. c. 50 m ) on a gentle slope | Late Roman: jar (Fig. 2:5) |
| 2 | 134229/563970 | Scattering of potsherds and flint flakes (diam. c. 60 m ) in a small valley | \|ron I: bowl (Fig. 2:1); Byzantine: jar (Fig. 2:7), jug (Fig. 2:8) |
| 3 | 132903/564161 | Potsherd scattering (diam. c. 20 m ) on a gentle slope | Byzantine and Ottoman |
| 4 | 133330/564386 | Potsherd scattering (diam. c. 20 m ) on a gentle slope | Byzantine(?) |
| 5 | 134005/564689 | Potsherd scattering (diam. c. 20 m ) on a gentle slope | Iron II: Negebite ware (Fig. 2:2); Byzantine and Ottoman |
| 6 | 134367/564794 | Meager scattering of potsherds (diam. c. 20 m ) on a gentle slope | Byzantine and Ottoman |
| 7 | 133585/565075 | Potsherd scattering (diam. c. 20 m ) in a shallow valley | Byzantine and Ottoman |
| 8 | 133519/565205 | Potsherd scattering (diam. c. 20 m ) along a road, on a plain | Byzantine and Ottoman |
| 9 | 133368/565376 | Potsherd scattering (diam. c. 50 m ) next to a road, on a plain | Iron Age(?); Byzantine and Ottoman |
| 10 | 134466/565506 | Potsherd scattering (diam. c. 30 m ) along a road, on a plain | Byzantine: jar (Fig. 2:6); Ottoman |

Table 2. Sites within the precincts of Haluzit 4.

| Site No. | Map Reference (NIG) | Site | Ceramic Finds and Dating (periods) |
| :---: | :---: | :---: | :---: |
| 1 | 136427/563781 | Scattering of flint flakes, small stones, bones and a few potsherds (diam. c. 60 m ) along a road in a valley |  |
| 2 | 135533/563691 | Potsherd scattering and remains of hearths (see below) |  |
| 3 | 135548/563352 | Continuation of Site 2; potsherds and remains of hearths scattered in a north-south strip (length c. 350 m ); the continuation of the site to the east and west may be buried beneath the sand dunes | Iron Age; Byzantine and Islamic |
| 4 | 135455/563999 | Scattering of potsherds and a few flint flakes (diam. c. 60 m ) west of a road | Late Islamic: jug (Fig. 2:9); Ottoman (?) |
| 5 | 136486/564021 | Potsherd scattering (diam. c. 50 m) along a road, in a valley | Byzantine and Ottoman |
| 6 | 136232/563379 | Scattering of potsherds and a few flint flakes (diam. c. 50 m ) along a road, in a valley | Byzantine; Mamluk (?) and Ottoman |

Table 3. Sites located in the agricultural area.

| Site <br> No. | Map Reference <br> (NIG) | Site | Ceramic Finds and <br> Dating (periods) |
| :--- | :--- | :--- | :--- |
|  |  |  |  |


| 1 | $135015 / 563685$ | Potsherd scattering (diam. c. 25 <br> $\mathrm{~m})$ | Byzantine <br> 2 |
| :--- | :--- | :--- | :--- |
| 3 | $134266 / 563933$ | Potsherd scattering (diam. c. 50 <br> $\mathrm{~m})$ | Roman-Byzantine |
| 4 | $134322 / 563855$ | Potsherd scattering (diam c. 20 <br> m) | Ottoman or British <br> Mandate era |
| $54033 / 563890$ | Potsherd scattering (diam. c. 50 <br> m) | Late Roman: jar (Fig. <br> 2:4); Byzantine and <br> Late Islamic |  |
|  | $134067 / 563627$ | Potsherd scattering (diam. c. 50 <br> m) | Iron II: cooking pot <br> (Fig. 2:3); Roman, <br> Byzantine and Late <br> Islamic |
| 6 | $134221 / 563638$ | Potsherd scattering (diam. c. 50 <br> m) | Roman-Byzantine |
| 7 | $134318 / 563659$ | Potsherd scattering (diam. c. 50 <br> m) | Roman-Byzantine |

Potsherds of black Gaza ware were also found at all the sites. The survey findings show that the area-between Haluza and Gaza and its daughter settlements-was intersected by ancient routes and that until the current survey, as in antiquity, the region was used for seasonal grazing and shepherd encampments, without any permanent settlements.


Shelomit a שלומית
Haluzit 4 חלוצית 4 ח 4
Agricultural areas • שטחי חקלאות

1. Survey map.


## (Volume No. HA-ESI 121 (2009

## Har Shahar

Final Report
Mordechai Haiman
During May 2005, a salvage excavation was conducted in a cairn located within the precincts of a quarry along the slopes of Har Shahar (Permit No. A-4447; map ref. NIG 18235-55/54830-50; OIG 13235-55/04830-50). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by A. Ben-Ari, Ltd., was directed by M. Haiman, with the assistance of A. Hajian (surveying).

The site, situated on the high part of the slope (Fig. 1), included a cairn (T100, diam. c. 3 m , height 0.6 m ; Figs. 2-4) and remains of a paved surface, c. 10 m to the west. The cairn was built of different size stones and in its center were the remains of an elliptical burial cell ( $1.0 \times 1.5 \mathrm{~m}$; Fig. 5), which was devoid of finds. Nabataean potsherds dating to the Roman period were found among the stones of the cairn. The small-stone paved surface (L101; $2 \times 3 \mathrm{~m}$ ) was devoid of finds.

The site is not typical to the groups of sites common to the Negev hill country and it is not characteristic of a particular period. The cairn was haphazardly built and the potsherds do not actually aid in dating it or the paved surface.


1. General view of excavation region.

2. The cairn, looking southeast.

3. The cairn, burial cell, looking west.
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Hittin
Final Report
Edna Amos

4. Square A, plan and
section.

5. Square A, looking
southeast.


During November 2006, a trial excavation was conducted along the northern slope of the Khirbat el-'Fika hill (Permit No. A 4927 map ref. NIG 24290/74579; OIG 19290/24579), prior to paving a road. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the contractor, was directed by E. Amos (surveying and drafting), with the assistance of Y. Ya'aqoby (administration), N. Getzov and M. Hartal (scientific guidance) and laborers from Tiberias.
The course of the road passed close by the Early Bronze Age city wall that had been previously exposed (Permit No. A-4376) and two excavation squares were opened alongside it. A farming terrace from the Late Roman period was excavated in the western square (A), c. 100 m northeast of the wall and the walls of a building from the abandoned village of Hittin were exposed in the eastern square (B), c. 80 m east of Square $A$.

## Square A

A terrace wall that extended along the slope (W2) and an enclosure wall (W4; Figs. 1-3), which was perpendicular to it and delimited a cultivation plot, were exposed. The wide walls, founded on bedrock, were built of medium and large fieldstones. A lump of lime was placed on the corner that was destroyed. A cluster of medium fieldstones, probably a collapse (L13), was overlaying bedrock along the eastern side of W4.
A few fragments of pottery vessels from the Late Roman period were found atop bedrock surface. Fragments of pottery vessels that dated to the beginning of the twentieth century CE (Rashaya el-Fukhar and Gaza wares), to the Late Roman and Byzantine periods and three fragments with band slip decoration from Early Bronze IB were found on surface.

## Square B

The northeastern corner of a modern building was exposed and c. 1 m north of it, at the bottom of the slope, was a retaining wall, founded on bedrock (Fig. 4). Part of a plow was discovered on top of a thick white plaster floor segment and alongside it were a chisel, an axe head and rifle cartridges.


1. Square A, plan and section.

2. Square A, looking southeast.

3. Square A, looking west.


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## Hof Shahaf <br> Preliminary Report


4. Picking and sorting dried material after wet sieving.

5. Eastern area, travertine remains of presumed fresh water spring.

6. The oval structure, looking west.

7. The oval structure wall. with Unit 2 boulders below looking southwest.

9. The oval structure and adjacent burial, looking south.

Ofer Marder, Reuven Yeshurun and Howard Smithline

During May 2007, a test probe, followed by a salvage excavation during May-July, 2008, were conducted at a small Natufian site, Hof Shahaf, located above the southwestern bank of the Sea of Galilee (Permit No. A-5401; map ref. NIG 253459-488/738833-898; OIG 203459-488/238833-898). The excavation, undertaken on behalf of the Israel Antiquities Authority and funded by Meqorot National Water Company, was directed by O. Marder, H. Smithline (photography) and R. Yeshurun, with the assistance of G. Jaffe (area supervision), R. Meshayev, T. Meltsen, V. Essman and M. Kipnis (surveying and drafring), A. Shapiro (GPS), O. Ackerman (geomorphology), I. Hershkovitz (physical anthropology) and E. Weiss (archaeobotany).
The excavations were part of the initial stage of a major project intended to widen the salt-water channel that runs along the west bank of the Sea of Galilee.
The site, 200 m below sea level, is situated on a narrow shelf that extends eastward above a steep slope (Fig. 1). It was discovered during a systematic survey (Permit No. A-4494), in which a small number of flint artifacts in a limited area on the slope and adjacent to the western side of the water channel were recorded. The site had suffered from destructive disturbances, such as the construction of a water-carrying channel that bisected the site, a road along the shoreline that had severely cut into the steep slope and intensive geological and geomorphological events, which resulted in colluvial accumulations of basalt boulders and lime stones above and below the site terrace, as well as deep in the excavation matrices.

The excavations were aimed at better defining the magnitude and the chronology of the site. The test probe revealed a segment of a rounded wall, as well as flint artifacts dating to the Natufian period and the Pre-Pottery Neolithic A. The salvage excavation ( 78 sq m ) was carried out to the west and east of the channel. The excavation on the western side exposed the remainder of the oval structure that dated to the Natufian period (15,500-11,000 cal. BP). The structure was set into the marl and silt sediment of the Kinneret paleolake. Near the structure and to its northwest were human skeletal remains. The excavation area had a square grid of $1 \times 1$ m (Fig.2).
The excavation on the eastern side of the channel exposed the eroded and extremely damaged slope that contained rich Natufian finds, although not necessarily in primary deposition. The basic excavation units were 2 $\times 2 \mathrm{~m}$ squares that were divided into $1 \times 1 \mathrm{~m}$ squares, depending on the archaeological relevance of the matrix. All excavated material was dry sieved. Upon reaching archaeological matrices, all the material underwent wet sieving (Fig. 3). Thereafter, the material was sun-dried and then carefully picked and sorted (Fig. 4). Overall, about one third of the excavated soil underwent wet sieving.

Four main geological units (1-4) were discerned within the excavation area
Unit 1 comprised basal vesicular basalt, possibly the remnant of an ancient flow.
Unit 2, limited to the southwestern section of the excavation, was the Kinneret formation, composed of crossbedded layers of marl, coarse sand, and limestone and basalt pebbles and boulders. These layers represented several depositional environments that reflected the dynamic changes of the Kinneret palaeolake over the course of thousands of years.
Unit 3 (Fig. 5) was a thin coating of travertine that appeared in limited areas of the northeastern quarter of the excavation. The travertine coated and abutted portions of the Unit 1 boulders. Embedded in the upper surface of the travertine were flint artifacts, bones, freshwater shells (mainly Melanopsis), a freshwater crab claw and possibly root and bark imprints. The localized travertine crust indicated the existence of a prehistoric fresh-water spring, which appears to have attracted human occupation.
Unit 4 was the main anthropogenic and depositional archaeological accumulation. It comprised paleosols that contained chalk concretions, angular small limestone and worn basalt cobbles.

The oval structure (diam. 4.75 m ; Fig. 6) was built of unworked fieldstones. Construction of the channel destroyed the eastern portion of the structure .Its wall was preserved to a maximum of four courses high (c. 0.7 m ; Fig. 7). No entrance was discerned. Several living surfaces (combined depth c. 0.45 m ) that consisted of compacted brownish gray fine palaeosol were identified. In comparison to the artifact density outside the structure, the density within was rather low. The finds consisted of flint artifacts, Dentalium, bones and sporadic patches of charcoal. The flint artifacts included small lunates modified by Helwan retouch (Fig. 8) and sickle blades dating to the Natufian period; the bones represent gazelles, small mammals, turtles, birds and a few fish.
An open area, adjacent to the north of the structure, contained the majority of ground-stone artifact fragments (pestles, mill stones and pounders). A human burial was uncovered on a stone surface, 1.5 m to the northwest of the structure (Fig. 9). Only the upper half of the skeleton was preserved. The skull was likewise missing but the lower jaw was found in situ, facing north. The interred was lying unusually on his chest (Figs. 10, 11) and a single fluted Dentalium was found on his torso.
South of the structure, only evidence of the Kinneret formation and its sedimentation were identified and no humanrelated artifacts were retrieved.
In addition to the clear Natufian presence, flint artifacts, e.g., el-Khiam points and awls on bladelets with miniature points, dating to the PPNA (11,000-9,500 cal. BP) were retrieved from the palaeosol (Fig. 12). Their presence suggests a possible PPNA occupation in close proximity to the Natufian finds.
The eastern excavation area was a narrow strip between the water channel and the descending slope (length c. 25 m ), two meters lower in absolute height than the western area. The stratigraphy of this area differed somewhat from that of the western one. Three layers were discerned and the most significant one was the lowest, which consisted of a light brownish gray paleosol rich in Natufian archaeological material with a few later intrusions. No architectural remains or a clearly defined living surface were revealed in this area and it is not as yet clear whether the Natufian finds were in primary deposition.

The excavations at $\underline{H}$ of Shahaf revealed a site of great importance in terms of archaeology, geology and geomorphology. Although indications of a PPNA presence at the site occur, the major occupational phase is dated to the Natufian period. A relatively well-preserved oval structure with a series of living surfaces, which is dated to the Natufian period on the basis of the flint artifacts it contained, was uncovered. Adjacent to the structure was a human burial, accompanied by a fluted Dentalium shell
The preliminary examination indicates that most of the recovered diagnostic tools are the Helwan retouched lunates, which point to the early Natufian period, although their size may imply a later date. Only future systematic lithic analysis accompanied by absolute dating will assist in determining a more exact chronological attribution.
The discovery of a presumed fresh-water spring within the bounds of the excavation suggests that the Natufian settlers were attracted to this source of potable water for their subsistence. This is supported by research studies of the Kinneret palaeolake, which show that at $15,000 \mathrm{BP}$ the Kinneret was probably several meters lower, at c. -215 bsl , as opposed to today's level of -212 bsl , and in consequence, it was both further from the present shoreline and more saline.
The size of the site is indeterminable due to the natural and anthropogenic destructive activities that it sustained.
The relatively sparse artifact density within the structure raises a number of interpretive possibilities: Does this reflect a short-term occupation? Is this a result of site-formation processes where the occupation sits on a steep slope and its remains are gradually washed down the eastern slope? Is this a result of continuous cleaning of the internal living
surfaces that eventually resulted in low artifact densities?
The results of the excavation contribute new data concerning subsistence strategies and settlement patterns of hunter/gatherer groups during the Later Pleistocene and the onset of the Holocene (Epipaleolithic and Pre-pottery Neolithic periods) in tracts bordering the Kinneret. It is particularly important due to the nearly complete absence of Natufian sites in this region.


1. Excavation area, prior to fieldwork, looking north.

2. Western area, excavation method of 1 sq m grid.

3. Wet sieving, using a high pressure water hose.

4. Eastern area, travertine remains of presumed fresh water spring.

5. The oval structure, looking west.

6. The oval structure wall, with Unit 2 boulders below, looking southwest.

7. Helwan lunates.

8. The oval structure and adjacent burial, looking south.

9. Human burial, looking southwest.

10. Human burial, close up view, looking southwest.

11. El-Khiam point.
(Volume No. HA-ESI 121 (2009
Horbat Ba‘alan, Survey Preliminary Report

Yehuda Dagan
During February-March 2003, a preliminary archaeological survey was conducted within the precincts of the Kefar Menahem [90], Gat [94], Bet Shemesh [103] and Bet Guvrin [107] survey maps (Permit No. A-3809; map ref. NIG 182-9/615-23; OIG 132-9/115-23), prior to development. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Jewish National Fund, was conducted by Y. Dagan, with the assistance of P. Nahshoni (Southern region).
An area of c. 30 sq km was surveyed west of the Moshav Luzit-Qibbuz Bet Nir road. Due to the rain and the muddy terrain, the high priority area was initially surveyed on foot and other areas were randomly surveyed afterward.
The results of partial surveys that had previously been carried out in this area (HA-ESI 114:83*-85*) were integrated in the current survey.

The surveyed area is located in the low western Shephelah, which is characterized by extensive areas of no drastic topographical differences. Large areas of fertile farmland are located in this region, with several hills between them. A few of the hills evince human activity that occurred in antiquity. The stream channels and gullies that drain the region are divided between those flowing north to Nahal Ha-Ela and those flowing southward to Nahal Guvrin.

One hundred and five survey sites with antiquities were documented, including two settlements; a milestone station on the Bet Guvrin-Lod road; six collapsed caves; seven winepresses; four limekilns; twenty-two orchards, as well as farming terraces; it appears that this area is abundant in ancient remains.


1. The survey area.

## Horbat Bannay

Final Report
Yoav Lerer
3/8/2009


1. Survey map.

2. Site 17 , rock-hewn water reservoir, looking west.

During February 2007, a survey preceding development was conducted along the route of Highway 8993, in the region of Horbat Bannay (Permit No. A-5042; NIG 21730-56/77550-70; OIG 16730-56/27550-70), prior to widening the road. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel National Roads Company, was directed by Y . Lerer, with the assistance of A. Shapiro (GPS) and E. Stern.
Horbat Bannay had been surveyed in the past (Map of Akhziv [1] and Map of H्Hanita [2], p. 83*, Site 2.66) and was damaged when the road was paved.

Twenty-eight sites were surveyed (Fig. 1):
Sites 1, 4, 9, 18, 20, 21, 26, 27: Quarries.
Sites 2, 3, 14, 16, 19: Caves
Site 23: Burial cave.
Sites 11, 22: Winepresses.
Site 6: Olive press, a crushing stone.
Site 17: Rock-hewn water reservoir (c. 100 sq m , depth c. 7 m ); hewn steps along western side (Fig. 2). Sites $5,7,8,10,12,13,15,24,25,28$ : Wall sections.
A large quantity of potsherds from the Roman, Byzantine, Crusader and Mamluk periods was found throughout the entire survey area.


2. Site 17 , rock-hewn water reservoir, looking west.

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## Horbat Bet Loya

 Preliminary Report

1. Aerial photograph of the site, looking east.

2. Area $B$, underground olive press, looking north.

3. Area C, Byzantine chapel. looking east.

4. Area M, large columbarium, looking east.

5. Area M, underground stable, looking north.

## Oren Gutfeld

During May and October 2008, the third season of excavations was conducted at Horbat Bet Loya in the Lakhish region (License No. G-27/2008; map ref. NIG 19315-40/607975-8100; OIG 14315-40/107975-8100; ESI 6:3-6). The excavation, undertaken on behalf of the Hebrew University of Jerusalem and underwritten by the Beit Lehi Foundation, Utah, USA (A. Rudd, G. Rudd and G. Kimber), was directed by O. Gutfeld, with the assistance of Y. Kalman (excavation co-director), A. Ecker, P. Betzer, B. Gordon and M. Haber (area supervision), S. Freilich (administration), A. Yamim (surveying), N. Sneh (photography), Sky Balloon (aerial photography), M. Lavie (conservation) and B. Johnson (pottery). Participating in the excavation were volunteers from the United States, students from the Hebrew University and laborers from the village of Hares in Judea. Valuable assistance was rendered by the Israel Antiquity Authorities, particularly G. Avni (director, Excavations and Surveys Department), Y. Israel (Ashkelon district archaeologist), Y. Dagan (director, Surveys Branch), J. Negeur (Conservation Department) and A. Ganor and I. Klein (Unit for the Prevention of Antiquities Robbery).

Horbat Bet Loya is located in the eastern part of the Lakhish region, on a hill 400 m above sea level (Fig. 1). The site (c. 50 dunams) had first been surveyed by R.A.S. Macalister (PEFQSt 1901:226-230). In 1962, two Iron II burial caves were excavated by J. Naveh in the eastern part of the site (HA 2:4-5; Yediot 27:235-265 [Hebrew]). In 1972-1973, the site was surveyed by Y. Dagan (Map of Amazya [109, Vol. 1], Site 103). From 1979 to 1983, Y. Tepper and Y. Shahar investigated the caves at the site (Hiding Refuges in the Judean Shephelah, Tel Aviv 1987:131-136 [Hebrew]) and in 1983 and 1986 J. Patrich and Y. Tsafrir excavated a basilica church at the site, as well as an olive press, a winepress and a burial cave nearby (Ancient Churches Revealed 1993:265-272). The excavations at the site were renewed in 2005 under the direction of the author, on behalf of the Institute of Archaeology of the Hebrew University in Jerusalem.
A survey conducted by the present expedition at the site revealed seven columbarium caves, five olive presses, two ritual baths, two stables, quarries, numerous cisterns and underground tunnels. The ruin in the center of the site has settlement remains dating to the Middle Ages, which are built on top of settlement remains from the Byzantine, Early Roman and Hellenistic periods.
Four excavation areas (B, C, M, P; Fig. 2) were opened.

## Area B

On the eastern fringes of the site, east of the village remains from the Middle Ages, a subterranean olive press and a ritual bath (miqwe), well preserved and dating to the Early Roman period, were excavated (Fig. 3). Discovered as well were a series of underground tunnels, wall remains and domestic installations on ground level, whose date ranged from the Late Hellenistic until the Mamluk periods.
Olive press. The subterranean olive press was hewn in bedrock (Fig. 4). It was accessed from the south by way of a rock-cut staircase that descended to the north that was delimited by two massive walls (W009, W010). At the foot of the steps and in the vestibule preceding the entrance was a rock-hewn cistern (L004) that contained dressed stones, some of which were the voussoirs of an arch that was part of a vault, which had collapsed. The entrance to the olive press was preserved in its entirety. The doorjambs and the lintel were bedrock-hewn and adorned with a magnificent Attic decoration. Two seven-branched candelabra were carved on the western doorjamb and another candelabrum was in the center of the interior side of the lintel above the entrance. The olive-press complex consisted of a main room ( $5 \times 8 \mathrm{~m}$ ) in whose western wall another chamber $(1.5 \times 2.0 \mathrm{~m})$ that housed a complete press installation was hewn. Two large rooms were hewn in the main room's northern wall, opposite the entrance (see Fig. 4). The eastern room was found filled with stones up to its top and a complete press installation with a rock-hewn vat at its bottom was in the western room ( $1.50 \times$ 2.25 m ). The latter was filled with stone slabs that apparently collapsed from the ceiling and it is unclear when they were collected and placed in such an orderly manner. A hewn recess in the façade of the wall between the two rooms had the remains of a charcoal-drawn acanthus (see Fig. 4). Beneath the recess was an entrance to a rock-hewn tunnel that connected to a rear passageway. Two adjacent rooms were discovered along the main chamber's eastern wall. The northern room had another press installation and in the southern room was an in situ crushing basin (yam) and to its north a crushing stone (memmel) was lying. A niche in the ceiling above the center of the crushing basin was apparently intended for a wooden beam. To the south of the crushing stone was an opening in the ceiling that led to a complex of subterranean tunnels, which extended between ground level and the cavity where the olive press was located.
The oil press is the original and first phase of usage of the installation.
The original floor of the olive press was removed when it turned into a quarry and the bottom was then hewn to a depth of c. 3 m . On the lowered bedrock floor were numerous rectangular building stones hewn of soft rock and several hard limestone weights that were used in the olive press. A hewn staircase descended to the later floor level. In the soil fill above the later floor was a coin from the time of Agrippa II (second half of the first century CE) and potsherds that dated from the end of the first and the beginning of the second centuries CE.
Ritual Bath. Another entrance that led to an underground rock-hewn miqwe ( $4.5 \times 5.0 \mathrm{~m}$; Fig. 5) was in the western part of the vestibule to the olive press. Seven broad, tall steps $(0.30 \times 0.45 \mathrm{~m})$ coated with gray hydraulic plaster were discovered. At the bottom of the seventh step was a deep pool (c. 1 m ) on whose floor was a ritual water bowl from the time of the Second Temple period. A hewn square window ( $0.63 \times 0.63 \mathrm{~m}$, depth 0.54 m ) in the eastern wall of the miqwe opened into a channel, which was cut in bedrock along the western side of the staircase. The miqwe was found filled with soil fill and large stones, some of which were dressed building stones. An opening in the western corner of the ritual bath led to an underground tunnel that was ascribed to a later phase of the miqwe's usage.
Remains on Surface. Above the olive press and the ritual bath, sections of walls and domestic installations were excavated, among them pools, a household installation for extracting oil and a tabun. It seems that this was the courtyard of a residential building where different household activities were performed. The architectural connection between the residential complex and the underground installations is not yet clear.
Area C
On the northwestern fringes of the site, northwest of Area $P$ and northeast of the Byzantine church, a subterranean Byzantine chapel ( $5 \times 8 \mathrm{~m}$; Fig. 6) that dated to the fifth-eighth centuries CE was excavated. The entrance to the chapel on the west had a small rock-hewn entry chamber in which two rock-cut steps were found. The western wall was mostly rock-hewn and part of it was built of large stones. The chapel consisted of a central chamber with an apse in its eastern end that was separated from the hall by a rock-carved chancel screen.

## Area M

On the northwestern side of Horbat Bet Loya, east of Area C and north of Area P, was a rock-hewn cave with remains of an olive press, from which a long underground passageway that led to a large columbarium emerged. In the southern part of the area was an underground stable that contained troughs and pits for collecting the dung.
The Columbarium (c. $15.5 \times 17.5 \mathrm{~m}$; Fig. 7) was large and hewn as a square cavern supported by four L-shaped pillars in its center. Hundreds of triangular-shaped niches were hewn in its walls. Three round shafts with hewn recesses that probably served as ladder rungs were located in the ceiling. The original entrance to the columbarium was by way of a cut opening in the ceiling of the cavern. After the quarrying of the columbarium was completed, the original opening was sealed with large stone slabs that were supported by a built half-arch. A secondary smaller opening was then hewn in the northern wall of the cavern. The southeastern corner of the columbarium was damaged by the quarrying of a bell-shaped cistern.
Underground Stable. The underground stable was found in Area M2 on an artificial terrace of the northwestern slope of
the site, at a vantage point that directly overlooks Tel Maresha (Fig. 8). Above ground, the area contained wall complexes that probably belonged to the remains of the Mamluk settlement. The underground stable in the southern part of the area was reached via a passageway (width 0.9-1.1 m) where five steps were hewn (rise $30 / 50 \mathrm{~cm}$, run $40 / 60 \mathrm{~cm}$, alternating in size). The high, wide steps enable an easy passage for animals. The stable was a hewn square hall ( $5.8 \times 6.0 \mathrm{~m}$ ), divided by a wall with rock-cut mangers that was oriented north-south (length 4.75 m , width 1 m ). The entrance to the stable accessed the western wing of the hall. Another entrance, east of the main one, led to the eastern wing of the hall. On the doorjambs of the entrance, holes that were apparently used for placing partitions to separate the animals were drilled. The wall that divided the hall had six mangers at the same elevation (span of manger c. 0.6 m , height above floor $0.6 \mathrm{~m})$. Between the mangers were several perforations that were probably used to tie the animals. The floor of the hall was covered with a layer of soft, tamped chalk. This may have originated from the disintegration of the ceiling and the animals packing down the material or it may have been an intentional floor covering. Based on the height of the hall (c. 1.8 m ) it seems that the stable was used for donkeys. Two pits (depth down to 0.4 m ) were hewn in the western wing's floor. One was rectangular (c. $0.4 \times 0.5 \mathrm{~m}$ ), the other-concave (diam. c. 0.4 m ) and both were probably used for mixing feed for the animals. Niches for oil lamps were cut along the walls of the stable and in the eastern wall was a large arched recess (height 0.6 m , width 0.4 m ). In the northeastern corner of the eastern wing was a hewn basin in the corner of the wall (height of corner from floor 0.5 m ) that was probably used as a small trough for donkeys. In the floor of the stable's western wing were two hewn bell-shaped pits (diam. $0.45-0.60 \mathrm{~m}$, depth c .2 m ); the original capstone was found on top of the northern pit. Three similar pits were hewn in the eastern wing of the stable.

## Area P

On the summit of Horbat Bet Loya, c. 200 m northeast of the Byzantine church and c. 50 m southwest of Area B, were numerous built remains, including residential buildings, installations and farming terraces that dated to the late Middle Ages.
The Middle Age Ruin (Fig. 9). In the high part of the site were the remains of buildings and the collapse of the ruin that dated to the Middle Ages. The excavation focused on the southern side of the ruin where two rooms of a building from the Mamluk period were exposed.
The Eastern Room ( $5.25 \times 9.25 \mathrm{~m}$ ) was delimited on the west by the partition wall that separated between the rooms and seems to be later than the other walls of the building. This was probably a room (or courtyard) that had been divided into two rooms. The walls were built of two rows of hard limestone, with fieldstones and soft limestone between the stones, which were coarsely hewn, usually on their outer face. The core of the wall was composed of small stones and soft gray bonding material.
A pillar with a voussoir on top of it was in the center of the room's western wall. Running the length of the room's southern wall were two other pillars and it seems that the ceiling of the room was supported by a central arch that was built along an east-west axis and two perpendicular arches that were oriented north-south. Three installations were located along the room's northern wall. A decorated silver ring was found on the floor of the room. Below the floor, construction phases that predated the Mamluk period were exposed: a monumental wall built of one row of large dressed stones, one of which had drafted margins and a prominent boss and a doorway with a stone threshold. The wall probably belonged to a public structure of some sort that was located north of the excavation area. North and south of this wall, sections of a floor or a foundation, built of a thin crushed limestone layer, were uncovered. A trial square that was opened below the floor revealed three sealed floors and a burnt layer, which yielded potsherds dating to the Hellenistic period.

The archaeological excavations at Horbat Bet Loya exposed remains from three main settlement periods: the end of the Hellenistic-Early Roman period (Stratum III), the Byzantine-Early Islamic period (II) and the Mamluk period (Stratum I).


1. Aerial photograph of the site, looking east.


2. Area B, plan.

3. Area $B$, underground olive press, looking north.

4. Area $B$, underground ritual bath, looking west.

5. Area C, Byzantine chapel, looking east.

6. Area $M$, large columbarium, looking east.

7. Area $M$, underground stable, looking north.

8. Area P, eastern room, looking west.

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## Horbat Burin

## Final Report

Amani Abu Hamid


1. Plan.

2. Square A, plan and sections.
 pottery.

3. Square B, plan.

4. Square B, pottery.

During December 2001, a salvage excavation was conducted at Horbat Burin, along the northern fringes of Baqa- al-Gharbiya (Permit No. A-3542; map ref. NIG 203636/703415, OIG 153636/203415), in the wake of damage to antiquities while preparing a plot for construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Abu Hamid (surveying), with the assistance of T. Sagiv (field photography), M. Shuiskaya (pottery drawing) and E. Yannai, R. Kletter, E. van den Brink, S. Golan and D. Ben Yosef.

Horbat Burin is located on a spur along the western edge of the Samaria foothills, at an elevation of $50-60 \mathrm{~m}$ above sea level. It should probably be identified with Burim from the listings of place-names that were conquered by Shishak (A. Zertal and N. Markam, 2000, The MenassehHill CountrySurvey - from Nahal 'Iron to Nahal Shechem, p. 292).
Two half squares (A, B; $2.5 \times 5.0 \mathrm{~m}$; Fig. 1) were opened, revealing a rock-hewn cave, remains of walls and an installation.

Square A. A rock-hewn cave (Fig. 2) and to its south, a hewn shaft with a niche at its bottom, were exposed. The passage from the cave to the shaft was blocked by different size fieldstones (Fig. 2: Section 1-1). The entrance to the cave $(0.79 \times 0.95 \mathrm{~m})$ was in the northern side and it led to a cavity $(2.25 \times 2.80 \mathrm{~m}$, height 1.5 m$)$ that contained fill and several potsherds from the Byzantine period (L118).
The shaft of the cave (Fig. 2: Section 2-2) became bell-shaped toward its bottom (upper diam. 0.82 m , lower diam. 1.2 m , height 1.6 m ); the alluvium fill that accumulated in it included fragments of pottery vessels from Middle Bronze II and Iron II (L123). A niche (Fig. 2: Section 3-3; $0.80 \times 0.95 \times 1.05 \mathrm{~m}$ ) in the side of the shaft contained a fragment of an ossuary from the Chalcolithic period and potsherds from Iron II (Loci 131, 135).
Two fragments of Chalcolithic ossuaries (Fig. 3:1,2) were discovered, not in situ. Three bowls and two bases that dated to Middle Bronze II were found in the cave's entrance, including a thin carinated bowl of metallic fabric with an everted rim (Fig. 3:3) and two bowls (Fig. 3:4, 5) and two bases (Fig. 3:6, 7) of levigated and well-fired clay. Most of the Iron II ceramic finds recovered from the niche dated to the ninth-eighth centuries BCE, including round carinated bowls, some slipped red (Fig. 4:1-11), cooking pots (Fig. 4:12-19), a jug (Fig. 4:20) and a juglet (Fig. 4:21).
The cave, almost certainly hewn in MB II, was probably damaged when the shaft and the niche to the south were quarried. It seems that the latter were used for storage during Iron II, after the passage linking them to the cave was sealed.

Square B. Three phases that dated to Iron II were exposed (Fig. 5). The third and latest phase was represented by a wall (W103) aligned north-south and built of one row of medium-sized fieldstones ( $0.20 \times 0.35 \times 0.45 \mathrm{~m}$ ) that were preserved a single course high. A floor (L113), paved with medium fieldstones ( $0.25 \times 0.25 \times 0.30 \mathrm{~m}$ ) that were set on a bedding of small fieldstones (L112), abutted the wall. The finds ascribed to the second phase included Wall 134, partly excavated below W103, which was oriented east-west. The wall, preserved a single course high, was built of small fieldstones $(0.08 \times 0.15 \times 0.10 \mathrm{~m})$ and founded on tamped earth (Loci 140, 141). A rectangular plastered installation with round corners (L133) was exposed to its south. The first phase was represented by a circular rock-cutting (L143) beneath W134. It contained a yellowish brown clay fill mixed with small potsherds that could not be dated. The excavation of the rockcutting, down to the discovery of its upper part, was then suspended and its nature could not be clarified.
The ceramic finds from the first two phases dated to Iron I and II and included bowls (Fig. 6:1-4), cooking pots (Fig. 6:79) and jars (Fig. 6:10-12).

The remains most likely indicate that some sort agricultural activity had transpired at the site during Iron II.


2. Square A, plan and sections.


3. Square A, Middle Bronze II pottery.

4. Square A, Iron Age pottery.


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Horbat Castra Final Report


1. Plan and section.

During September 2006, a salvage excavation was conducted along the northern fringes of Horbat Castra (Permit No. A4896; map ref. NIG 197337-41/744289-93; OIG 147337-41/244289-93; HA-ESI 120; 'Atiqot 29:77*-92* [Hebrew]), in the wake of discovering building remains when a communications line was installed. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ashtrom-Dragados Company, was directed by M. Masarwa, with the assistance of S. Ya'aqov-Jam (administration), A. Hajian (surveying and drafting), T. Sagiv (field photography), P. Spivak (preliminary inspections) and P. Gendelman (ceramic consultation).
An excavation square was opened, revealing a wall (W100; length c. 2.5 m ; Fig. 1) that was oriented north-south. The wall, set atop a foundation of small stones that were well-bonded with brown soil, was built of a single course of kurkar stones, some of which were dressed (c. $0.2 \times 0.3 \times 0.4 \mathrm{~m}$ ). The northern end of the wall was disturbed, probably due to modern construction activity. A surface paved with different size stones (L501; width c. 1 m ), whose western part was destroyed, was east of and alongside W100; it was probably the floor that abutted W100. The finds included worn potsherds that dated to the Byzantine and Early Islamic periods (fifth-seventh centuries CE).


1. Plan and section.

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## Horbat Damon

## Final Report



1. Square A, the olive press. plan and section.

2. A stone lintel decorated with a floral design.

3. Two stone piers on either side of a collecting vat looking southeast

4. Walls 4 and 5 enclosing the olive press, looking west.

5. Ottoman-period pottery.

Khaled Mahamid
During October 2002, a trial excavation was conducted at Horbat Damon (Permit No. A-3727; map ref. OIG 20233/73761; OIG $15233 / 23761$ ), in the wake of infrastructure work at the Damon Prison. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel Prison Service, was directed by K. Mahamid (photography), with the assistance of V. Essman (surveying), V. Pirsky (drafting), L. Kupershmidt (metallurgical laboratory), P. Gendelman (pottery reading), M. Shuiskaya (pottery drawing) and Y. Gorin-Rosen (glass).
The excavation was conducted within the precincts of the prison, at the southwestern end of Horbat Damon. The ruin is situated on the Mount Carmel watershed (HA-ESI 112:29*), where other sites from the Byzantine period and earlier periods, on the southwestern slopes of Nahal Oren (M. Marcus, H. Alon and H. Shalala, 1997, in: Mount Carmel: Survey, Landscape and Touring Itineraries, pp. 70-71, 74-75), are known. Remains of agricultural installations were documented in preliminary surveys in the region.

Two squares (A, B), c. 200 m apart, were excavated.
Square A. Three strata were uncovered in the square. The upper stratum was a layer of fill and debris that contained mixed potsherds, dating from the Roman until the Mamluk periods. An animal skeleton was discovered c. 0.2 m below surface, in what may possibly have been a later pit that penetrated into the upper stratum. The middle stratum was a large stone collapse, enclosed within Walls 4 and 5 (L107; Fig. 1); most of the collapse probably belonged to the walls from the bottom stratum. A stone lintel decorated with a floral design (Fig. 2) was discovered in the collapse, as well as numerous potsherds.
The principal remains were exposed in the third and lowest stratum, below the collapse. These included part of an olive press from the Byzantine period that was enclosed between W4 in the north and W5 in the west. A wall (W3), higher than and to the north of W4, did not abut it. Wall 3, which was oriented differently, probably did not belong to this stratum and perhaps postdated it. Its construction technique, utilizing fieldstones and mortar, was different than that of W4 and the fill alongside it contained fragments of pottery vessels from the Ottoman period.
The olive press included two piers on either side of a collecting vat (L112B; Fig. 3). The walls and the stone piers (height 1.8 m ; Fig. 4) were founded on natural bedrock surface (L112A). On the inner upper part of the western stone pier closest to W5, was a small round recess into which the wooden beam was inserted. A similar recess was on the opposite stone pier, but only half of it survived. Potsherds from the Byzantine period were found in a small cupmark (depth 0.1 m ) at the bottom of the collecting vat (depth 1.1 m ). A thin layer of brown earth (L108) that overlay the bedrock floor contained potsherds, mostly from the Byzantine period and similar to those recovered from the cupmark.
Most of the ceramic finds dated to the Late Byzantine period (end of the sixth-beginning of the seventh century CE). Nearly all potsherds came from the collapse (L107) and included bowls (Fig. 5:1-5), kraters (Fig. 5:6-8), cooking pots (Fig. 5:9, 10) and jars (Fig. 5:11-18). The potsherds associated with the olive press in the bottom stratum were also from the same period and included jars (Fig. 5:19-21). A few potsherds were found in the upper stratum, including a bowl (Fig. $5: 10$ ) dating to the Byzantine period and a glazed bowl (Fig. 6:1), a gray Gaza jar (Fig. 6:2) and a smoking pipe (Fig. 6: 3), dating to the Ottoman period. Three iron nails, two from L107 and one from surface, were also found.

Square B, located east of Square A, contained the meager remains of two walls that could not be dated with certainty.
The olive press at Horbat Damon belongs to the southern type of presses in the Land of Israel that was operated by a press beam, inside $\overline{\mathrm{a}}$ structure that included two piers on either side of a collecting vat. This type was also common to the regions of the Galilee and Mount Carmel (R. Frankel, 2003, Olives and Olive Oil in Israel and the Southern Levant in Antiquity, in Estudios Sobre el Monte Testaccio, Roma Vol. III, pp. 637-662). The numerous jars among the potsherds point to their association with the olive press.


1-1
. Square A, the olive press, plan and section.

2. A stone lintel decorated with a floral design.

3. Two stone piers on either side of a collecting vat, looking southeast.

4. Walls 4 and 5 enclosing the olive press, looking west.


6. Ottoman-period pottery
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Horbat Devela
Final Report


1. Plan and section.

2. The excavation, looking north.

3. Pottery.

During March 2004, a trial excavation was conducted at Horbat Devela, in Daliyat el-Karmil (Permit No. A-4130; map ref. NIG 2043/7328; OIG 1543/2328), following the discovery of ancient remains. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel Electric Corporation, was directed by S. Golan, with the assistance of A. Hajian (surveying), T. Sagiv (field photography), M. Shuiskaya (pottery drawing) and Z. Horowitz and E. Yannai.
Horbat Devela is located on Mount Carmel. Surveys and excavations had previously conducted at the site (C.R. Conder and H.H. Kitchener 1881-83. The Survey of Western Palestine I: 303; Y. Olami, S. Sender and E. Oren, 2004. Survey Map of Yagur [27], Site 179; F. Hasson and A. Seligmann 1970, 1972, IAA Archive; HA-ESI 118).

A single square was excavated along the northeastern slope of the site, revealing a wall that was built of large ashlar stones and founded on bedrock (Figs. 1, 2). The wall was dated to the middle of the second or the beginning of the third century CE.
The ceramic finds consisted mostly of storage jars (Fig. 3:1-7) and an amphora (Fig. 3:8), along with some cooking-pot fragments (not illustrated). The earliest pottery is dated to the first century CE, but most is dated to the second-third centuries CE .

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1. Plan and section.

2. The excavation, looking north.


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3. Pottery.

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Horbat 'Emed Preliminary Report


1. Plan.

2. Wall 10, built with headers and stretchers, looking east.

3. The western part of the southern entrance to the hal looking south.

4. Installation, looking northeast.

5. A niche in the Wall 10 looking east.

Hagit Tahan

During March 2006, a salvage excavation was conducted at Horbat 'Emed (Permit No. A-4755; map ref. NIG 2131/7714; OIG 1631/2714). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by Qibbuz Hanita, was directed by H. Tahan (find drawing), with the assistance of Y. Ya'aqobi (administration), V. Essman and V. Pirsky (surveying and drafting), L. Kupershmidt (metallurgical laboratory), L. Porat (pottery restoration), Y. Gorin-Rosen (glass) and D.T. Ariel (numismatics)
Horbat 'Emed is located in the northern part of the 'Akko valley, south of the Nahal Keziv channel and in the orchards of Qibbuz Hanita. The remains of a large structure, possibly a public building that dated to the Byzantine period, were exposed. The site had been severely damaged during the course of agricultural work, c. 50 m northeast of the excavation. Stone objects, some of which came from an olive press, were removed from the site in the past and are displayed today at the museum of the 'Shemen' factory.

The building ( $7.5 \times 11.0 \mathrm{~m}$; Fig. 1), whose walls (W10-W12) were meticulously built of dolomite ashlars set as headers and stretchers without bonding material (width 0.63 m ; Fig. 2), included a large central hall ( $3.8 \times 10.0 \mathrm{~m}$ ) and two rooms to its east. The walls extended beyond the limits of the excavation area. The wide entrance ( 2 m ) to the main hall was set in the southern wall. It consisted of two ashlar doorjambs and two threshold stones (Fig. 3). Sockets for door hinges were hewn in the threshold stones and the base of a hinge was preserved in the western socket. Bolt-holes for locking the door were preserved in the threshold and doorjambs. The corner of another structure that extended beyond the boundaries of the excavation was exposed next to the southern wall. Three large stone slabs ( $0.5 \times 0.8 \mathrm{~m}$ ) were exposed north of and c. 0.15 m lower than the level of the threshold stones. North of and c. 0.2 m lower than the stone slabs was a step paved with fieldstones; this may have been a later repair. It seems that the floor in the rest of the hall was tamped earth. An installation enclosed within a curved wall (L108; Fig. 4) was exposed in the southwestern corner of the main hall. It contained numerous potsherds, including a fragment of a lamp, fragments of glass vessels and iron slag. Virgin soil was revealed to the north of the paving stones (L105), yet no earlier building remains were noted. Stone collapse, mostly composed of nari blocks, was exposed next to the eastern wall (W10) in the northern part of the hall. It is possible that the nari was used in constructing the upper part of the walls. Three entryways (width c. 1 m ) were set in W10 (exposed length 14 m ); the most northern one could be seen on surface along the continuation of the wall to the north. The doorjambs in the two southern entries had hewn bolt-holes (Fig. 5). On the surface to the north of the northern entryway was a small square niche, probably used for storage (Fig. 6). Two rooms, separated by a wall (W13) and partly excavated, were exposed east of the main hall. On the tamped-earth floors of the rooms were fragments of pottery vessels from the Byzantine period that could partially be restored, a coin, fragments of glass vessels, pieces of plaster, some of which were decorated and a bronze rod. A few potsherds from the Roman period and a coin were discovered while excavating below the floor level in the northern room.

The artifacts on the floors of the building dated to the Byzantine period and included pottery vessels, mostly jars, cooking pots and kraters, as well as plaster remains of unclear origins, several white tesserae, coins, iron nails and fragments of glass vessels. The ceramic finds below the floor level in the northern room, which dated to the Roman period, raise the possibility that the building had already been built in the Roman period. A wall (length 3 m ) was discerned some 8 m west of the building remains and other walls were noted in its vicinity; it seems that these were remains of a settlement that was located at the site.


2. Wall 10 , built with headers and stretchers, looking east.

3. The western part of the southern entrance to the hall, looking south.

4. Installation, looking northeast.

5. A doorjamb with a hewn bolt-hole, looking east.

6. A niche in the Wall 10 , looking east.

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Eli Yannai


1. Location map.

2. Plan.

3. Grave 1, looking north.

4. Pottery.

5. Small finds from surface.

During November 2005, a salvage excavation was conducted at Horbat Humra (Dhahrat el-Humraiya; Permit No. A-4616; map ref NIG 17538-44/64851-62; OIG 12538-44/14851-62), prior to the installation of a water pipe. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Mekorot Water Company, was directed by E. Yannai (photography; find drawing in the field), with the assistance of E. Bachar (administration), N. Zak (drafting) and M. Ajami, F. Volinsky and D. Barkan of the IAA central district.
The excavation area extended across a flat spur south of a low kurkar hill, c. 50 m north of the Nahal Soreq channel (Fig. 1). Two large tells whose remains are dated to the Bronze and Iron Ages: Tel Mahoz (Tell esSultan) east of the site and Yavne-Yam to its west (HA-ESI 118: Fig. 1:1, 11), are located in this region, which has extensive sand dunes on its north and south.
Nine squares aligned east-west were opened; eleven pit graves were discerned, based on changes in the color of soil. The excavation was suspended by the contractor shortly after it had begun and therefore, only four graves were partially exposed in the eastern side of the area (1, 3, 10 11; Fig. 2). The graves and their contents were documented; no artifacts were removed and once the recording was completed, the graves were covered over.

The four graves were discovered 0.3 m below surface as four concentrations of pottery vessels and small finds alongside bone remains of probably four individuals. The graves, dating to Middle Bronze IIB, contained complete pottery vessels that were poorly preserved, i.e., the paint had flaked off and several vessels disintegrated upon exposure. Grave 1 (Fig. 3) contained three bowls (Fig. 4:1-3), two of them (Fig. $4: 2,3$ ) placed one inside another and the bowl in Fig. $4: 3$ has a rounded base, unlike the ring base of the other two, as well as a jar (Fig. 4:10), a jug (not drawn), a dipper juglet (Fig. 4:9) and a Cypriot White-Painted VI juglet (Fig. 4:6). Tomb 3, damaged by a sewer trench, was survived by a Cypriot White-Painted VI juglet (Fig. $4: 8$ ) and two jars (Fig. $4: 11$, 12) with a folded rim, concave on the exterior. The handles of the jar in Fig. $4: 12$ had been torn off prior to being interred in the tomb. Tombs 10 and 11 were dug one inside the other and it was impossible to determine the stratigraphic relation between them. Tomb 10 contained two bowls (Fig. 4:4, 5), a jar (not drawn), a jug (not drawn) and four Cypriot White-Painted VI juglets (identical to Fig. 4:6). Only two Cypriot WhitePainted VI juglets (Fig. 4:7) were found in Tomb 11. The Cypriot White-Painted VI juglets are made of very light yellow or white fabric, their surface is vertically pared and they are decorated with dark brown and gray stripes. These juglets can be compared to ones found in the Megiddo tombs and on Tel Megiddo, indicating that they were imported into the Land of Israel as of the late MB IIB and at the beginning of Late Bronze I.
On top soil in the area of the excavation, small finds were collected. These apparently surfaced from the excavated graves or from adjacent ones that were not examined, when the ground was plowed. The finds included a bronze toggle pin (Fig. 5:1), a bronze dagger (Fig. 5:2), a weight of red stone (Fig. $5: 3$ ) and another of metal (Fig. 5:4), as well as a black-stone scarab whose bottom is engraved with a floral design (Fig. 5:5).

The graves exposed in the excavation belong to a cemetery that extended along the edge of the hill, next to Nahal Soreq. A complex of sixty-three tombs, mostly attributed to MB IIB and a few to Late Bronze Age, had previously been excavated by J. Ory (1948. QDAP 13:75-91) in this cemetery, probably slightly south of the current excavation (the precise location of Ory's excavation was not recorded). A site surrounded by a rampart and ascribed to MB IIB is located opposite Horbat Humra and slightly south of the Nahal Soreq channel. It is assumed that the cemetery belonged to this site. In light of this geographic proximity and the complete absence of any vessels later than MB IIB in the excavation, the cemetery should only be dated to MB IIB.

This cemetery and the site it belonged to join other burial and settlement sites from MB IIB in this region (see Fig .1) Seven burial caves from MB IIA-B, hewn in the kurkar rock, were excavated at El-Jisr (HA-ESI 118: Fig. 1:10; HA-ESI 120; Mayer A.L. 1926. PMJB 2:2-7; Ory J. 1945. QDAP 12:31-42). A cemetery from MB IIA-B was discovered in the Rishon Le-Ziyyon sand dunes, c. 4 km northeast of Horbat Humra (ES/ 13:57-59). A large settlement-Nahal Soreq Bon the northern bank of Nahal Soreq, but cut by its channel, is attributed to MB IIA ('Atiqot 21:9-14 [Hebrew]; ESI 1:7778; HA-ESI 118: Fig. 1:5); and further south, the settlements at Yavne-Yam and Tel Ashdod (Stratum XXII).


1. Location map.


2. Grave 1 , looking north.



3. Pottery.

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Abdallah Masarwa

4. Square A1, plan.

5. Pottery.

During July-August 2007, a small-scale salvage excavation was conducted at Horbat Mesar (North; Permit No. A-5211; map ref. NIG 204343-66/705744-66; OIG 154343-66/205744-66), prior to the construction of a residential building in Meisar village. The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Masarwa (photography), with the assistance of R. Mishayev (surveying and drafting) and M. Peilstöcker (scientific consultation).
The excavation was conducted along the northwestern slope of the hill where the Meisar village is situated. Remains of buildings, agricultural installations and a bathhouse from the Roman and Byzantine periods had been exposed in previous excavations nearby (HA-ESI 113:39*-40*; HA-ESI 120; Permit Nos. A-3602, A-3925, A-4787).
Two half squares (A1, A2) were opened, 10 m apart. Square A1, which was excavated down to virgin soil, yielded sections of two walls (W10-length 2.26 m , width 0.4 m ; W11—length 1.17 m , width 0.5 m ), which formed the corner of a room and were preserved a single course high, below a layer of fill (L300). Wall 10 was built of ashlar stones (average size $0.15 \times 0.40 \times 0.60 \mathrm{~m})$ in dry construction, while Wall 11 was built of roughly dressed stones $(0.20 \times 0.35 \times 0.50 \mathrm{~m})$, A fieldstone floor (L40) that was founded on soil abutted the walls. Jar fragments dating to the Byzantine period (fourthsixth centuries CE) were found in the fill between the stones in the walls and below the floor.



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## Horbat Mesar

Final Report


1. Location map.

2. Plan.

3. Strata III, II, pottery.

4. Strata III, II, glass.
 and bottles.

During March and August 2002, a salvage excavation was conducted along the southwestern fringes of the Meisar village (Permit No. A-3602; map ref. NIG 204125-50/70556-8; OIG 154125-50/20556-8). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Menashe Regional Council, was directed by K. Sa'id, with the assistance of A. Hajian and V. Essman (surveying), L. Kupershmidt (metallurgical laboratory), O. Shorr (glass restoration), C. Hersch (drawing of pottery and glass vessels), N. Katsnelson (glass finds) and D.T. Ariel (numismatics).
Previous excavations and surveys that had been carried out in the village exposed remains of buildings, rockhewn installations and fragments of pottery vessels that dated from the Roman until the Early Islamic periods (HA-ESI 120; Survey of the Map of Ma'anit [54], Site 34).
An excavation area ( 210 sq m ) was opened on a low hill in the middle of the village and three strata from the Roman and Byzantine periods were discovered (Figs. 1, 2).

## Stratum III

Two quarries, each with four rock-hewn steps, were exposed in the nari bedrock (Loci 116, 118, 126). The quarries had been filled with soil and the Stratum II buildings were constructed above them. The soil fill in the quarries contained numerous fragments of pottery vessels, including a jar (Fig. 3:1) dated to the Roman period and two lamps (Fig. 3:2, 3) that dated to the first-third centuries CE.

## Stratum II

Remains of walls and floors that can be ascribed to three buildings (A-C) were exposed.
Building A. Two fieldstone walls (W209, W210), preserved two courses high, were exposed in the western part of the excavation area; the walls were abutted by a floor of crushed chalk (L123). Wall 210 was abutted by Wall 213, which together formed the corner of a room. Wall 213 was next to another wall (W214), founded on bedrock.
Building B. Sections of fieldstone-built walls and floors, probably the remains of rooms and a corridor were exposed in the southeastern part of the excavation area. The walls in the west of the building (W200, W201, W203) formed a room and were abutted by a floor of crushed chalk (L103). Wall 201 was abutted by W202, in which a perforated ashlar stone in secondary use was incorporated. A corridor that had a stone pavement (L131) was formed by Wall 203 and Wall 219 to its north, which was oriented east-west. East of the corridor was another corner of a room (W207, W215) that may possibly be ascribed to this building. A wall (W222) that was abutted on the south by a chalk floor (L127) extended north of and parallel to Wall 207.
Building C. The remains of walls (W216, W218, W220) that formed a room were exposed in the northeastern part of the excavation area. A chalk floor (L122) abutted the western side of W218.
The pottery recovered from the fill in the walls and above Floor 123 included fragments of a cooking pot (Fig. 3:4), jars (Fig. 3:5-7) and jugs (Fig. 3:8, 9) that dated to the Roman period (first-second centuries CE).

## Stratum I

Remains of walls (W206, W211, W212, W223) that were built on top of Floor 122 of Stratum II were exposed in the northern part of the excavation area. The walls, built of large fieldstones, were preserved two courses high. Walls 206 and 212 were parallel to each other and oriented north-south. Walls 211 and 223, of which only the foundations were preserved, probably connected W206 with W212. South of these walls was another wall (W208), built of fieldstones and aligned east-west. It should probably also be ascribed to this stratum.
Fragments of cooking pan and pot (Fig. 4:1, 2) and jars (Fig. 4:3-9) that dated from the Late Roman period to and into the Byzantine period were discovered in the fill of Walls 206 and 212.

## The Coins

D.T. Ariel

Sixteen identified coins, which are chronologically consistent with the strata discovered at the site, were found. One coin with a rectangular countermark, depicting a head facing right, was discovered in Stratum III (L114; IAA 97643) and is dated to sometime in the first century CE. The dates of all other coins are in keeping with that of Stratum I, from the end of the Roman period and into the Byzantine period. The earliest of them may have been struck by Empress Salonina (250-268 CE; IAA 97653), but most of the coins date to the fourth century CE (IAA 97644-97646, 97648-97652, 9765497658). The latest coin is a follis of the emperor Justin II from the year 573/74 CE (Constantinople mint; IAA 97647).

## Glass Vessels

Natalya Katsnelson
The site yielded six hundred and seventeen glass fragments, only half of which were diagnostic. Most came from notstratified fills of construction and have no secure context. The largest accumulation of glass fragments was excavated in L110. The earliest vessels are generally attributed to the second century CE (Fig. 5: Nos. 1-5); the majority of the assemblage is dated from the third to the early fifth centuries CE (Figs. 5:6, 6:1-9, 7:1-6).
The corpus consists of blown domestic tableware, mainly bowls and beakers; none of vessels is preserved intact. The material is characterized by naturally colored glass, uniform manufacture methods and a wide range of similar types, which altogether indicate the presence of a local workshop. Small remains of some industrial activity, probably of glass (L110), and the discovery of very similar vessels at an adjacent site (Permit no. A-3925), support this proposal.

## Strata III and II

A small group of thin-walled vessels came from these strata. Locus 126 yielded a number of colorless pieces, including a small bowl with a rounded rim (Fig. 5:1), a beaker with an unfinished rim (Fig. 5:2) and a small bottle with a triangular body, constricted at the junction with a neck (Fig. 5:3). Three additional fragments of bluish-green glass were found in L113. They belong to a bowl with a double fold on a horizontally splayed rim (Fig. 5:4), a bowl with a hollow ring base (Fig. 5:5) and a flask, whose body and base are decorated with tiny pinches (Fig. 5:6).
Analogies to Fig. 5:1-5 come mainly from second-century CE contexts, especially in the Judean Desert, but are also known from the north of the country. The fragment in Fig. 5:6 belongs to a rare type and is probably dated to the third century CE.

## Stratum I

The largest number of fragments was recovered from a construction accumulation (L110). They include a series of bowls with a rounded rim (Fig. 6:1-9), beakers with a solid base (Fig. 7:1, 2) and various bottles (Fig. 7:3-6). These vessels are made of bluish green, colorless and yellowish (Fig. 7:3) glass and are dated to the third-early fifth centuries CE.
Bowls. The large shallow bowl (Fig. 6:1) with a small horizontal fold on the walls is exceptional in its size and form. Others are smaller and deeper, more resembling cups. The bowl in Fig. 6:2 has walls tapering downward and a double fold on the wall. The cylindrical bowls in Fig. 6:3, 4 are distinguished by a thickened rim that forms a kind of collar. These bowls had possibly a flattened base, like the bowl in Fig. 6:5. An unusual group is composed of bowls with a flaring rim and a trail wound below it (Fig. 6:6-9). Their thickened concave bases form a low solid ring underneath. This subtype is rare, since other comparisons from Israel, dating to the third-early fourth centuries CE, e.g., from Yehi'am, Peqi'in, Khirbat Shema, Nahariyya and Khirbat lbreiktas, have plain concave bases.
Beakers. Two fragments (Fig. 7:1, 2) are the upper and lower parts of a beaker with a solid base. The type is often
decorated with a horizontal trail below the rounded rim, as on Fig. 7:1. These vessels, dating to the fourth century CE, are well documented, especially in the Western Galille.
Bottles and Flasks. The fragments in Fig. 7:3, 4 are the upper parts of bottles with a tall neck and a funnel mouth. The bottle in Fig. 7:3 is distinguished by the yellowish tinge of glass and a constricted neck, representing the late third-fourth centuries CE. The spirally trailed fragment (Fig. 7:4) could also date later, to the fourth-early fifth centuries CE. The fragment in Fig. 7:5 is the small lower part of an elongated flask with a massive trail applied to its base. Series of such flasks found on the western foothills of Mount Carmel (Castra) were dated to the fourth-early fifth centuries CE (HA-ESI 109:27*). The fragment in Fig. 7:6 is a small base of a vessel, which stands on "toes"; only eight short "toes" of uneven shapes were preserved. Such bases are known both on open and closed vessels that are dated from the third to the fourth centuries CE, e.g., in 'Akko, Nahariyya and Jalame.
The glass assemblage from $\underline{H}$. Mesar is a small, but useful contribution to the data of glassware from the northern Sharon plain. The Late Roman types, represented mainly by open vessels, are dominant. They were apparently produced in a local workshop and most of them have analogies along the coastal plain of Israel, as well as in Samaria and the Western Galille.


1. Location map.

2. Plan.

3. Strata III, II, pottery.

4. Stratum I, pottery.


6
5. Strata III, II, glass.


6. Stratum I, glass bowls.


7. Stratum I, glass beakers and bottles.

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Horbat Nekhes (Highway 431)
Final Report
Ron Toueg


1. Location map.

2. Bodeda, looking north.

3. Cistern, looking north.

4. Stone Quarry 1002. looking north.

5. Stone Quarries 1003 and 1004, plan.

During September 2007, a salvage excavation was conducted at Horbat Nekhes(Permit No. A-5250; map ref. NIG 19592-643/64423-522; OIG 14592-643/14423-522), prior to paving Highway 431. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Netivē Ayyalon Company, was directed by R. Toueg, with the assistance of R. Mishayev and T. Melzen (surveying and drafting) and T. Sagiv (field photography).
Horbat Nekhesis situated along the hills north of the Ayyalon Valley, between Modi'in and Highway 1 (Fig. 1). The hills are crossed by ravines that mostly drain northward, toward Nahal 'Anava. This region is characterized by dolomite and limestone bedrock that form rocky areas with pockets of terra rossa soil. The excavation zone includes two sites that had been documented in the Survey of Western Palestine by the Palestine Exploration Fund: Khirbat el-Kunnisa (Horbat Nekhes), where remains of buildings, cisterns, rock-cuttings and tombs were recorded and $\underline{H}$ orbat $\underline{H}$ ammim, located c. 1 km south of $\underline{H}$ orbat Nekhes, where remains of walls, rock-cuttings and cisterns were identified. Previous excavations in this area were conducted by H. Torge and D.A. Sklar (HAESI 114:62*-63*; Fig. 1:1), D.A. Sklar (HA-ESI 114:63*-64*; Fig. 1:2), A. Golani (HA-ESI 120; Fig. 1:3) and E. van den Brink (HA-ESI 120; Fig. 1:3). Previous surveys in the excavation region and probe trenches cut prior to the current excavation revealed a cistern and several rock-cuttings in bedrock.

An area of 200 sq m was excavated along the eastern slope of a hill that descends toward a wadi, c. 300 m north of Horbat Nekhes. Small quarries for building stones and three rock-hewn installations were discerned in bedrock surfaces on the slope; some of the rock-cuttings are known from previous surveys. The rock-cuttings extended from the top of the slope ( 148.40 m above sea level), where a cistern was found, to its base ( 144.78 m above sea level). It seems that the quarrying surfaces and installations were used by the residents of the adjacent settlement, Horbat Nekhes. However, no potsherds or other diagnostic artifacts, except for modern finds alongside the cistern, were discovered in the excavation.

Bodeda (L1000; $0.4 \times 0.5 \mathrm{~m}$, depth 0.5 m ; Fig. 2). A hewn, horseshoe-shaped bodeda was cleaned on the upper part of a bedrock surface that protruded c. 1 m above surface. To the southwestern and southeastern corners of the bodeda, two shallow rock-cuttings were probably used to press fruit or crush olives and the liquid drained into the bodeda.

Cistern (L1001; Figs. 3, 4). The round and deep opening of the cistern (diam. 1 m, depth c. 2 m) was hewn through a layer of hard dolomite. When the layer of soft limestone beneath the dolomite was reached, the quarrymen widened the cistern, which was not excavated due to technical constraints. Hence, it was impossible to determine its dimensions, although it is known to be at least 6 m deep, or propose a date for its initial hewing. Still, it is clear that the cistern was used over a long period and even served the residents of the Arab village of El-Kunnisa. The rock-hewn opening of the cistern was made higher in the twentieth century, using stones in secondary use that were bonded with cement; among the stones was an especially large one $(0.8 \times 0.8 \times 1.3 \mathrm{~m})$. A concrete surface was laid above the raised construction, in which a square opening probably closed with an iron door was fixed. Jars that dated to the first half of the twentieth century were found around the opening. Next to the northwestern corner of the cistern's opening was an irregular shaped, rock-hewn trough (depth 0.5 m ). Another small trough in a stone, in secondary use (Fig. 4), was found near the cistern's southwestern corner.

Quarries. On bedrock surfaces were seven quarries for building stones. The small bedrock surfaces were unsuitable for a large quarry and only one or two stones were hewn from each surface. Two stones (dimensions of larger stone $0.80 \times$ 1.05 m ) were extracted from the upper part of a bedrock surface (L1002; Fig. 5); signs of rock-cutting and stone detachment were discerned. A hewn step (L1003; c. $0.4 \times 3.3 \mathrm{~m}$, depth c. 0.4 m ; Fig. 6) seems to have remained on a bedrock surface after the cutting of one or more large stone blocks, although detachment marks were absent. Two small rock-cuttings (L1004; $0.4 \times 0.4 \mathrm{~m}$ and $0.4 \times 0.5 \mathrm{~m}$; Fig. 6) were discovered c. 2 m east of the step. Indistinct quarrying marks (L1005; Fig. 7) -probably the result of hewing small building stones-were apparent in the upper part of a bedrock surface that protruded above surface. A small quarry (L1007; Fig. 7) where medium-sized stones were hewn was exposed at the bottom of the slope; two stones, whose quarrying was not completed, remained in the corners of the quarry. Some 2 m north of the cistern (L1001), the quarrying remains of one building stone were exposed.

Treading Floor (L1006; Fig. 8). A partially quarried treading floor was found; only its long, western side (length 2.6 m ) was completely hewn. The northern and southern parts of the floor were unfinished and remained as natural bedrock outcrops. Building stones were hewn in the high parts of bedrock in preparation for the treading floor; detachment marks were still visible in the southern side of the surface and a building stone whose quarrying was incomplete, remained in situ. It seems that the quarrymen intended to cut other building stones to attain a straight surface that would extend across the entire bedrock surface.


1. Location map.

2. Bodeda, looking north

3. Cistern and hewn trough, plan.

4. Stone Quarry 1002, looking north.

5. Stone Quarries 1003 and 1004, plan.

6. Stone Quarries 1005 and 1007, plan.

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7. Plan and sections.

8. The excavation area, looking west.

9. Pottery.

10. Cist graves $13,14,19$, looking east.

Elena Kogan-Zehavi
During the end of June and beginning of July 2003, a salvage excavation was conducted northeast of Horbat Pelah (Permit No. A3942; map ref. NIG 19300-08/61398-400; OIG 14300-08/11398-400), prior to the installation of an electric pole along the patrol road. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel Electric Company, was directed by E. Kogan-Zehavi, with the assistance of A. Hajian and H. Moyal (surveying and drafting), H. Stark (GPS), T. Sagiv (field photography), I. Lidsky (drawing) and A. Nagorsky.
One square ( $4 \times 6 \mathrm{~m}$; Figs. 1, 2) was opened along the western slope of a hill; building remains from the Early Islamic period (Strata I, II), cist graves from the end of the Byzantine period (Stratum III) and a few building remains from the Byzantine period (Stratum IV) were exposed. Remains of a ruin and a cistern were visible on the hill, to the northeast of the excavation.
Stratum I. The end of a wall (W5; preserved height 0.25 m ) built of coarsely dressed stones and aligned east-west was exposed in the southeastern part of the square, at a depth of 0.2 m below surface. A floor of small fieldstones (L2) abutted the wall from the north. The soil fill above the floor contained numerous fragments of pottery vessels from the eighth-ninth centuries CE, including cooking pots (Fig. 3:2, 3), a jar (Fig. 3:4) and a fragment of a lamp (Fig. 3:6), as well as roof tiles, lumps of white mosaic, marble fragments and a few pieces of glass vessels and window panes. The rims of a bowl (Fig. 3:1) and a jar (Fig. 3:5) that dated to the Byzantine period were discovered below the floor. Based on the ceramic finds, the wall and the floor could be dated to the eighth-ninth centuries CE.

Stratum II. A section of a corner (W4; length 1.3 m , width 1.1 m , preserved height 0.5 m ) was exposed in the northeastern part of the square. It was built of coarsely dressed stones on the exterior face and small fieldstones on the interior. Two stone floors abutted W4 from the south; one floor (L7) abutted the upper part of the wall and the other (L17) joined its bottom part, hence being the earlier of the two. Another floor of tamped earth (L10) whose elevation matched that of Floor 17, was exposed on the inside and north of W4. The artifacts above Floor 7 included a few potsherds from the Byzantine period and fragments of glass vessels and tesserae. A fragment of a Late Roman C bowl with a black rim (Fig. 3:7) dating to the sixth century CE and a jar rim (Fig. 3:8) that was common to the sixth-eighth centuries CE were found in the soil fill between the Floors 7 and 17. Four round beads of turquoise colored glass, one of which is complete, were discovered on Floor 10.

Stratum III. Six cist graves ( $0.8-1.0 \times 2.3 \mathrm{~m}$ ), oriented east-west, were exposed below the level of Floors 10 and 17 of Stratum II. Three of the graves (T13, T14, T19; Fig. 4) were discovered on the western side of the square, two graves (T20, T23) were below the walls of Strata I and II and another grave (T22) was discerned in the square's northern balk. The graves (not excavated) were built of dressed rectangular stones and covered with stone slabs of various sizes. The soil fill above the graves and below Floor 17 (Loci 8, 12, 16) contained many potsherds, including imported African Red Slip bowls (570-625 CE; Fig. 3:9), kraters (Fig. 3:10-12), a cooking pot (Fig. 3:13), a jar rim (Fig. 3:14) and a flask (Fig. $3: 15$ ) that dated to the end of the Byzantine period and extended into the Early Islamic period.

Stratum IV. A wall (W21; exposed length 1 m , width 0.5 m ), oriented north-south, was revealed in the western part of the square. Built of two rows of dressed rectangular stones, it was preserved two courses high. The wall's southern side was cut by T19 and its northern part continued beyond the excavation area. The soil fill below the graves and beneath the wall's foundation (L15) contained potsherds from the Byzantine period (sixth-seventh centuries CE), including a bowl (Fig. 3:16), a Fine Byzantine Ware slipped bowl (Fig. 3:17), kraters (Fig. 3:18, 19), jars (Fig. 3:20, 21) and a jug (Fig. $3: 22)$.

The excavation of Strata I and II seems to indicate that a building from the Early Islamic period stood nearby; it may have been paved with a mosaic, covered with a tile roof and its windows had glass panes. The cist graves, exposed below the building remains, were earlier than the building and should be dated to the latter part of the Byzantine period. The number and density of the graves suggest that they were part of a cemetery located in the area. Other tombs had previously been discovered west of the excavation during backhoe work, which was suspended and the tombs were not excavated. Wall 21 in Stratum IV clearly predated the tombs, as it was severed by one them.

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3. Pottery.

4. Cist graves $13,14,19$, looking east.

# (Volume No. HA-ESI 121 (2009 <br> Horbat Petora (North) Final Report 

llan Peretz and Oded Feder


1. Plan and sections.

During August-September 2003, a salvage excavation was conducted at Horbat Petora North (Permit No. A-3981; map ref. NIG 18210-20/61125-35; OIG 13210-20/11125-35), in the wake of paving work along the Cross-Israel Highway. The excavation, on behalf of the Israel Antiquities Authority, was directed by I. Peretz and O. Feder, with the assistance of H. Lavi and E. Bachar (administration), A. Hajian (surveying), T. Sagiv (field photography), N. Zak (drafting) and P. Nahshoni and D. Varga.

Twelve and a half squares ( 200 sq m ) were opened at the foot of a gentle hill, revealing meager remains of three walls (W117-length 0.9 m , width 0.25 m , height 0.21 m ; W110-length 5.25 m , width 0.75 m , height 0.32 m ; W111—length 6.7 m , width 0.4 m , height 0.18 m ) that delimited a gray level mixed with numerous potsherds, glass and bones (Loci 112, 114, 115, 124, 127, 143, 153, 154). These were probably agricultural terraces built directly on bedrock.
Two natural caves (Loci 145, 146) were located below the gray level and the terraces' soil fill, which contained fragments of pottery vessels that included a few jar rims from the Early Roman period, as well as Gaza jars, jugs, juglets, cooking pots, bowls, a fragment of a bowl decorated with a cross, fragments of lamps and glass, bones and basalt, all dating to the Late Byzantine and the beginning of the Early Islamic periods (sixth-seventh centuries CE).


1. Plan and sections.

2. Location map.

3. Plan and section

4. Building, looking north.

5. Limekiln, looking east.

6. Pottery.
(Volume No. HA-ESI 121 (2009
Horbat Petora (North)
Final Report
Oded Feder
During May 2003, a salvage excavation was conducted at Horbat Petora (North), located in the Lachish region (Permit No. A-3905; map ref. NIG 1821-3/6116-9; OIG 1321-3/1116-9; Fig. 1), prior to installing communication lines along the route of the Cross-Israel Highway. The excavation, on behalf of the Israel Antiquities Authority and underwritten by Bezeq, was directed by O. Feder, with the assistance of H. Lavi (administration), A. Hajian (surveying), T. Sagiv (field photography) and I. Lidski-Reznikov (pottery drawing).
Two phases were discerned. The first phase consisted of two rooms and a staircase, leading to an underground void that was not excavated, which belonged to a farmhouse that was built on a bedrock terrace (Fig. 2). A limekiln south of the building was ascribed to the second phase.

The farmhouse comprised two long rooms (1, 2; Fig. 3) whose walls (width 0.8 m ) were partly founded on a sloping perforated bedrock terrace and partly on top of leveled soil fill that also served as their floors. A refuse pit was discovered north of the building.
Room $1(4.4 \times 6.0 \mathrm{~m})$ had survived by their northern (W2) and eastern (W1) walls. At the northern end of W1 was an opening (width 0.9 m ) with a threshold that led to Room 2. Two stones that apparently served as the base of a pilaster for an arch were discovered in the middle of W 1 , on its western side. The other room's walls did not survive, but their outline could be discerned at the end of the bedrock terrace on the southern (W3) and western sides.
Room $2(2.6 \times 6.0 \mathrm{~m})$ was survived by three of its walls (W1, W2, W4); the fourth was most likely located at the end of the bedrock terrace. A rectangular base built of large stones, which probably served as the foundation for a staircase, was discovered at the northern end of the room, abutting W2. The meager remains of a flagstone pavement on top of tamped soil fill, which was incorporated in the bedrock floor, were discovered near W1 in the center of the room.
The pottery vessels on the floor of Room 1 (L108) included jar fragments (Fig. 6:14, 18); on the floor of Room 2 (Loci 107, 125, 126) were fragments of bowls (Fig. 6:3, 6), kraters (Fig. 6:7), a cooking pot (Fig. 6:10, 12) and jars (Fig 6:16, 17, 19), all dating to the sixth-seventh centuries CE.

The staircase,to the south of Room 1, consisted of six steps, some bedrock-hewn and others built. It rested against a wall (W6; Fig. 4) along its southern side and led from the bedrock surface to the opening of a shaft ( $0.9 \times 3.0 \mathrm{~m}$, depth 2.07 m ), which was blocked by a rectangular stone; a recess in its southern side was most likely meant for a rolling stone. The staircase apparently led to a burial cave that was not excavated. A fragment of a krater (Fig. 6:8) from the sixth-seventh centuries CE was recovered from the fill in the staircase.

The installation (not marked on plan), having two rectangular hewn recesses, was discovered south of the building and the staircase. A narrow channel connected the higher and deeper eastern recess ( $0.56 \times 0.70 \mathrm{~m}$ ) to the western one ( 1.0 $\times 1.1 \mathrm{~m})$. It seems this was some sort of agricultural installation.

A refuse pit (L118; diam. c. 2 m , depth c. 1.1 m ), which was a natural depression in bedrock, was discovered alongside the northern W2 of the building. The fill that covered the pit (L105) contained fragments of pottery vessels, including cooking pots (Fig. 6:11, 13), a jar (Fig. 6:15) and a jug (Fig. 6:20). Fragments of bowls (Fig. 6: 1, 2, 4, 5) and a cooking pot (Fig. 6:9) were recovered from the excavation of the pit itself. All the ceramic finds were dated to the latter part of the Byzantine-the beginning of the Early Islamic periods (sixth-seventh centuries CE).

The limekiln (diam. 2.9 m , depth 2.3 m ; Fig. 5) was hewn in bedrock south of Room 2 and had its opening ( $0.7 \times 0.9 \mathrm{~m}$ ) in the east. The dome did not survive and a thick layer of lime ( 0.97 m ) was discovered on its floor. The kiln's proximity to the farmhouse can be explained by the availability of masonry stones that were removed from the structure for the purpose of manufacturing lime during the Umayyad period. Another limekiln was discovered in the vicinity (HA-ESI 120).

The farmhouse at Petora, which is dated to the end of the Byzantine and the beginning of the Early Islamic periods, apparently constituted part of the agricultural periphery in the Lachish region.



3. Building, looking north.

4. Staircase, looking east.

(Volume No. HA-ESI 121 (2009

## Horbat Rimon

Final Report


1. Area A, plan.

Yael Abadi-Reiss and Nir-Shimshon Paran
During 2004-2005 archaeological excavations were conducted in Horbat Rimon (Permit Nos. A-3976, A-4080, A-4531; map ref. NIG 1875/5870; OIG 1375/0870). The excavations, undertaken on behalf of the Israel Antiquities Authority and funded by the Jewish National Fund, were directed by Y. Abadi (2003-2004) and N.S. Paran (2005), with the assistance of O Feder and K. Golan (area supervision), H. Lavi (administration), V. Pirsky and A. Hajian (surveying), T. Sagiv (field photography), E. Belashoc (drafting), A. Pikovski (pottery drawing) and O. Aflalo (Negev Archaeological Center). Youth groups from Israel and abroad participated in the excavations in the framework of the 'Jewish layer' project of the JNF.
At the top of Horbat Rimon's hill, 470 m above sea level, along the fringes of the Lahav Forest in the southern Judean Shephelah and c. 60 m south of the current excavations, a synagogue and other areas had previously been excavated by A. Kloner (HA 67-68:52-53; 72:32-34; 76:34-35 [Hebrew]). A new are (A) was opened in 2003 in the upper third of the northern slope of a hill that was documented by B. Zissu and D. Amit (B. Zissu, 2001. Rural Settlement in the Judean Hills and Foothills from Late Second Temple Period to the Bar Kokhba Revolt, Ph.D. dissertation, the Hebrew University, Jerusalem). A miqwe (ritual bath) and a building were exposed (Fig. 1).

## Miqwe

The rock-hewn miqwe is nearly square ( $\mathrm{L} 11 ; 6.6 \times 7.1 \mathrm{~m}$ ). Its northern part was opened and the ceiling of its southern part was the nari rock. Above the quarried eastern and western sides, walls were built (W11-length 2.2 m , width 0.7 m , height 0.5 m , a single course; W10-length 3.5 m , width $0.5-0.6 \mathrm{~m}$, height $0.4-0.6 \mathrm{~m}$, a single course). Seven hewn steps accessed the miqwe; five extended its entire width (length 7.3 m , width $0.30-0.65 \mathrm{~m}$, height $0.2-0.5 \mathrm{~m}$ ) and the other two were partially preserved and apparently were completed with construction that only partly survived. A compact, white-gray hydraulic plaster was preserved on the rock ceiling and on some of the miqwe's walls, particularly in the covered section, as well as on the rock wall in the open northern section, but not on the steps.
The finds recovered from the miqwe were mixed and dated from the Byzantine period to modern times.

## Building

To the south of the miqwe and higher up on the slope, a building founded on a rock shelf and roofing the southern part of the miqwe, was exposed. The tops of its walls were visible above surface prior to the excavation. The building consisted of three rooms in a row, aligned north-south (Rooms R1-R3) and an adjacent open courtyard on the west (R4) whose southern wall did not survive.
The walls of the rooms (W3-W8; width $0.65-0.80 \mathrm{~m}$, max. height $0.6 \mathrm{~m}, 1-2$ courses) were built of large ashlar and fieldstones ( $0.2-0.4 \times 0.6-0.7 \mathrm{~m}$ ), set on the leveled rock surface that served as the floor of the rooms. The walls of the courtyard (W1, W2; width $0.4-0.6 \mathrm{~m}$, max. height $0.7 \mathrm{~m}, 2$ courses) consisted only of fieldstones and were set on a fill.
The finds from the building included potsherds and a few flint artifacts. The potsherds were mixed and dated from the Hellenistic period to modern times.
The mixed finds did not enable to set a date, yet the Jewish settlement in Kloner's excavations was dated from the first to the sixth centuries CE.


1. Area A, plan.

## Horbat Rimon

 Preliminary Report

1. Plan.

Nir-Shimshon Paran and Svetlana Talis
20/1/2009
During the course of 2006 an initiated excavation was conducted at Horbat Rimon (Permit No. A-4724; map ref. NIG 18745/58709; OIG 13745/08709). The excavation, on behalf of the Antiquities Authority and with the financial support of the Jewish National Fund, was directed by N.S. Paran and S. Talis, with the participation of H. Lavi (administration), O. Aflalo (Negev Archaeological Center) and A. Hajian (surveying).
Horbat Rimon is situated on a hill along the fringes of the Lahav Forest in the southern part of the Judean Shephelah and excavations were conducted there in the past (HA-ESI 121).

A new area (Area B) was opened, c. 20 m south of Area A, where massive walls of a building ( $15 \times 25 \mathrm{~m}$ ) were visible on the surface level. The structure was supported from the north by a curved wall (W6) that was built of two courses of very large stones.
There was a large courtyard in the southwestern part of the building (R3; $5.0 \times 8.5 \mathrm{~m}$ ) which was delimited from the north by Wall 1, from the east by Wall 7 and from the west by Wall 4. The southern boundary of the courtyard has not yet been discovered.
In the northern and eastern wings of the courtyard were three rooms whose walls were preserved to a height of two to four courses. In the northern wing was Room R1 $(3.7 \times 6.0 \mathrm{~m})$, delimited in the east by Wall 3 and in the south by Wall 1 East of it was Room R2 $(3.5 \times 3.5 \mathrm{~m})$ which was delimited in the north by Wall 2, in the south by Wall 9 and in the west by Wall 3. Another wall started to be exposed along the eastern edge of the room but its identity is unclear. East of the courtyard was another room (R4; $4.0 \times 4.7 \mathrm{~m}$ ), which was delimited in the north by Wall 9 , in the east by Wall 8 , in the south by Wall 5 and in the west by Wall 7 .
The possibility should not be ruled out that other walls which have not yet been discovered are located on the eastern side of the building. The complete plan of the building has yet to be ascertained and the excavation has not yet reached the floors of its rooms. The excavation will be completed in the coming seasons.


1. Plan.

# (Volume No. HA-ESI 121 (2009 Horbat Shelah (west) Final Report 



1. Plan.

2. Reconstruction of the late phase winepress.

3. Storage cells, looking south.

4. The collecting vat from the late phase, looking northeast.

5. The settling pit and collecting vat in the late
phase, looking south.

Mordechai Haiman
17/11/2009
During July-August 2003, an excavation was conducted in a complex winepress west of Horbat Shelah (Khirbat Umm Kalkha; Permit No. A-3967; map ref. NIG 18241/61390; OIG 13241/11390). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Cross-Israel Highway Ltd., was directed by M. Haiman (photography), with the assistance of A. Hajian and T. Kornfeld (surveying and drafting) and A. Pikovsky (drawing).

A complex industrial winepress ( $13.25 \times 17.40 \mathrm{~m}$; Figs. 1-3) that was built in an agricultural region at the foot of a slope was excavated c. 500 m west of Horbat Shelah. Probe trenches excavated around the winepress ascertained that the installation was not part of a larger building or a settlement. The preservation of the winepress' eastern part was good and it deteriorated farther to the west. Two distinct construction phases that dated to the sixth-seventh centuries CE were discerned in the winepress. A cistern (L141) was exposed to the south of the winepress.

## The Early Phase

A simple winepress was built; its components included a treading floor (L121) and a collecting vat (L161), separated by a wall (W156). The treading floor ( $9.5 \times 10.9 \mathrm{~m}$ ) was paved with a mosaic (size of tesserae $3 \times 3 \mathrm{~cm}$ ), a section of which was exposed in the southwestern corner of the surface (L129; $1.0 \times 1.3 \mathrm{~m} ;$ Fig. 4), beneath the remains of a storage cell that was dated to the late phase (L126). The western side of the mosaic section (129) ended in a straight line at W156 (width $0.4 \mathrm{~m})$. The mosaic bedding, composed of small stones and bonded with cement, was overlain with a layer of white cement (thickness c. 5 cm ); it was preserved in most of the treading floor area. Collecting Vat 161 was a square cell ( $3.0 \times 3.2 \mathrm{~m}$ ), delimited by four walls (W156-W159). An octagonal collecting vat was built within it in the late phase. A paved surface (L139) had apparently surrounded the collecting vat and only remains of its foundation, which abutted the foundation trench of the winepress' western enclosure wall (W145), were preserved. The entire winepress was enclosed by walls on four sides (W116, W145, W146, W149; width 1.15 m).

## The Late Phase

The simple winepress was converted into a complex industrial winepress in this phase (Fig. 5). The major change was in the construction of four storage cells (Loci 122, 123, 126, 152; $0.8 \times 2.0 \mathrm{~m}$, height 1.4 m ; Figs. 6, 7) along the eastern and southern sides of the treading floor. The cells, built of small stones bonded in cement, formed an L-shaped structure (width c. 2.5 m height 1.5 m ) and were almost completely preserved. They were paved with a coarse mosaic and their walls were coated with a thick layer of plaster that contained potsherds; their ceiling was thick and vaulted (thickness c. 0.8 m ). A treading floor was built on the roof of each of the cells. The floors were of a coarse mosaic, delineated by partition walls (W134, W136, W148; width c. 0.5 m ) and poorly preserved. The facades of the storage cells faced the main treading floor (L121) and their openings were higher than its floor. Round holes (diam. c. 5 cm ) were discovered at the bottom of the walls in the front of Cells 123 and 126. These were probably intended for pipes that led to the built vat in the screw base recess (L155) in the center of the treading floor. A lead pipe (diam. c. 3 cm ) was discovered inside this vat, opposite Cell 126.
The main treading floor was reduced by about a third of its original size ( $5.4 \times 5.5 \mathrm{~m}$ ) and it was repaved with a coarse mosaic (tesserae size $4 \times 4 \mathrm{~cm}$; Loci 120, 132), of which only two sections were preserved. The tesserae were arranged diagonally, except for the frame along the edges of the floor that consisted of two rows of tesserae. The floor bedding was composed of small stones bonded with cement. A recess for the base of the press screw (L155; $2 \times 2 \mathrm{~m}$, depth 0.8 m ; Fig. 8) was exposed in the center of the treading floor. The sides of the recess were destroyed in antiquity; however, its margins, built of large stones, were preserved. A rectilinear cavity ( $0.3 \times 0.5 \mathrm{~m}$, depth c .0 .2 m ; Fig. 9) was cut at the bottom of the recess. A lead pipe (diam. c. 3 cm ) that faced Storage Cell 126 was set in the southern side of the cavity and another lead pipe (diam. c. 5 cm ) that connected to the settling pit (L138), located west of the treading floor, was fixed in the western side of the cavity. A fragment of a limestone screw press (c. $0.8 \times 0.8 \mathrm{~m}$, thickness 0.2 m ) with a square hole in its center ( $0.4 \times 0.4 \mathrm{~m}$; Fig. 10) was discovered nearby. Millstones placed one atop the other, whose stratigraphic context is unclear, were recorded in the southeastern corner of the treading floor (Fig. 11).
Wall 156 continued to be used in this phase, separating the treading floor from the collecting vat (L115) and the settling pit (L138). Floor 120 in the treading floor ended in a straight line and abutted W156. Floor 139 to the west of W156 continued to be used. The leveled bedding of a mosaic floor was discovered in the area of Floor 139 but only a small section of the mosaic itself that consisted of coarse tesserae (L118) survived in the southeastern corner.
An octagonal collecting vat (L115; length per side 2.38 m , depth c. 1.5 m ; Fig. 12) was built inside the collecting vat of the early phase. The space between the sides of the octagonal vat and the earlier collecting vat (L161) was filled with small stones, bonded with mortar. The walls of the octagonal vat were coated with a thick layer of white plaster and its floor was paved with a coarse mosaic, which characterize the pavements of the winepress in the late phase. The floor was framed at the edges with two rows of tesserae that were arranged in a different direction than that of the floor tesserae. A circular, stepped pit, lined with stones, was cut in the center of the vat (upper part diam. 0.8 m , lower part diam. 0.4 m , depth 0.5 m ). A stone was fixed in its center to secure the screw. A round niche (width 0.5 m , height c .0 .6 m ), which contained a lead pipe (diam. c. 5 cm ) that led to Settling Pit 138, was installed in the northeastern wall of the collecting vat.
A rectangular settling pit whose eastern part is curved (L138; $1.1 \times 1.6 \mathrm{~m}$, depth 0.7 m ; Fig. 13) was built north of Collecting Vat 115. The sides of the pit were coated with a thick layer of plaster and its floor was paved with a coarse industrial mosaic. Lead pipes that led to the recess of Screw Press 155 and Collecting Vat 115 were inserted through the eastern and southern sides of the pit.
The walls enclosing the winepress (width c. 1.15 m ) were divided lengthwise in two. The outer wall was raised c. 0.5 m higher than the inner wall, which was used as a bench (Figs. 14, 15). The eastern wall (W146/W147) and the eastern part of the southern wall (W116) were preserved to their full height $(1.3 \mathrm{~m})$. The western part of W116 was preserved one-four courses high ( $\max .0 .5 \mathrm{~m}$ ) and extended to the hewn side of a miqwe, located to its west, which belonged to the late phase (L141; below). An opening in this part of the wall allowed rainwater to flow from the treading floor to the miqwe. Only the eastern part of the northern wall (W149; length c. 7.5 m ) was preserved. The division of the wall into an inner bench and an outer wall was apparent at the wall's eastern end. An opening that may date to the late phase of the winepress was probably located near the juncture between W149 and the eastern wall. The western wall (W145) was not preserved, except for its foundation trench, which was hewn in bedrock (depth $2-5 \mathrm{~cm}$ ) and its entire length had survived. The space between the storage cells and the eastern and southern enclosure walls of the winepress was filled with small stones and mortar (Loci 143, 150; width 1.2 m ). The top of the fill was c. 0.4 m lower than the top of the bench (W147).

The cistern (L141; $3.5 \times 4.0 \mathrm{~m}$, depth c. 2.5 m ; Fig. 16) was bedrock hewn and coated with a thick layer of plaster. A staircase of seven steps led from its opening (width c. 1 m , height c. 1.7 m ) to its bottom. Rock-cutting remains in the side and ceiling of the cistern indicate that initially, it was apparently a miqwe $(2.5 \times 2.5 \mathrm{~m})$, possibly at the time of the winepress' early phase; later, maybe in the late phase of the winepress, the miqwe was enlarged and used as a cistern. The miqwe/cistern was filled with rainwater that flowed from the winepress, probably via an opening that was cut in W116. The miqwe attests to the association of the winepress with a Jewish settlement.

A multitude of ceramics that dated from the end of the sixth and the beginning of the seventh centuries CE was discovered in the winepress and the cistern. The majority of fragments were jars (95\%), mainly of the later type of Gaza jars (Fig. 17:79) and also bag-shaped jars from the south of Israel (Fig. 17:10, 11), Late Roman C bowls (Fig. 17:1), an imitation of a Fine Byzantine Ware bowl (Fig. 17:2) that first appeared at the end of the Byzantine period, a bowl with an everted rim that has an interior gutter (Fig. 17:3), kraters (Fig. 17:4-6) and cooking pots (Fig. 17:13-15). Fragments of a flask (Fig. 17:16) and a jar with a tall neck (Fig. 17:12), which date to the Abbasid period, were discovered in the cistern; these potsherds were probably swept into it after the site was abandoned.


3. General view of winepress, looking east.

4. Remains of Mosaic Floor L129 on the early treading floor, looking east.

5. Reconstruction of the late phase winepress


7. Storage cells, looking south.

8. Recess at the base of screw press.

9. Stone-lined cavity and lead pipe in its southern side.

10. Part of screw press base.

11. Upper millstones, looking southeast.


13. The settling pit and collecting vat in the late phase, looking south.

14. The southern wall of the winepress, looking west.

15. The eastern wall of the winepress, looking north.

16. Cistern 141, looking south.


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Fis 17. Pottery.

# (Volume No. HA-ESI 121 (2009 <br> Horbat Siv, Survey of Northern Sharon Final Report 

Yehuda Dagan and Leticia Barda


1. Survey map.

During September 2002, a survey was conducted west of the Shuweika village and east of Qibbuz Bahan (Permit No. A-3736; map ref. NIG 20240-434/69410-520; OIG 15240-434/19410-520), along the planned route of the separation fence. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by Y. Dagan and L. Barda (GPS).

A strip of land (length 3 km , width 250 m ) was investigated in the low, western part of Samaria, along which eighteen survey sites with antiquities were identified (Fig. 1). The southwestern section of the surveyed strip (Sites 1-14), extending southeast of Bahan (map ref. 20245/69445) up to the road leading from the Zemer Junction to Shuweika, runs along the fringes of two tells, Khirbat Dahara and Horbat Siv, both declared antiquities sites. Burial caves, quarries and rock-hewn installations could be discerned on surface, as well as buildings remains and numerous potsherds. The central section (Sites 15, 16), extending eastward from the road and parallel to Nahal Bahan, passes through an olive grove that is c. 40 years old. Although clusters of flint artifacts were observed on surface, no ancient tools were identified among them. The northern section of the surveyed strip (Sites 17, 18) runs along a rocky slope where agricultural installations were hewn, including basins, a bodeda for extracting oil, cupmarks and a stone quarry. Farming terraces in this area were built along the fringes of Khirbat el-Jarushiya (Site 18).

The sites are described below:
(1) Map ref. 20252/69418 - burial cave; blocked entrance ( $0.83 \times 1.60 \mathrm{~m}$ ); courtyard walls (height 1.7 m ) are vertically hewn in bedrock and modern heaps of soil cover the courtyard's floor.
(2) Map ref. 20254/69420 - burial cave and rock-cuttings along bedrock surface. The cave, damaged by later quarrying, had survived by the chamber $(1.3 \times 1.6 \mathrm{~m})$ and two kokhim in its southern side $(0.68 \times 1.55 \mathrm{~m})$, filled with modern debris. East of the cave opening was a rock-hewn bodeda for extracting oil (diam. 0.3 m ) and nearby, rock-cuttings that were probably used for quarrying building stones were discerned.
(3) Map ref. 20255/69418 - shallow rock-cutting ( $1.1 \times 1.3 \mathrm{~m}$, depth 0.3 m ) on bedrock surface.
(4) Map ref. 20248/69413 - cave dwelling ( $5 \times 10 \mathrm{~m}$, height $1.9-2.1 \mathrm{~m}$ ).
(5) Map ref. $20256 / 69417$ - quarry $(2.3 \times 3.6 \mathrm{~m}$, depth $0.32-0.55 \mathrm{~m})$ and a scattering of potsherds $(1.2 \times 2.0 \mathrm{~m})$.
(6) Map ref. 20257/69421 - cave (pit?; diam. of opening 0.9 m ).
(7) Map ref. 20257/69526 - large hewn cistern with elliptical opening ( $1.50 \times 2.25 \mathrm{~m}$ ) and rock-hewn pool nearby $(0.8 \times$ 1.2, depth 0.55 m ).
(8) Map ref. 20269/69442 - northeastern corner of building (presumed area $3.5 \times 4.7 \mathrm{~m}$ ), surrounded by scattering of building stones; pottery fragments from the Mamluk and Ottoman periods.
(9) Map ref. 20271/69449 - two rock-cuttings, square ( $0.5 \times 0.6 \mathrm{~m}$, depth 0.16 m ) and rectangular ( $0.8 \times 2.0 \mathrm{~m}$, depth 0.9 $\mathrm{m})$, probably used for processing agricultural products.
(10) Map ref. 20275/69454 - shallow quarry ( $3 \times 5 \mathrm{~m}$ ).
(11) Map ref. 20281/69469 - concentration of dressed building stones $(5 \times 5 \mathrm{~m})$.
(12) Map ref. 20281/69471 - concentration (diam. 4 m ) of building stones that may be the remains of a structure, most of whose stones were removed for reuse in later construction; potsherd scattering (diam. 10 m ); rock-cuttings on bedrock outcrops.
(13) Map ref. 20284/69473 - winepress and rock-cuttings on a flat bedrock outcrop; the hewn winepress included a treading floor $(0.9 \times 1.0 \mathrm{~m}$, depth 0.36 m$)$ and a collecting vat $(0.6 \times 0.9 \mathrm{~m}$, depth 0.78 m$)$ to its east that was filled with alluvium; c. 2 m to the east-bedrock surfaces that bear signs of quarrying, probably of building stones.
(14) Map ref. 20280/6947 - two burial caves, a hewn winepress and a quarry for masonry stones; modern debris piled on all remains hindered accurate documentation.
(15) Map ref. 20395/69499 - scattering of potsherds from the Early Roman, Late Roman and Byzantine periods (diam. 15 m ); farming terraces were built on the slope.
(16) Map ref. 20393/69496 - hewn rectangular vat ( $0.5 \times 0.7 \mathrm{~m}$ ), surrounded by potsherd scattering (diam. 5 m ) from the Roman and Byzantine periods.
(17) Map ref. 20414/69519 - masonry stone quarry $(2.7 \times 3.0 \mathrm{~m})$; hewn vat $(0.44 \times 0.66$, depth 0.32 m$)$.
(18) Map ref. 20414/69518 - farming terraces.

(Volume No. HA-ESI 121 (2009
Horbat Tirat Tamra

## Final Report

Hagit Tahan


1. Plan and section.

2. Pottery.

During November 2001, a salvage excavation was conducted at Horbat Tirat Tamra (Permit No. A-3518; map ref. NIG 216240-45/750835-40; OIG 166240-45/250835-40). The excavation, on behalf of the Israel Antiquities Authority, was directed by H. Tahan, with the assistance of A. Thatcher (area supervision), V. Essman (surveying), A. Hajian (drafting), E.J. Stern (pottery reading) and Y. Gorin-Rosen (glass finds).
The corner of a large building was exposed on the southern slope of the site (Fig. 1).
Two squares, in the southeast $(4.5 \times 7.0 \mathrm{~m})$ and the north $(4.0 \times 4.5 \mathrm{~m})$ of the building, along the continuation of the eastern wall (W10), were opened.
The walls of the building, preserved six courses high ( 2 m ), were built of roughly hewn medium-sized stones. Walls 10 and 13 were built on a foundation of stone and earth above bedrock.
Two perpendicular walls (W12, W15) inside the building were probably used to partition the structure into rooms.
Numerous potsherds and a few glass vessels were found, including a cooking pot (Fig. 2:1) from the Hellenistic period; a bowl (Fig. 2:2) and jars (Fig. 2:3, 4) from the Early Roman period; bowls (Fig. 2:5-8) and a cooking pot (Fig. 2:9) from the Byzantine period; a bowl (Fig. 2:10) and a jar (Fig. 2:11) from the Early Islamic period; bowls (Fig. 2:12-14) from the Crusader period; bowls (Fig. 2:15-17); a juglet (Fig. 2:18) from the Mamluk period and bowls (Fig. 2:19-21) and a pipe (Fig. 2:21) from the Ottoman period.
Potsherds from all these periods were also found on the bedrock and next to the foundations; based on the latest potsherds, the structure can be dated to the Ottoman period.


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(Volume No. HA-ESI 121 (2009
Hura, Nahal Shoket
Final Report


1. Plan and section.

2. Pottery.

## Vlada Nikolsky

During April 2003, a salvage excavation was conducted at the settlement of Hura (Permit the No. A-3885; map ref. NIG 19281-91/57935-45; OIG 14281-91/07935-45), in the wake of development plans. The excavation, undertaken on behalf of the Antiquities Authority and financed by the Israel Lands Administration, was directed by V. Nikolsky-Carmel, with the assistance of A . Hajian (surveying and drafting), T. Sagiv (field photography), L. Kupershmidt (metallurgical laboratory), N. Ze'evi (drawing) and D.T. Ariel (numismatics)
Four squares ( 59 sq m ; Fig. 1) were opened within the precincts of the Nahal Shoket site
A building, probably used as a watchman's hut, was exposed. The walls of the structure were built of medium-sized lime stones $(0.2 \times 0.3 \mathrm{~m})$, which were not all preserved. A stone weight was among those utilized in the construction of the eastern wall (W13). The floor of the building was not preserved. The finds included a few potsherds from the Late Byzantine period, such as bowls (Fig. 2:1, 2), kraters (Fig. 2:3-5), a cooking pot (Fig. 2:6) and a cooking pot lid (Fig. 2:7), as well as several metal fragments, including a poorly preserved coin that probably dates to the fourth century CE.


1-1

1. Plan and section.


## Jerusalem, Ramat Sharet

## Final Report

Annette Nagar


1. Location map.

2. Western cistern, general view, looking north.

3. Western cistern. southwestern corner, looking north.

4. Western cistern, sample of the plaster layers from the floor.

5. Pottery.

In November 2006 a salvage excavation was conducted on Moshe Sharet Street, in the Ramat Sharet neighborhood of Jerusalem (Permit No. A-4944; map ref. NIG 21750/62932; OIG 16750/12932), prior to the construction of residential buildings (Fig. 1). The excavation, undertaken on behalf of the Antiquities Authority with the financial support of the Azorim Company, was directed by A. Nagar, with the participation of R. Abu Halaf (administration), V. Pirski (surveying), R. Brin (drafting), T. Sagiv (field photography), I. Lidski-Resnikov (drawing), C. Amit (studio photography) and N. Ze'evi (archives photographs).
Two squares were excavated in which two rock-hewn, plastered cisterns were exposed that were used by the inhabitants of the Arab village of Malha until 1948. The eastern cistern is dated to the Ottoman period and the western one to the Byzantine period. The cisterns were severely damaged during the course of construction work.

## The Eastern Cistern

The cistern (L100; $3.6 \times 5.5 \mathrm{~m}$, depth 3.8 m ; Fig. 2) was hewn in the limestone bedrock and was irregular in shape; its ceiling, which was arched, was preserved only in the western part. The sides of the cistern were slanted inwards in the bottom part of the installation and its floor sloped to the east. At the eastern end of the floor was an oval settling basin (L100A; $1.15 \times 1.60$, depth 0.15 m ). The northeast side of the cistern was preserved higher than its other sides ( 3.65 m ). Two layers of plaster were applied to the sides ( 5 cm thick) and to the floor ( 7 cm thick). The bottom layer consisted of light gray plaster with a hard cement-like texture which contained crushed potsherds and gravel ( 3.5 cm thick on the sides, 5.5 cm thick on the floor), while the upper layer was modern cement ( 1.5 cm thick on the sides and floor). Wate level lines were observed on the cement layer. The opening to the cistern was evidently situated in its eastern side. The finds that were recovered from inside the cistern date to the modern era and include a small glass bottle, a rifle bullet and a coin.

## The Western Cistern

The cistern (L101; $2.95 \times 3.50 \mathrm{~m}$; Figs. 3, 4) was hewn in the limestone bedrock and was plastered. It was squarish in shape, although its northern side was curved. The cistern's ceiling was not preserved; its floor sloped to the north. It seems that the opening to the cistern was in its northern side. The cistern was found blocked with poured, modern cement that covered the alluvium sediment at the bottom of the installation. Differences in the thickness of the plaster (as much as 15 cm ), the number of layers ( $2-5$ ) and their composition were noted on the walls of the cistern and its floor. The different layers of plaster were comprised of pale yellow limestone, white lime and large fragments of potsherds, white/pink lime with ground potsherds and cement in the upper layer (Figs. 5, 6).
The potsherds that were found in the walls of the cistern include jars from the Second Temple period (Fig. 7:1-3) and bowls from the Byzantine period (Fig. 7:4, 5).
The location of the cisterns indicates they were in use until 1948; however, they were constructed at different times. Based on the cement in the eastern cistern one can assume that it was built in the modern era. In contrast, the pink plaster in the western cistern, which contained potsherds from the Second Temple and Byzantine periods and was covered with a layer of modern cement plaster, proves that the cistern was quarried no later than the Byzantine period.


1. Location map.

2. Eastern cistern, plan and section.

3. Western cistern, plan and section.


4. Western cistern, southwestern corner, looking north.

5. Western cistern, sample of the plaster layers from the floor.

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# (Volume No. HA-ESI 121 (2009 

## Jerusalem, 'Ir Gannim

 Final Report

1. Location map and excavation areas.

2. Area A, general view, looking west.

3. Area B, pottery.

4. Area C, winepresses and limekiln, looking west.

5. Impression on a ceramic tile (?).

Gideon Solimany

During August-September 2005, a salvage excavation was conducted on Costa Rica Street in the 'Ir Gannim neighborhood of Jerusalem (Permit No. A-4556; map ref. NIG 216300-50/62860-75, OIG 166300-50/12860-75), prior to construction work. The excavation, on behalf of the Israel Antiquities Authority and with the financial support of the Kotler-Adika Company, Ltd., was directed by G. Solimany, with the assistance of R. Abu Halaf (administration), T. Kornfeld and V. Essman (surveying), T. Sagiv and C. Amit (photography), R. Vinitsky (metallurgical laboratory), R. Gat (pottery restoration), O. Shorr (glass restoration), I. LidskyReznikov (pottery drawing), N. Katsnelson (glass), C. Hersch (glass drawing), and D.T. Ariel (numismatics).
Broad agricultural terraces were built on the southeastern slope of a spur, where a survey and exploratory soundings exposed ancient building stones and architectural elements, as well as quarries, hewn cavities and numerous potsherds from the Early Roman and Byzantine periods. A past survey documented burial caves with kokhim in the bedrock outcrop south of the terraces (A. Kloner 2000, Survey of Jerusalem, The Southern Sector, Site 33).

Four excavation areas were opened (Fig. 1), revealing stone quarries (A, D), terraces (B) and two winepresses that were later adapted for use as a limekiln (C).

Area A ( $8.5 \times 13.0 \mathrm{~m}$; Figs. 2, 3). Two phases were discerned. In the first phase, two adjacent hewn cavities of identical size (Loci 102, 103; $1.2 \times 1.2 \mathrm{~m}$, depth 1.5 m ) were linked to each other by a passage; L103 was plastered. The cavities, whose function is unclear, were devoid of artifacts. Based on the plaster that survived in Cavity 103, they were probably used for storing liquids. In the second phase, the area was used as a stone quarry (Loci 100, 101, 104) and even though it was quite shallow (c. 0.5 m ), the quarrying destroyed the ceilings and facades of the cavities of the first phase.

Area B (5 $\times 7 \mathrm{~m}$; Figs. 4, 5). A sounding was excavated in the area opposite a terrace wall (W203). Brown soil fill (L200), which yielded potsherds mostly dating to the Hellenistic period that included bowls (Fig. 6:1, 2), storage jars (Fig. 6:3-5 and a lamp (Fig. 6:8), was exposed. A storage jar fragment from the Early Roman period (Fig. 6:7) was also found. Four coins were in the fill, three of which were identified: a coin from the time of Constantine II (330-335 CE, IAA 102267), an early Byzantine coin (IAA 102268) and an anonymous Umayyad follis from the Damascus mint that dates to the middle of the eighth century CE (IAA 102269). It seems that the terrace was built of soil fill that was brought to the site from an adjacent ruin and the contents of the terrace fill reflects the periods of occupation of that ruin. The excavation reached bedrock, descending from north to south, on which the terrace wall (W203) was founded, against which the soil fill and small stones (L201) rested. A considerable effort was invested in the construction of the terraces (height 2-3 m, width 10 $\mathrm{m})$.
Area C $(10 \times 20 \mathrm{~m})$. Four phases were discerned in this, the largest of the excavation areas.
Phase 1. A square cave, documented but not excavated, was exposed (L320; $4.5 \times 5.0 \mathrm{~m}$; Fig. 7). It was found half filled with alluvium and its walls showed evidence of hewing, but no kokhim or arcosolia were discerned. Its entrance was in the south and an ashlar-built wall (W322) abutted the eastern side of the entrance and most probably enclosed a built passage that led to the entry. A rectangular aperutre $(0.3 \times 0.8 \mathrm{~m}$, height 1.0 m$)$ was cut in the southeastern corner of the ceiling in the cave. The entrance to the cave was blocked by a fieldstone wall. A modern iron plate and a terrace soil fill (L313) were placed over this blockage in the last phase of the cave's use.
Phase 2. Two adjacent winepresses, separated by a bedrock partition (width 1.10 m ; Fig. 8), were hewn. The western part of the cave extended below the treading floor of the eastern winepress.
The eastern winepress (Fig. 9) included a square treading floor (L305; $4.5 \times 4.5 \mathrm{~m}$ ), which was paved with white mosaic and a collecting vat (L312; $1.2 \times 1.2 \mathrm{~m}$, depth 1.2 m ) that had a rectangular settling pit ( $0.3 \times 0.7 \mathrm{~m}$, depth 0.3 m ) in its northeastern corner. A secondary pressing installation was discovered to the north of the collecting vat. This was bedrock hewn (L319; $0.7 \times 1.2 \mathrm{~m}$, depth 0.35 m ) and included a niche, cut in the southern wall of the winepress and a sedttling pit in its bottom. The northern wall of the winepress was hewn as a step (width 0.5 m ) and a hewn channel in the wall (width 0.1 m ) led to the ceiling of the cave to the north. The purpose of the channel and the stone step is unclear. The south side of the winepress was not preserved due to later damage.
The western winepress was only survived by a square treading floor (L302; $5 \times 5 \mathrm{~m}$ ). It seems that its construction was never completed due to the quality of bedrock in the eastern part.
The winepress complex and the ceiling of the cave were close to surface and were covered with the soil of later terraces therefore the ceramic finds were mixed, which made it impossible to date Phases 1 and 2. It seems that the winepresses were built in the Early Roman or Byzantine periods, but this is not certain.
Phase 3. The winepresses were canceled in this phase by the construction of a square limekiln (L318; $1.5 \times 1.5 \mathrm{~m}$ ) in the center of the eastern winepress' treading floor whose mosaic floor was destroyed in its eastern part. Only the base of the limekiln survived. The winepress' collecting vat, which was found filled with lime up to its rim, was used as the collecting pit for the lime. At the end of this phase the lime pit was sealed with a layer of small stones, which included fragments of a large jar.
In three other places (Loci 303, 309, 317), concentrations of ash, jar fragments and the remains of bones were found. The finds from this phase included fragments of bowls (Fig. 10:1-5), jars (Fig. 10:6-15) and a teapot spout (Fig. 10:16) that dated the end of the installation's use to the Early Islamic period (seventh-eighth centuries CE). A single lamp fragment (Fig. 10:17) that dated to the Byzantine period was found. Glass vessels that also dated to the Early Islamic period (Fig. 11, see below) were found as well. A fragment of a tile recovered from L300 (?) was decorated with a stamped impression of a table amphora with raised S-shaped handles (Fig. 12) that dated to the Roman or Byzantine periods.
Phase 4. Farming terraces that were generally oriented north-south direction were built in this phase. The walls of the terraces stood 3-4 m high and the soil fill against them seems to have been similar in composition to that in Area B. A small retaining wall (W324) of small fieldstones was built perpendicular to the lines of the terraces, and lower walls were built in places where bedrock was high (W323). A fieldstone-built installation, most likely an oven (L317), was built next to W323 and was also ascribed to this phase.

Area D. Next to the terrace and and slightly west of Area B, a shallow stone quarry (L400; $4.5 \times 4.5 \mathrm{~m}$; Fig. 13) was revealed, covered by a soil fill similar to the terrace fill in Areas B and C. The quarry resembled the one in Area A and was located along the same terrace line. On the slope between Areas B and D, a tractor exposed the remains of an ovalshaped cave (L402; $2.0 \times 2.5 \mathrm{~m}$, depth 1.5 m ), which contained soil fill that yielded numerous potsherds from the Early Roman period. It seems that this cave was intended for burial, but its quarrying was never completed. With the construction of the terraces the cave was blocked with soil.

## Glass Artifacts

Natalya Katsnelson
A number of glass fragments were found in Area C (Loci 304, 309, 311, 319). The assemblage is extremely limited and includes two bottles or cups (Fig. 11:1, 2), a wine goblet (Fig. 11:3) and jars (Fig. 11:4-10). The fragments are small and poorly preserved; due to the calciferous coating their color is almost invisible. Most of the fragments are decorated with trails of the same color as the vessel $(1,6)$, yellow (2) and turquoise ( 7,10 ). The decorations are arranged horizontally ( 1 ,
2), forming incised triangles (6-8) or a zigzag pattern ( 9,10 ). The types of vessels and their decorations are characteristic of the Umayyad period, thus providing a tentative date for the limekiln phase (Phase 3).

Fragments 4-10 constitute an interesting group. While the decoration on No. 6 is made of translucent glass, Nos. 7-10 are decorated with a turquoise trail on the body of the vessel, which is translucent. Nos. 4 and 5 are fragments of either one or two different vessels. Jars of this type have a globular body and are decorated with a strip of zigzag threads around the upper part of the vessel and another strip below it forms irregular triangles that face up and down in an alternating pattern. These vessels appear in the region at the end of the seventh and the beginning of the eighth centuries CE. They are well known from their wide distribution in museums but are rarely found in archaeological excavations.
The slope of the site was first used in the Early Roman period, primarily for burial. Many potsherds from this period were found in the fill of the terraces. Activity at the site was renewed in the Byzantine period when burial caves, winepresses (Area C), water installations and quarries (Areas A, D) were hewn. In the Early Islamic period the area was used for lime production (Area C). Following a long hiatus, agricultural terraces were built in the area, ptobably by Palestinian villagers that lived in the region until 1948.


1. Location map and excavation areas.


2. Area A, general view, looking west.


3. Area B, pottery.

4. Area C, cave, plan and sections.

5. Area $C$, winepresses and limekiln, plan and section.

6. Area C, winepresses and limekiln, looking west.




# (Volume No. HA-ESI 121 (2009 Jerusalem, Zahal Square Final Report 

## Annette Nagar

30/12/2008

2. Convent, general view to the west.

5. Kitchen and Corridor 109, Hall 105 in background, looking southeast

9. Marble finds.

14. Small glass bottles and an inkwell.

15. Metal finds.

During June 2005, an excavation was conducted at Zahal Square (Permit No. A-4488; map ref. NIG 221530/631820; OIG 171530/131820; Fig. 1). The excavation, undertaken by the Israel Antiquities Authority and financed by the Moriah Company, was directed by A. Nagar, with the assistance of R. Abu Halaf (administration), A. Hajian, T. Kornfeld and (surveying), T. Sagiv and C. Amit (photography) and I. Berin (drafting).
Remains of the convent Soeurs de Marie Réparatrice, which was affiliated with an order of French Catholic nuns, were exposed. The land was purchased in 1888, within the construction projects sponsored by Baron Marie Paul Amedee de Piellat. The convent stood three stories high and its façade faced the northwest, toward Ha-Zanhanim Street (which was then King Solomon Street) and the rear part of the French hospital, Saint Louis. The convent, destroyed during the War of Independence, was situated in no-man's land until 1967. In 1969, Zahal Square was renovated and the foundations of the convent were buried beneath the street. No ancient remains were exposed below the convent's foundations.
The outer walls of the building are probably located outside the excavation area; therefore, only rooms of the first story and their interior walls were exposed (Figs. 2, 3). These included a large hall (L105), a kitchen (L108) and three connecting corridors (Loci 109, 112, 113). The walls, which were partially preserved to a maximum height of nine courses (c. 2.5 m ), were built of two rows of ashlar stones and a core of medium-sized fieldstones. Remains of plaster were found on all walls. The floors of the rooms were paved with various ceramic tiles in shades of gray or red. It seems that the architects of the building wished to accentuate the differences in the nature and function of the various spaces by utilizing tile of different colors. Black soot was discerned on the floors throughout the entire area of the convent, but this was mostly evident in the large hall where a major conflagration occurred.
The entrance to the large hall was by way of a long corridor (L109; length 18.6 m , width 1.25 m ) delineated on one side by Wall 6 (length 11.5 m , width 0.8 m . preserved height 2.2 m ) and by the front wall of the building that did not survive. The corridor (Fig. 4) was paved with red ceramic tiles $(0.2 \times 0.2 \mathrm{~m})$ and remains of paving tiles, blocks, steps and stone architectural elements that overlaid the corridor floor and were next to W6 bear witness to the collapse of the upper stories. Two stone steps (length 1.55 m , width 0.35 m , height 0.2 m ) led from the corridor to the large hall (L105; $9.9 \times$ $13.7 \mathrm{~m})$, which was paved with gray ceramic tiles $(0.2 \times 0.2 \mathrm{~m})$. Three square column bases (A, B, C; $0.8 \times 0.8 \mathrm{~m}$ ) were exposed in a row opposite Wall 1, 1.5 m east of it. The excavation, which was deepened by 2.4 m by means of mechanical equipment in the southern part of the hall (L111) adjacent to and east of the Column A base, exposed a wall (W5) that was founded on bedrock. Column Base A was set on this wall and it seems the latter was a stylobate that bore a row of columns. The southern end of the stylobate wall (length 1.3 m ; width 0.8 m , height 0.7 m ) was discovered and at its northern end was a plastered door jamb, an indication of an opening (width 1.8 m ) between the door jamb and Column Base A. Three semicircular depressions ( $0.5 \times 0.8 \mathrm{~m}$; Fig. 2) that were used to position semicircular-shaped pillar bases were discovered in the floor next to W1 and opposite the column bases that were set on the stylobate. Three window sills ( $a, b, c$; width $1.2-1.3 \mathrm{~m}$ ) were preserved in W1. The walls between Window Sill $a$ and Window Sill $b$ did not survive, but since the room is symmetric its size can be reconstructed based on the wall between Windows band c and the pillar bases that were situated between the windows. A special find that consisted of c .60 marble artifacts was discovered in a heap between Column Bases A and B, next to W1 (L100; see below). Besides the marble artifacts, numerous stones items were found; similar ones were discerned in the eastern part of the hall. The remains of a bed that were leaning up against the middle of W6 were found with glass fragments nearby.
The hall was delimited on its eastern side by a wall (W10) in which three openings (width 1 m ) were set; the southern opening was delimited by Wall 11 . The sections of the wall between the openings were identical in size $(0.85 \times 2.40 \mathrm{~m})$ to the sections of Wall 1 between the windows. In addition, the sections of W10 were parallel to Column Bases B and C The southern part of the hall was delineated by W11. The passage from the hall to the corridor to its east (L112) was marked by a change in the floor tiles from gray to red. The corridor (length 8.75 m , width 2.0 m ), paved with red ceramic floor tiles, was not excavated in its southern part. Originally, a passage existed between Corridor 112 and Corridor 109; however, at some point in time the eastern part of W6 (length 2.0 m , width 0.8 m ) was sealed. Three arch stones were integrated into the stone fill that blocked W6. A ceramic drainage pipe extended along Walls 8a-b, which delimited the eastern border of Corridor 112. Another corridor (L113) whose eastern part was not excavated was to the east of Corridor 112. Corridor 113 (length 2.2 m , width 2 m ) was paved with red ceramic tiles and its walls were coated with plaster. It is assumed that this corridor led to the kitchen (L108).
The kitchen (length 3.0 m, width 2.2 m ; Fig. 5), paved with red ceramic tiles and plastered, was delimited on the north side by a thin curtain brick wall ( 0.1 m ). It was identified by the artifacts it contained, including teapots, a metal cup, a copper weight, part of a stone mortar (Fig. 6) and a large quantity of fragmentary porcelain plates that were produced in Czech Republic for Zanini in Jerusalem.
The passage to the second story was exposed in the northern part of the building. Six stone steps (L106; length 1.5 m , width 0.4 m , height 0.2 m ) survived of the staircase, at whose foot was a stone landing ( $1.40 \times 1.75 \mathrm{~m}$; Fig. 7). A drainage conduit (diam. 0.1 m ) passed beneath the steps, along W1 in a north-south direction, to a drainage/septic pit (L102; length 1 m , width 0.4 m , depth 0.85 m ; Fig. 8).

Architectural Finds. Among these finds were marble elements that included a tile inlaid with a mosaic pattern (Fig. 9:1), gilded marble tiles (Fig. 9:2), gilded column and pillar bases (Fig. 9:3), a keystone inlaid with a gilded mosaic and the number 1531 in blue (Fig. 9:4), a marble chancel screen bearing reliefs and adorned with green granite and malachite inlay (Fig. 10:1), a malachite gemstone (Fig. 10:2), a gilded marble panel (Fig. 11:1) and gilded cornices (Fig. 11:2). The stone elements included a decorated capital (Fig. 12:1), a pilaster capital (Fig. 12:2), a decorated column base (Fig. 12:3), a pilaster base (Fig. 12:4) and column drums (Fig. 12:5).

Other finds from the large hall (L100). These finds included fragments of black marble slab that bore a Latin memorial inscription in gilded letters (Fig. 13:1), fragments of blue glass (Fig. 13:2), small glass bottles and an inkwell (Fig. 14), a fragment of a metal chancel screen (Fig. 15:1), a clover-like metal door hinge (Fig. 15:2), metal handles and a small faucet (Fig. 15:3). A gold-plated copper pendant (Fig. 16) was discovered outside the excavation area, next to W11. The obverse of the pendant is engraved with an image of Mary holding Jesus, surrounded by angels and flanked by the words REGINA ANGELORUM (the Queen of the Angels). The reverse of the pendant is inlaid with a glass molded frame engraved with angels. A picture was probably inserted within it at one time.

The order of the Soeurs de Marie Réparatrice that ran the convent was founded in Strasbourg, France in 1858, following a spiritual revelation that the foundress of the order, the Baroness Emilie d'Hooghvorst, experienced. In the wake of this revelation, she took the religious name of Mary of Jesus. The community of French nuns in the Land of Israel that belonged to this order founded a convent with their own money on the lot that was given to them in 1888 by Baron Marie Paul Amedeé de Piellat. The reason for founding the convent in this place should be seen as an attempt to create a French foothold in the region, blocking any direct visual contact between the Russian assets in the Russian Compound and the Christian Quarter (T. Shiloni 1994. The projects of the French Baron de Piellat in the Holy Land [1884-1925]. Cathedra 72:63-90). The compound included Saint-Louis Hospital, the Notre Dame Hostel and the convent of the Soeurs de Marie Réparatrice and formed a 'French bloc' in the area. Subsequent to the building of the convent, the New Gate was breached in 1889 to allow direct and shorter access between the 'French bloc' and the Holy Sepulcher and the Christian Quarter. The convent was destroyed during battles of the War of Independence.


1. Location map.

2. Convent, general view to the west.


3. Corridor 109 and the staircase to second story, looking east.

4. Kitchen and Corridor 109, Hall 105 in background, looking southeast.

5. Stone mortar.

6. Staircase to second story, looking west.

7. Drainage conduit to Pit 102, looking northwest.

8. Marble finds.

9. Gemstones for inlay.

10. Gold-plated finds.

11. Stone finds.


12. Small glass bottles and an inkwell.

13. Metal finds.

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Jerusalem, Ramat Bet Ha-Kerem Final Report

14. Plan and section.

15. Cistern, looking west.

16. Pottery.

Annette Nagar

## 8/1/2009

During June 2007, a salvage excavation was conducted in the Ramat Bet Ha-Kerem neighborhood of Jerusalem (Permit No. A5157; map ref. NIG 21827/63060; OIG 16827/13060), prior to paving a street. The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Nagar, with the assistance of Y. Ohayon (administration), M. Kunin (surveying and drafting), T. Sagiv (field photography), E. Belashov (drafting), and R. Bar-Natan (pottery reading).
One square was excavated south of and near Moshe Kol Street, on the slope of a spur that descends to the south toward Nahal Raqqafot. The bottom part of a round cistern ( $2.30 \times 2.85 \mathrm{~m}$, preserved depth 1.35 m ; Figs. 1, 2), hewn in limestone bedrock, was exposed. The floor of the cistern descended to the west. A circular settling pit (diam. 0.4 m depth 7 cm ) was hewn along the northwestern side of the cistern's bottom. The cistern was coated with a single layer of light gray plaster (max. thickness 7 cm on sides, 9 cm on bottom) mixed with gravel. The cistern was intentionally filled with many pieces of various sized flint and potsherds that mostly dated to the Early Roman period, including a goblet (Fig. 3:2), cooking pots (Fig. 3:3, 4), an amphora (Fig. 3:5), jars (Fig. 3:6-9) and a jug (Fig. 3:10). A single fragment of an Iron Age amphoriskos base (Fig. 3:1) was discovered on the bottom of the cistern, which was dated to the Early Roman period based on the plaster and the ceramic finds. The cistern was probably connected to a settlement in the vicinity. Remains dating to the Second Temple period had been discovered in a previously conducted survey, c. 120 m northeast of the excavation (A. Kloner, 2001, Survey of Jerusalem, The Northwestern Sector, p. 168).


## 1-1

1. Plan and section.

2. Cistern, looking west.

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3. Pottery.
(Volume No. HA-ESI 121 (2009

## Jerusalem, Giv'at Sha'ul

 Final Report

1. Plan and section.

2. The cistern, looking east.

During July 2007, a trial excavation was conducted on Ketav Sofer Street in the Giv'at Sha'ul neighborhood of Jerusalem (Permit No. A- 5185; map ref. NIG 21858/63325; OIG 16858/13325), prior to the construction of a residential building. The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Nagar, with the assistance of R. Abu Halaf (administration), M. Kipnis (surveying and drafting), T. Sagiv (field photography) and E. Belashov (final plans).
A rectangular cistern was excavated in the northern slope of a hill ( $4.00 \times 5.75 \mathrm{~m}$, max. preserved height 2.6 m ; Figs. 1, 2). The cistern was mostly built and plastered and was severely damaged during development work. The southwestern side of the cistern was the hard limestone bedrock, whereas the rest of the sides were built walls (W1-W4), constructed from two rows of large stones with a core of small and medium-sized fieldstones; white lime-based bonding material was discerned between the stones. Only the upper part of Wall 2 was built and an iron drainage pipe (diam. 2 cm ), 0.7 m above the floor, was incorporated in the western part of W4. The sides of the cistern were coated with a layer of plaster that consisted of cement and gravel, to which an upper layer of concrete was applied (thickness of two layers c. 5 cm ). The floor of the cistern descended to the northwest. No datable finds were discovered in the excavation. Based on its construction, the cistern is dated to the beginning of the British Mandate, when the Giv'at Sha'ul neighborhood was established in 1919 (Z. Vilnay, Jerusalem, the New City 3:181-183).


2. The cistern, looking east.

## (Volume No. HA-ESI 121 (2009 Jerusalem, the Greek Colony Final Report



1. General view of the excavation, looking west.

2. Wall 1, looking west.

Annette Nagar
During July 2007, a trial excavation was conducted in the Greek Colony in Jerusalem (Permit No. A-5190; map ref. NIG 22033/62997; OIG 17033/12997), prior to the construction of a residential building. The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Nagar (photography), with the assistance of Y. Ohayon and R. Abu Halaf (administration) and R. Bar-Natan (pottery reading).

A single square was excavated next to the intersection of El'azar Ha-Moda'i and Amazya Streets, on the slope of a gentle hill that descends southward. The excavation area was disturbed during the modern era. Remains of a northeast-southwest oriented wall (W1; length 1.1 m , width 0.4 m ; Figs. 1, 2), which was built of medium-sized limestone fieldstones arranged in a row on bedrock and preserved two courses high ( 0.3 m ) were discovered. Bedrock was exposed throughout most of the excavation area. Based on the construction of the wall and its location along the slope it probably was a retaining wall of a farming terrace. A meager amount of ceramic finds, dating to the Roman and Byzantine periods and not in situ, was recovered from the excavation. A large stone quarry that dated to the Byzantine period had been exposed c. 100 m east of the excavation in the past (HA-ES) 118).


1. General view of the excavation, looking west.

2. Wall 1 , looking west.
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Jerusalem, Development Survey in Nahal Darga Final Report

3. Survey map.

4. The Lower Aqueduct to Jerusalem (5), looking northeast.

5. A stone column fragment (1).

6. A rock-hewn installation for extracting olive oil (2).

Yehuda Dagan and Leticia Barda
During June 2006, a survey was conducted in Nahal Darga in Jerusalem (Permit No. A-4817; map ref. NIG 2196-210/6262-70; OIG 1696-710/1262-70), prior to paving a street. The survey was conducted by Y. Dagan (photography) and L. Barda (GPS), on behalf of the Israel Antiquities Authority.
The survey was carried out along the route of a road that will link the Jerusalem-Har Gillo road to the Har Homa quarter (Fig. 1). The surveyed area descends gently to the east and farming terraces, some of which are planted with fruit trees, are built on the slope. The Mar Elias monastery is located north of the area. Remains of the Lower Aqueduct that conveyed water to Jerusalem were documented in several places of the surveyed area (5; Fig. 2). A stone column fragment in the eastern part of the surveyed area was possibly part of a milestone (1; length 1.6 m , diam. 0.7 m ; Fig. 3). Southwest of the stone column, a shallow elliptical rock-cutting was noted; a cupmark in its center was probably an installation for extracting oil from olives (2; Fig. 4); shallow channels and cupmarks were hewn around this installation. A rock-hewn cistern (3) in the middle of the surveyed area had a square opening built of stones; numerous potsherds that dated to Iron II and the Roman and Byzantine periods were scattered in the vicinity of the cistern, next to which was an elliptical, rock-hewn cave (4) in whose entrance a modern wall was built. A rectangular rock cutting in the eastern part of the surveyed area was probably a burial cave (6) and nearby, a broken stone trough ( $7 ; 0.5 \times 0.6 \mathrm{~m}$ ) was noted. Documented as well were field walls (8-11) used for various purposes; Wall 11 was possibly connected to the Lower Aqueduct to Jerusalem.


2. The Lower Aqueduct to Jerusalem (5), looking northeast.

3. A stone column fragment (1).

4. A rock-hewn installation for extracting olive oil (2).

# (Volume No. HA-ESI 121 (2009 <br> Jerusalem, Har Ziyyon <br> Preliminary Report 



1. The quarry, looking west.

2. Water channel incorporated into quarry bed looking east.

3. Southern face of Hasmonean wall and blocked Bliss and Dickie's trench. looking east.

4. Decorated and inscribed Early Roman potsherd.

Yoav Arbel 11/1/2009
During July-September 2008, an excavation was conducted on the southern slopes of Har Ziyyon (Permit No. A-5445; map ref. NIG 64-630742/834-221748; OIG 171748-834/130742-64), prior to the development of the site as part of a national park. The excavation, undertaken on behalf of the Israel Antiquities Authority and financed by the El'ad association, was directed by Y. Arbel, with the assistance of V. Avrutis (area supervision), Y. Ohayon and E. Bachar (administration), V. Essman and M. Kipnis (surveying), T. Sagiv (field photography), C. Amit (studio photography), N. Katsnelson (glass finds), K. Rafael (metal finds), D.T. Ariel (numismatics) and R. Buchnikand I. Katlav (archaeozoology), as well as a group of workers from Silwan.
The 2008 summer excavation continued the former excavations at the site (February 2007-May 2008), which were directed by Y. Zelinger (Permit No. A-5023). The site is located south of the Har Ziyyon bypass road and it overlooks the Valley of Hinnom. The first excavators at the site, F.J. Bliss and A.C. Dickie (Excavations at Jerusalem, 1894-1897, London), discovered the remains of a Hasmonean defensive wall from the first century BCE and a fifth century CE Byzantine city wall credited to the empress Eudocia. Both walls were described in contemporary historical texts, i.e, Book 5 of Josephus Jewish War and in the Book of Maccabees (1, 10:10, $13: 10,16: 23,24)$. Zelinger rediscovered the walls, which were no longer visible and exposed the large quarry upon which the walls were built, as well as an earlier wall of a possible Iron Age date and large vaulted Early Islamic cisterns. The current excavation concentrated on expanding westward and resuming the exposure of the Hasmonean and Byzantine walls.

Excavations at the western part of the site exposed an additional segment of the quarry ( $15 \times 15 \mathrm{~m}$; Fig. 1) on a gradually rising topography. The Hasmonean wall was built directly upon the quarry, adapting bedrock to accommodate the lowest foundation course; some hewing marks in the quarry matched the size of the wall's masonry stones. A large quantity of potsherds dating up to the first century CE was found in the quarry, suggesting that the bulk of quarrying occurred during the Hasmonean period and the construction of the wall may have been the incentive for quarrying at this site .Once quarrying stopped, part of the site was apparently exploited for the collection of water. A narrow plastered conduit (exposed length 5.1 m , width 0.2 m , depth 0.25 m ; Fig. 2) with a stone-slab cover was cut into the quarry bed at the southern part of the site. It descended eastward to an unexcavated lower part of the quarry where a cistern may have existed. The only other mark of later activity in this area, except for the channel, were the remains of a rough solid wall built on a fill, c. 2.5 m above the quarry bed. The wall was abruptly cut at both ends and no related architectural remains or associated surfaces were discerned. The layer next to the wall contained potsherds dating to the late Byzantine and Early Islamic periods.

Excavations at the eastern side of the site revealed an additional segment of the Hasmonean wall (length 3.8 m ; Fig. 3), which is now exposed to a total length of 6 m . The masonry stones vary in length ( $0.65-0.90 \mathrm{~m}$, average height 0.5 m ) and most of them show the marginal dressing, characteristic of monumental Hasmonean architecture. Exposure along the southern face of the wall followed the course of one of Bliss and Dickie's long collapsed excavation tunnels, which seems to have been partly blocked with stones for a still unknown and obscure reason. The Byzantine wall remained outside the scope of this excavation season.

The majority of finds were retrieved from the massive fill that accumulated over the generations in the quarry and near the walls. The numerous potsherds ranged from Iron III (seventh-sixth centuries BCE) to the Abbasid period (eighthtenth centuries CE). Most of the ceramics nonetheless, dated to the Hasmonean and early Roman periods, comprising a representative selection of late Second Temple pottery vessels. Among the Iron Age finds were several animal figurines a pillar figurineand several stamped handles of the late LMLK variety. One stamped handle dated to the Persian period and its mark read yhd, with the addition of the letter tet. Early Roman pottery was mostly locally produced, although imported vessels were noted, including the handle of a large black-slipped imported lamp. A large storage jar potsherd adorned with a pomegranate branch and two fruits belonged to the same period (Fig. 4). Two words in Greek, not yet deciphered, can be seen next to the branch. Nearly 150 coins were recovered, as well as several fragmentary architectural elements of nari limestone, including two parts of a pillar coated with white stucco in a delicate fluting pattern.

Archaeological work is expected to resume in the future. In addition to the further exposure of the quarry and the city walls, specific unresolved chronological and stratigraphic issues will be addressed. It is expected that the data collected so far, together with data from the final stage of this project, should be of vital importance in the reconstruction of the development and alterations of the Jerusalem defensive system throughout the ages.


1. The quarry, looking west.

2. Water channel incorporated into quarry bed, looking east.

3. Southern face of Hasmonean wall and blocked Bliss and Dickie's trench, looking east.

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## Jerusalem, Er-Ram

## Final Report

Annette Nagar
11/1/2009


1. Location map.

2. Location of the squares.

In March-April 2007 a trial excavation was conducted along the eastern boundary of the 'Atarot Industrial Zone (Permit No. A-5056; map ref. NIG 221078-223/640417-739; OIG 171078-223/140417-739), prior to the installation of a sewage pipe (Fig. 1). The excavation, on behalf of the Antiquities Authority and with the financial support of the Jerusalem municipality, was directed by A. Nagar, with assistance from Y. Ohion and E. Bahar (administration), A. Hajian (surveying), E. Belashov (preparation of plans for publication) and T. Sagiv (photography).
In an excavation that was conducted beneath a modern asphalt street, c. 25 m west of Nahal 'Atarot, five probes (A-E; Fig. 2) of different sizes were excavated over a distance of c. 235 m . No datable finds were recovered. Section F was exposed by means of mechanical equipment and was not excavated. The road bed of a street that dated to the time of the British Mandate was exposed; this street served as the main thoroughfare between Jerusalem and Ramallah prior to the paving of a wider road located further east.
The street, which also included a layer of asphalt, was situated beneath a layer of asphalt and gravel of a modern road. Its bedding, which was made of small and medium fieldstones, was deposited on terra rossa soil (thickness in the south 0.25 m , Section A; 0.2 m in the center, Section F; 0.4 m in the north, Section B; Figs. 3, 4). The width of the street is unknown.
Meager pottery finds were recovered in the terra rossa soil below the level of stones and include body sherds and spouts that date to the Mamluk period.
Based on the road building technique the street should be dated to a period no earlier than the British Mandate and it was probably paved during the time of the Jordanian rule. The pottery sherds originated from the alluvium terra rossa soil and they have no connection whatsoever with the paving of the street.

3. Square A, looking north.


1. Location map.

2. Location of the squares.

3. Square A, looking north.

4. Square B, looking north.

5. Location map.

6. Plan and section.

7. General view of the terraces.
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## Jerusalem, Newe Ya'aqov

Final Report
Annette Nagar
11/1/2009
In February 2007 a salvage excavation was conducted in the Newe Ya'aqov neighborhood of Jerusalem, in the base of the Central Command (Permit No. A-5036; map ref. NIG 222584-602/638475-89; OIG 172584-602/138475-89) prior to the construction of buildings (Fig. 1). The excavation, on behalf of the Antiquities Authority and with funding provided by the Ministry of Defense, was directed by A. Nagar, with the participation of Y. Ohion and E. Bahar (administration), A. Hajian (surveying), E. Belashov (preparation of plans for publication), T. Sagiv (photography), N. Ze'evi (photographic archive), and O. Marder (identification of flint implements)

Two squares were excavated along a southern slope where farming terraces (Figs. 2, 3) were exposed in which probe trenches were excavated. Ceramic artifacts and flint implements were found that were not in situ and were of no value in dating the terrace walls.
Terrace Wall 1 (width $0.95-1.55 \mathrm{~m}$, height 1.75 m ) was built along an east west axis of two rows of small and large fieldstones and a dense fill of small and medium fieldstones. The wall's southern face was made of large fieldstones whereas the northern face was built of a row of small and medium fieldstones and a fill of small fieldstones was leaning against it from the north. This wall continued beyond the limits of the square.
Terrace Wall 2 (length 7.2 m ) extended from north to south and abutted Wall1 from the south. The wall was built of large fieldstones and behind it was a dense fill of small and medium size fieldstones. The wall, only the northern part of which was excavated (width $1.7-2.1 \mathrm{~m}$, height $0.65-1.50 \mathrm{~m}$ ), continued south beyond the limits of the square.
The pottery finds include two rims that date to the Byzantine period which were found on the surface level. In addition a few flint tools, flakes and burin debitage were recovered that were not in situ.
The terrace walls were part of the region's agricultural system and it is unclear when they were constructed.


1. Location map.

2. General view of the terraces.

Jerusalem, E-Tur

Final Report
Anna Eirikh-Rose


1. Quarry A, plan and
section.

2. Quarry A, looking east.

3. Quarry A, looking east.

4. Quarry B, looking east.

In April 2005 a salvage excavation was conducted in the E-Tur neighborhood, south of the Mount of Olives (Permit No. A-4439; map ref. NIG 2234-5/6320-1; OIG 1734-5/1320-1) following the discovery of ancient remains in probe trenches. The excavation, on behalf of the Antiquities Authority and with the financial backing of Ibrahim Julang, was directed by A. Eirikh-Rose, with assistance from V. Essman and V. Pirski (surveying) and T. Sagiv (photography).

Two excavation areas were opened in which an upper (A) and lower (B) quarry were exposed c. 20 apart.
Quarry A (Figs. 1-3) was located on the upper part of the slope (c. 6.0-9.0 $\times 12.5 \mathrm{~m}$, depth 1-2 m ). In most of the quarry rock-cutting occurred only in the upper layer of bedrock. In its deeper parts a white sediment overlay bedrock; however, in the southwestern corner of the quarry a coin was recovered from inside this white sediment layer. The debris from the stone dressing and the detachment channels indicate that the size of the stones removed from the quarry average $0.5 \times$ 0.7 m .

Quarry B (Figs. 4,5) was located on the southern part of the slope ( $7 \times 10 \mathrm{~m}$ ). It was a courtyard-type quarry whose quarrying steps and detachment channels were situated mostly in its northern and central part. The eastern side of the quarry was cut in a straight line. There were diagonal signs of rock-cutting on that side whose directions were different in each row of quarrying. The average size of the quarried stones was $0.6 \times 1.0 \mathrm{~m}$. Here also was a white sediment layer $(0.1-0.3 \mathrm{~m})$ at the bottom of the quarry.
The ceramic finds were meager and non-diagnostic. Two metal artifacts were found, a chain link and a small square weight engraved with concentric circles which dates to the Byzantine period. A coin of 355-361 CE (IAA 115176) was also found. The pottery, Byzantine coin and metal artifacts were found in a fill that covered the quarries; it seems that the fill washed down from the slope above and therefore cannot be used to date the quarry. A coin of Alexander Jannaeus ( $80 / 79$ BCE; IAA 101942) was found in the white sediment layer. The quarry, which probably supplied building stones to Jerusalem, should probably be dated to the Second Temple period.


2. Quarry A, looking east.

3. Quarry A, looking east.

## ממחבה תחתונה Lower quarry B

766.17


5. Quarry B, looking east.

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Omry Barzilai, Leticia Barda and Ira Pasternak


1. Map of the survey.

2. Facade of Burial Cave 2.

During January 2007 a survey prior to development was conducted on the slopes of Giv'at Massu'a in Jerusalem (Permit No. A 5022; map ref. NIG 21560-680/62800-880; OIG 16560-680/12800-880). The survey, undertaken on behalf of the Israel Antiquities Authority and financed by the Ehud Tayyar Company, was directed by O. Barzilay, L. Barda and I. Pasternak.
The area surrounding the Giv'at Massu'a neighborhood on the east, south and west, which was bounded between an access path to the Biblical Zoo and a circumference wall of the neighborhood, was surveyed (Fig. 1). Forty sites were identified, in addition to those mentioned in the Survey of Jerusalem (A. Kloner 2000. Survey of Jerusalem. The Southern Sector, Sites [105] 27-38).
Caves
Rock-cut caves, either for burial or dwelling, natural caves and/or rock shelters, mostly in the eastern part of the area, were surveyed. Cave 2 was found looted and had a rock-hewn entrance with a round recess for a rolling stone (Fig. 2) and a burial chamber ( $3 \times 4 \mathrm{~m}$ ) with benches. A stone fence that bounded the front of Cave 15 was apparently a pen. This dwelling cave was originally a burial cave with a chamber $(2 \times 2 \mathrm{~m})$ and a trough. Cave 16 was survived by a kokh/trough $(1.5 \times 21.5 \mathrm{~m})$. Burial Cave 18, which consisted of a chamber $(2 \times 3 \mathrm{~m})$ and a kokh, served for dwelling at a later phase. Nearby was another burial cave (19). Burial Cave 20 had a kokh and a trough. The entrance of Burial Cave 21 had a vertical groove for a rolling stone. Close to Burial Cave 22 was a complex of three or more burial caves (23). In addition, natural caves and rock shelters that included two sealed caves (4, 5); a natural cave (10) in whose front were Middle Paleolithic flint implements; a cave (25) whose façade was open and inside it was a stone heap and a few caves/rock shelters (24, 26, 27, 35), were recorded.

Field Walls and Terraces
Two fieldstone-built walls (thickness 1.0-1.5 m) that enclose a plot were found at Site 1. Site 6 was a massive wall built of large fieldstones $(0.5-0.8 \mathrm{~m})$ that delimited a cultivation plot. Site 7 was an enclosure wall of a cultivation plot that extended perpendicular to the slope and was built of small and large fieldstones (length 50 m , width 0.5 m ). Site 9 was a terrace wall built of small fieldstones that was damaged during the installation of a sewer pipe. Site 12 was a thickened terrace wall, adjacent to which potsherds dating to the Byzantine period were found. Site 17 was a large enclosure ( 160 sq m ) that included walls built of two rows of large dressed stones with a core of small stones. Potsherds from the Byzantine period were scattered in its vicinity. A wall built of large upright stones ( $0.8-1.0 \mathrm{~m}$ ), which enclosed a cultivation plot and extended for a distance of 20 m , was found at Site 34 .

## Watchtowers

Site 14 featured a corner of a building/watchtower, built of large fieldstones (thickness $1.0-1.5 \mathrm{~m}$ ).

## Water Cisterns

Two cisterns were surveyed. At Site 3 a rock-cutting that was probably the opening to a cistern or a shaft tomb was found. Site 40 featured a hewn cistern that was damaged when the perimeter retaining wall was constructed around Giv'at Massu'a.

## Hewn Installations

Site 8 is an agricultural rock-cut installation of some sort. Site 11 featured two hewn cupmarks (diam. 0.4 m ) alongside a hewn rectangular installation ( $1 \times 2 \mathrm{~m}$ ) that contained potsherds from the Byzantine period. A rock-cutting was recorded in Site 36 and Site 39 was a rock-hewn and stepped installation.

## Stone Clearance Heaps

Nine sites (13, 28-33, 37, 38) featured piles of stone that were apparently stone clearance heaps (diam. 4-5 m). Potsherds from the Byzantine period were found in Heap 13.
Some of the slopes of Giv'at Massu'a are covered with vegetation and modern debris; hence the description of the finds is often lacking and probably incomplete at times. The results of the survey indicate that the region underwent functional changes during different periods. The flint implements attest to the existence of a Middle Paleolithic site in the region. During the Second Temple period the region was used for burial while in a later phase, most likely in the Byzantine period, it was used for farming, as evidenced by terraces, watchtowers and different agricultural installations.


1. Map of the survey.

2. Facade of Burial Cave 2.
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3. Map of the survey sites.

4. Site 14, rectangular building, looking north.

5. Site 19, burial cave, looking northwest.

6. Site 12, terrace complex, looking north.

Anna Eirikh-Rose
21/1/2009
During October 2006, a survey preceding development was conducted in the area between the Giv'at Massu'a neighborhood and Moshav Ora (Permit No. A-4893; map ref. NIG 21530-80/62890-930; OIG 16530-80/12890-930), prior to the paving of a road. The survey, undertaken on behalf of the Israel Antiquities Authority and financed by the Moriya Company, was directed by A. EirikhRose, with the assistance of M. Birkenfeld and I. Pasternak.

Approximately 50 dunams were surveyed along the slopes east of the Qiryat Menahem neighborhood in southwest Jerusalem (Fig. 1). Nineteen sites, including remains of a building, a watchtower, a rock-hewn burial cave, agricultural installations and a terrace complex, were documented, all dating to the Second Temple, Byzantine and Ottoman periods.
Rectangular building (Site 14; $2.5 \times 6.0 \mathrm{~m}$, preserved height c. 2 m ; Fig. 2) that is built of roughly hewn medium and large-sized fieldstones and has a window and two openings. A complex of terraces is adjacent to it.
Round watchtower (Site 16; diam. c. 2 m , preserved height c. 1.5 m ) that is built of roughly hewn medium to large-sized fieldstones. A rock-hewn channel is adjacent to it.
Rock-hewn burial cave (Site 19) that is incorporated in a quarry (Fig. 3). It includes a burial chamber and kokhim and its entrance was destroyed. A natural cave (Site 5), used by shepherds as a dwelling or for storage, was also surveyed.
Agricultural installations that included two rock-hewn winepresses and an olive press (Sites 11, 18, 13 respectively) and a relatively extensive scattering of other rock-cuttings throughout the area (Sites $1-4,10,15$ ) were documented.
An agricultural system that consisted of a number of terraces (preserved height 1.5 m ) with steps built between them (Site 12; Fig. 4) was surveyed. Several other terraces (Sites 6-9) were documented across the slopes, as well as a wall that most likely delimited cultivation plots and/or animal pens (Site 17).
The numerous sites, relative to the size of the surveyed area, indicate that the area functioned as part of Jerusalem's agricultural hinterland for a lengthy period of time.


1. Map of the survey sites.

2. Site 14, rectangular building, looking north.

3. Site 19 , burial cave, looking northwest.

4. Site 12, terrace complex, looking north

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2. Southeastern steps of quarry, looking east

4. Northwestern steps of quarry, looking northwest.

5. Upper view of structure at top of northwestern steps. looking south.

6. 'Corridor' section and southwestern steps of quarry looking south.

10. Pottery.

## Gerald Finkielsztein

During March-May 2008, a salvage excavation was conducted on 11Nisan Beck Street in the Mahanayim (Sanhedriya) neighborhood of Jerusalem (Permit No. A-5393; map ref. NIG 220799-817/633685-712; OIG 170799-817/133685-712), in the wake of exposing quarrying marks while building a private house. The excavation, on behalf of the Israel Antiquities Authority, was directed by G. Finkielsztejn (photography), with the assistance of T. Kornfeld (surveying and drafting), L. Kupershmidt (coin cleaning), R. Bar-Nathan (pottery reading), C. Hersch (pottery drawing) and G. Bijovsky (numismatics).
A quarry, dating to the Hasmonean and Herodian periods, was exposed in the excavated area (c. $13 \times 23 \mathrm{~m}$; Fig. 1); a probable access to a tomb was discerned, but not explored. The quarry was entirely covered with a thick terra rossa fill (depth over 2.5 m ; elevation $764.30-761.76 \mathrm{~m}$ ) that was mostly removed by mechanical equipment, except for two probes that were manually excavated and yielded potsherds from the Roman and Byzantine periods

The Quarry may be divided into four main features that surrounded a large flat zone, referred to as 'the courtyard', which was connected to a 'corridor' in the southwest that reached or provided access to a possible tomb
In the southeastern section of the quarry, five steps of quarried stones occupied more than a quarter of the explored area (elevation 764.64-761.76 m; Fig. 2). The extracted stones of various sizes were smaller on the two upper steps, where limestone was hard and breakable. The limestone in the three lower steps was smoother and more even and some of the largest stones were found fully dressed and still in situ, separated by deep severance channels and ready for extraction (Fig. 3).
In the northeastern section of the quarry, only the edges of a step with traces of stone extraction were uncovered, south and west of an unexcavated fill ramp, kept to allow access to the excavated area from the Nisan Beck street (elevation $762.24-761.76 \mathrm{~m}$; Fig. 4).
In the northwestern section and west of the ramp, part of three steps of quarried stones of uneven sizes, due to the different qualities of bedrock, were uncovered (763.49-761.84 m; see Fig. 4). On the upper step was a structure that consisted of a quarried quadrangular space (depth 0.6 m ), partly hidden below the ramp and the limit of the excavation whose function could not be identified (Fig. 5).
The highest remains of the quarry were uncovered in the southwestern section, where traces of six rather high steps of removed stones, with two large ones still in situ (height c. 4 m ; 765.84-761.85 m; Fig. 6) were preserved.
The courtyard and the corridor covered over one third of the explored quarry.
The courtyard occupied the whole center (c. $5.0 \times 5.7 \mathrm{~m}$; elevation 761.76 m ; Fig. 7), where a small squarish zone of the fill was not excavated due to lack of time. It was covered with hardened limestone chips and powder resulting from the quarrying activities. Although the surface was neatly flattened, perhaps as preparation for the quarrying of a lower step, white traces of severance channels for the separation of stone rows were still visible, showing regular sizes of the stones. To the west, close to the boundary of the excavated area, some shallow severance channels indicated that quarrying below the level of the courtyard had already begun (Fig. 8).
West of the southeastern steps of the quarry, a corridor (c. $3.6 \times 5.7 \mathrm{~m}$ ) prolonged the courtyard to the south, toward the section in the fill between the southeastern and southwestern sections of the quarry (see Fig. 6).
The fill consisted of a lower high layer of fieldstones mixed with some earth that was probably deposited in two conical piles (height 1.8 m ) and an upper layer of terra rossa (thickness 0.6 m ). Since the whole Sanhedriya neighborhood is known to be a necropolis that took advantage of the space created by the quarry, such a possibility was considered for this specific location, although the fill was not investigated. In any event, it is possible that the tomb, if indeed it was one, was situated below the plot to the south of the excavated area. Contrary to what was exposed below a nearby house (HA-ESI 119), well-preserved vessels typical of a funerary context were not found close to the section. In the middle of the corridor, two very big stones appeared to be resting on a layer of earth (thickness c. 0.2 m ), indicating that they were put there after the abandonment.

The Quarried Stones and their variety of types and sizes, as well as the extent of the excavation, allow some remarks on the quarrying methods. The fully quarried non-extracted stones showed that the severance channels were generally $0.10-0.13 \mathrm{~m}$ wide, with a few down to $0.07-0.09 \mathrm{~m}$ and some up to $0.14-0.17 \mathrm{~m}$, especially those between rows. A wedge-shaped groove (height c. $0.10-0.12 \mathrm{~m}$ ) was carved at the bottom of one long face of each stone to facilitate the extraction (see Fig. 3). Some of the stones were broken when the channels were carved and the bottom face of a few stones was unevenly pulled out (see Fig. 2).
The extraction was organized in rows of stones of given sizes, in relatively small groups of stones, which were bigger in the deeper steps where bedrock quality was more homogenous. This is especially the case in the courtyard where traces of four rows of stones, oriented east-west, were identified (see Fig. 7). The measurements of the stones (length 1.3-1.5 m , width 0.85 m ) could also be restored on part of the step above, to the south. The stones of an east-west oriented row to the south of the corridor were longer and had various widths (length $1.65-1.70 \mathrm{~m}$, width $0.9-1.5 \mathrm{~m}$ ). Out of 78 measured stones, $78 \%$ were $1.0-1.7 \mathrm{~m}$ long, $46 \%$ were over 0.8 m wide and only $9 \%$ were over 1 m wide. It can be concluded that this quarry was intended for the extraction of relatively large stones.
The analysis of the stone measurements did not draw clear-cut conclusions as the metric standard that may have been used to measure the stones prior to quarrying. Most of the measures may be related to a cubit of c. 0.425 m , although this is shorter than any identified contemporary one, especially the Roman cubit of c. 0.4436 m , which is the shortest o them all. Beside the need for specific measures of stones that conformed to the courses of a given wall, the length of a step and the number of stones that could be cut was also determined by the number of previously extracted stones and the quality of bedrock (cf. Figs. 1 and 7).

Post-quarry features consisted of a thick fill of mostly terra rossa, often laid on and mixed with lime fieldstones, which evidenced the transformation of the area into agricultural fields. A single-course wall of fieldstones, located high above bedrock (Elevation 764.29-764.08 m), was built between the edges of the southwestern and southeastern sections of quarried bedrock, with a gap of robbed stones (W2003, W2004; Fig. 9). It was strengthen by smaller fieldstones, especially along W2004. Its course and the fact that its two last stones to the east rested on the quarried bedrock show that the top of quarried bedrock was visible during the agricultural activities and may even have contributed to defining limits of field plots. Wall 2003/2004 may be understood as a terrace wall or a partition between two plots.

Two coins and only fifty-one small potsherds, mostly of local production, were recovered from the excavation. Most were not related to any of the excavated features, yet provided dating for the human activities at the site.
The earliest finds, which consisted of three bowls (Fig. 10:1-3), two jars (Fig. 10:4,5) and two bases of bottles (Fig. 10:6, 7), indicate that the quarry was in use in the late Hasmonean and Herodian periods, down to the late first century CE. As no finds earlier than these were detected, it may be surmised that the quarrying activities were initiated in that period at the site.
Only three sherds, including two jars (Fig. 10:8, 9) and a basin (Fig. 10:10) may doubtfully be dated to the second-early third centuries CE, when Aelia Capitolina was founded. Hence, a gap is suggested in the occupation of the area during this period. The probable abandonment of the site may have been due to either the end of the Herodian building works, or the Roman conquest of Jerusalem in 70 CE. In the latter case, the stones found at the site may have been intented for the building of the 'Third Wall'.
It seems that in the wake of organizing the life and supply of the city, re-founded by Hadrian, the area may have been
converted into a vast agricultural zone, which may have been part of granting land to veteran Roman soldiers, sometime in the third-fourth centuries CE. The potsherds from this period included six bowls (Fig. 10:11-16), two basins (Fig 10:17, 18) and a jar (Fig. 10:19). The agricultural activities continued until the end of the Byzantine period, as seen by two bowls (Fig. 10:20, 21), an imported LRRS bowl (Fig. 10:22) and a basin (Fig. 10:23) and maybe into the beginning of the Early Islamic period, which is represented by two potsherds, a bowl (Fig. 10:24) and a jar (Fig. 10:25).

The relatively limited excavation contributes to the well-known picture of the Sanhedriya neighborhood as an area of quarries during the Second Temple period, which was converted into a zone of agricultural fields in the Late Roman period and exploited until the Early Islamic period.
A better understanding of the destination of the extracted stones could be gained by comparing their sizes and stone qualities with those of monuments still standing in the city of Jerusalem, e.g., the Temple Mount and the 'Third Wall'.


1-1

1. Plan and view.

2. Southeastern steps of quarry, looking east.

3. Details of quarried stones, looking east.

4. Northwestern steps of quarry, looking northwest.

5. Upper view of structure at top of northwestern steps, looking south.

6. 'Corridor' section and southwestern steps of quarry, looking south.

7. Floor of 'courtyard' showing traces of extraction, looking north.

8. Severance channels west of 'courtyard', looking south.

9. Late terrace wall (W2003/2004) from above, looking east.


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Jerusalem, Sharafat
Final Report
Nuha Agha


1. Location map.

2. Pottery.

3. Quarry, looking southwest

4. Masonry stone surrounded by severance channels. looking south.

5. Round installation, looking east.

During March 2007, a trial excavation was conducted in the Sharafet village in south Jerusalem (Permit No. A-5074; map ref. NIG 218339-49/627963-71; OIG 168339-49/127963-71). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the contractor, was directed by N. Agha, with the assistance of Y. Ohayon and R. Abu Halaf (administration), A. Hajian (surveying), T. Sagiv (field photography), Z. Adawi and B. Tori (administrative and logistic assistance), R. Vinitsky (metallurgical laboratory), C. Hersch (pottery drawing) and R. Kool (numismatics).
The excavation was carried out in farmland where terraces are located, along a northern slope that descends to Nahal Refa'im and west of the road leading to Gillo (Fig. 1). Two strata, which consisted of terraces from the twentieth century CE (Stratum I) and a quarry and a rock-hewn installation (Stratum II), were identified.

Stratum I
Two terrace walls, 6 m apart (W1, W3; length 9 m , width 1 m ; Fig. 2) that were built of two rows of large fieldstones founded on bedrock and a core of small and medium-sized fieldstones were exposed. A section of another wall (W2) and a staircase (width 1 m ) built of dressed stones next to it was discovered between Walls 1 and 3. Similar steps were exposed in the middle of W3 and it seems that they were used to pass from one terrace to the other. A natural underground cavity (L110; $1.0 \times 1.5 \mathrm{~m}$ ) was exposed near W2.
The soil fill of the terrace (Loci 102 and 106) contained potsherds from different periods, including holemouth jars (Fig. 3:1, 2) from the end of the Iron Age, a jar (Fig. 3:3) from the Hellenistic period, a jar (Fig. 3:4) from the Early Roman period (first century BCE) and a bowl (Fig. 3:5) from the Late Roman period (third-fourth centuries CE). In addition, a Hasmonean coin was found (IAA 107172).

## Stratum II

A quarry (L112; Fig. 4) that consisted of the negatives of masonry stones (average size $0.5 \times 1.0 \mathrm{~m}$ ) that had been extracted and transported, hewn channels (Loci 108, 111) and a circular installation (L109) was revealed.
A concentration of quarrying debris (L103; $1.6 \times 1.8 \mathrm{~m}$ ) that rested directly on the negatives of the stones (L112) was exposed in the center of the southeastern area. Of the extracted masonry stones, a single one ( $0.35 \times 0.40 \times 0.70 \mathrm{~m}$; Fig. 5) had remained in situ and was surrounded by severance channels. Another severance channel (L111; $0.35 \times 0.40$ $\times 2.80 \mathrm{~m}$ ), aligned east-west, was identified east of L112.
The quarry extended farther to the northwest, beyond W3, in an area where another severance channel (L108; $0.4 \times 0.6$ $\times 3.8 \mathrm{~m}$ ) was exposed. Next to it was a round, non-plastered installation (L109; diam. 1 m , depth 0.15-0.40 m; Fig. 6) whose function is unclear, although it may have been a collecting vat of a winepress whose treading floor was part of the rock-hewn surface (L113; $1.5 \times 1.7 \mathrm{~m}$ ).
The terrace compound (Stratum I) was apparently part of the agricultural periphery of the Arab villages of Sharafat or Beit Safafa in the last one hundred years. Stratum II, which includes a 'step quarry' and a winepress, should be ascribed to the Roman-Byzantine occupation phase in the region. The fill in the terrace does not enable the dating the quarry; however, the ceramic finds and the single Hasmonean coin correspond to the time of its operation during the Hellenistic and Roman periods. A ritual bath (miqwe) had previously been documented near the site (D. Amit, 1994. Ritual Baths in the Hebron Hill Country: Landmarks for Reconstructing the Jewish Settlement during the Time of the Second Temple. Studies of Judea and Samaria, Proceedings of the Third Conference, pp. 161-162 [Hebrew]; A. Kloner 2000. Survey of Jerusalem: The Southern Sector, Site [105] 87) and a burial field that dated to the Early Roman period was excavated (ESI 18:94-95; Survey of Jerusalem: The Southern Sector, Site [105] 44).


1. Location map.


2. Pottery.

3. Quarry, looking southwest.

4. Masonry stone surrounded by severance channels, looking south.

5. Round installation, looking east.
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Tawfik De'adle

6. Plan and sections.

7. Northern segment of the aqueduct (L100), looking south.

8. Northern segment of the aqueduct (Loci 100, 102), looking south.

9. Pottery.

During September 2004, an excavation was conducted and a section was cleaned east of the Paz Rockefeller gas station in Jerusalem (Permit No. A-4280; map ref. NIG 22260/63228; OIG 17260/13228), after ancient building remains were damaged during the construction of a retaining wall. The excavation, on behalf of the Israel Antiquities Authority, was directed by T. De'adle (photography) and B. Tori, with the assistance of T. Kornfeld (surveying and drafting) and A. Pikovsky (pottery drawing).
Two segments of a built and plastered aqueduct were discerned in the section, cut at the site due to construction (Fig. 1). The aqueduct was founded on bedrock that sloped from south to north. The northern of the two segments (length 11.8 m ) was excavated, whereas the southern segment (length 5.5 m ) was cleaned. The two segments were separated by a pit that damaged part of the aqueduct (length c. 2.4 m ), which was dated to the Byzantine period (fourth-sixth centuries CE), based on ceramic finds.

Parts of the aqueduct's sides and floor were excavated in the northern segment of the section. The eastern side of the aqueduct, which was built of small fieldstones that were coated with two layers of white plaster, was preserved in the northern part of the segment (L100; $1.1 \times 2.2 \mathrm{~m}$, depth 0.2 m ; Figs. 1: Section 4-4; 2), as well as the floor of the aqueduct, which was built of small fieldstones and brown soil, set on bedrock and covered with a layer of white plaster (L104). All that survived of the aqueduct's western side were remains of plaster. The two sides of the aqueduct were exposed in the southern part of the northern segment (L102; $0.6 \times 1.6 \mathrm{~m}$, depth 0.4 m ; Figs. 1: Section 1-1; 3). They were built on bedrock of plastered and semi-worked fieldstones. The floor of the aqueduct in this part was built of fieldstones and brown soil that were coated with four layers of white plaster. Ceramic material from the Byzantine period (fourth-sixth centuries CE) was recovered from the excavation of the northern segment of the section. A krater of the arched-rim basin type (Fig. 4:1), a Fine Byzantine Ware bowl (Fig. 4:3), a rouletted-type bowl with gouged decoration (Fig. 4:4) and another bowl fragment (Fig.4:5) were discovered above the floor of the aqueduct (L100). A krater fragment of an arched-rim basin type (Fig. 4:2) was discovered between the fieldstones that composed the aqueduct's floor (L104). Part of the aqueduct's western side (W1; max. length 5.5 m ; Fig. 5), built on bedrock of small fieldstones and soil and plastered, was cleaned in the southern segment of the section. At least five layers of white plaster were discerned on the southern part of this western side (Fig. 1: Section 3-3).
Due to the limited extent of the excavation it was not possible to determine the course of the aqueduct or its purpose; however, based on its declination, it can be assumed that it conveyed water to the north. The repairs of the aqueduct are reflected by the many plaster layers discerned in it.


2. Northern segment of the aqueduct (L100), looking south.

3. Northern segment of the aqueduct (Loci 100, 102), looking south.

4. Pottery.

5. Southern segment of the aqueduct, looking south.

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1. Plan and sections.

2. The excavation square, looking south.

3. Pottery.

Tawfik De'adle
During December 2004, a salvage excavation was conducted in the compound of Bet Ha-Tsofe in the City of David's visitor's center (Permit No. A-4336; map ref. NIG 22243/63126; OIG 17243/13126). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the 'Ir David Foundation, was directed by T. De'adle, with the assistance of V. Essman and V. Pirsky (surveying and drafting), T. Sagiv (field photography) and A. Pikovsky (pottery drawing).

A single square $(4.0 \times 4.3 \mathrm{~m}$; Figs. 1, 2) was opened along the southern border of Area H, which was excavated by K. Kenyon in the 1960s and south of the area that was excavated at the site in 2003 (HAESI 120). A rock-hewn cistern and adjacent to it, part of a plastered installation and the corner of a room, were exposed.

An arch built in the upper part of the cistern of plastered ashlar stones was used to support the ceiling. Ledges of sorts were hewn in bedrock for placing the voussoirs. Two rows of stone slab covers, placed in the upper north and south part of the cistern had partly rested on bedrock and partly on the arch. The spaces between the covering slabs were filled with gray cement. Sections of a crushed-chalk floor (L152), which apparently covered the entire surface of the slabs, were exposed above the covering slabs. The cistern had two openings that were ascribed to two different phases of its use. The later opening was a square shaft built of fieldstones (W102), whereas the earlier opening was plastered and set between the covering slabs in the northern row and the voussoirs. It was blocked with fieldstones, similar to those used in the construction of the later opening and it therefore seems that these two actions were performed contemporaneously. The soil that had accumulated at the bottom of the cistern was not excavated. It seems that this soil penetrated into the cistern as a result of earthmoving activity by mechanical equipment. A similar cistern, excavated by Macalister in the 1920s in Area 5 south of here, was dated to the Herodian period (Macalister R.A.S. and Duncan J.G. 1926. Excavations on the Hill of Ophel, Jerusalem 1923-1925 [PEFA 4]).
The southern part of an installation (L153), built of dark gray cement and coated with light gray plaster, was exposed next to the cistern's northern covering slabs. Two steps built in the western side of the installation were plastered too. The bottom of the installation was not exposed.
Two walls (W100, W101) that formed the northeastern corner of a room were discovered atop the cistern's southern covering slabs. The walls, built of different size fieldstones, were preserved two to three courses high (max. 0.76 m ). Soil fill exposed inside the corner (L158), down to the base of the walls, yielded a bag-shaped jar (Fig. 3:4) and a bowl (Fig. 3:5) from the Roman period (second-fourth centuries CE) and a krater of the archedrim basin type (Fig. 3:1), a rouletted bowl with gouged decoration (Fig. 3:2) and a cooking pot (Fig. 3:3) from the Byzantine period (fifth-sixth centuries CE). Soil fill, close to W100 and outside the corner between the walls, contained a krater decorated with finger indentations and wavy combing that dated to the Abbasid period (ninthtenth centuries CE; Fig. 3:6).


1. Plan and sections.

2. The excavation square, looking south.

3. Pottery

4. Location map.

5. Plan.

6. Cistern 101, looking northeast.

7. Cistern 103, looking southeast.

8. Pottery from the Late Ottoman period.

During December 2006, a salvage excavation was conducted on Haey Adam Street in the Sha'are Moshe neighborhood of Jerusalem (Permit No. A-4978; map ref. NIG 22085/63260; OIG 17085/13260; Fig. 1), prior to the construction of a residential building. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the contractor, was directed by A. Nagar, with the assistance of R. Abu Halaf (administration), V. Essman, T. Kornfeld and A. Hajian (surveying), T. Sagiv (field photography), Y. Nagar (physical anthropology), R. Berin (drafting), C. Amit and M. Salzberger (studio photography), N. Ze'evi (photographic archive), L. Kupershmidt (metallurgical laboratory), R. Bar-Natan, M. Avissar and G. Finkielsztejn (pottery reading), Y. Bukengolts (pottery restoration) and I. Lidski-Reznikov (pottery drawing).

One and a half excavation squares were opened in the eastern part of a lot ( 0.5 dunam), where a rock-hewn area that included five water cisterns, partly rock hewn and partly built and plastered (Loci 101-105; Fig. 2), a partly hewn chamber with steps (L108), a cave in secondary use (L106) and a hewn bedrock floor (L109), was exposed.
The early ceramic finds dated to the Hasmonean, Early Roman (second century BCE-first century CE) and the late ones-to the late Ottoman period (nineteenth century CE).

## Water Cisterns

The water cisterns were hewn in bedrock and some were lined with built walls: Cistern 101 ( $3.2 \times 5.0 \mathrm{~m}$, height 1.5 m ; Figs. 3, 4), Cistern $102(3.0 \times 3.8 \mathrm{~m}$, height 2.9 m ; Figs. 3, 5), Cistern $103(2.15 \times 2.60 \mathrm{~m}$, height 2.25 m ; Figs. 6, 7), Cistern $104(1.05 \times 3.05 \mathrm{~m}$, height 2.7 m ; Figs. 8, 9) and Cistern $105(3.1 \times 3.4 \mathrm{~m}$, height 2.75 m ; Figs. 10, 11) .

The inner face of the walls in Cisterns 102-105 was built of large stones and the face against bedrock was built of small and medium-sized stones (width $0.20-0.45 \mathrm{~m})$. The northwestern $(0.15 \times 1.10 \mathrm{~m})$ and southeastern sides $(0.40 \times 1.15 \mathrm{~m})$ of Cistern 101 were built of small and medium-sized stones. Wall 1 in Cistern 102 was dismantled, exposing bedrock that was hewn to conform to the masonry stones placed on it. Remains of vaulted ceilings built of large flat stones were exposed in all the cisterns, except for Cistern 101. The floors of the cisterns sloped in different directions. The bonding material consisted of earth and lumps of white lime; it had an orange hue and a soft texture. All the cisterns were coated with four plaster layers. The first and lowest layer was soft gray plaster mixed with lumps of lime and charcoal. The second layer included small stones that lined the gray plaster. The third layer was white lime, which contained ground red and black potsherds/roof tiles and had a soft texture. The fourth and upper layer was a very thin application (max. thickness of 2 mm ) of hard gray cement. The cisterns were devoid of datable artifacts, yet contained construction refuse.

## Hewn Chamber

The chamber, which was mostly bedrock hewn (L108; $1.9 \times 2.9 \mathrm{~m}$, preserved height 1 m ; Figs. 3, 12), was exposed southwest of Cistern 102. It had three hewn sides, a bedrock floor that sloped to the northeast and three rock-cut steps (length 0.9-1.1 m, width $0.4-0.7 \mathrm{~m}$ ) that led to it from the southeast. The chamber's northeastern wall (W2b-c), shared with Cistern 102, was built of three sections. The northwestern section (W2a; length 1.2 m , width 0.4 m ), was adjacent to the hewn bedrock side of Cistern 102; its outer face was built of large stones and its inner face was a fill of small and medium-sized stones. The two other sections were built within the hewn chamber. The two sides of the middle section ( W 2 b ; length 1.6 m , width 0.4 m ) were preserved six courses high and not supported by bedrock. The courses of the outer side, which faced the cistern, were built of large dressed stones and the inner face consisted of small and mediumsized roughly hewn masonry stones. The southeastern section (W2c; length 1.2 m , width 0.35 m ), preserved four courses high, was built of two rows of large, roughly hewn masonry stones.

The building of W2 in sections apparently points to construction phases. The first phase saw the construction of the hewn chamber; the cistern came in the second phase, as it cut the chamber and during the third phase, the chamber was bordered with the construction of the southeastern section of the wall, W2c. When Cistern 102 and the other cisterns were hewn/built, the chamber served the masons, as evidenced by the white plaster and soot on its floor that were also the main components of the plaster layers applied to its walls. White plaster was traced in the vessels from the late Ottoman period and it probably shows that the cisterns should be assigned to this period.
The chamber contained debris characteristic of a refuse pit, which included small and medium-sized fieldstones, masonry stones, roof tiles, iron, glass bottles and a large quantity of animal bones. The pottery finds dated to the Late Ottoman period (nineteenth century CE) and included a bowl (Fig. 13:1), small and large kraters (Fig. 13:2-7), cooking pots (Fig. 13:8-11), including a Gaza pot (Fig. 13:10), a jug and a spout of a Gaza-type jug (Fig. 13:12, 13), a lid (Fig. 13:14), a hookah top (Fig. 13:15) and jars (Fig. 14:1-5). Most of the pottery was found on the chamber's floor and some was along the northeastern side, covered with white lime and a layer of charcoal.

## Cave and Structure

The rock-hewn cave (L106; $1.20 \times 2.85 \mathrm{~m}$; Figs. 15, 16) was accessed by a descending staircase and walls were built in its northeastern and southeastern sides. Wall 4 (width 2.85 m ), preserved thirteen courses high ( 2.3 m ; Fig. 17), was built of roughly hewn masonry stones and small and medium-sized fieldstones; its northwestern end was adjacent to Cistern 102. Two plaster layers were applied to the wall. The bottom layer consisted of soft gray plaster with lumps of white lime and charcoal and the upper layer, which was soft and had an orange hue, contained earth with lumps of white lime, small stones and ground potsherds/roof tiles. Wall 5 (width 1.2 m , preserved height 2.25 m ) abutted W4 and was built of roughly hewn masonry stones and small and medium fieldstones. A half vault, built of flat medium-sized stones was exposed in its center. Of the five steps in the staircase, the top three were built of flat stones and the third one was completely preserved (length 0.65 m , width 0.3 m , height 0.35 m ), the fourth step was hewn (length 0.7 m , width $0 / 35 \mathrm{~m}$, height 0.8 m ) and the fifth was built of two flat stones (length 0.6 m , width 0.25 m , height 0.15 m ). It seems that the staircase continued to the southeast but was severed by W5. The cave contained modern debris without any datable finds. Three phases of use were discerned in the cave. The southwestern side and the fourth step probably belonged to an early cave from the Second Temple period, as evidenced by the finds discovered in the adjacent unit (L109; see below). In the second phase, W4 was built and the staircase was completed by adapting the steps to the rock-cutting. It is unclear what the structure was used for at this time. In the last phase, which is also dated to the Late Ottoman period, the construction of W5 blocked the entrance to the cave.

## Hewn Bedrock Floor (Storehouse)

A bedrock floor that sloped to the northwest, was delimited on its western side by hewn walls (L109; $2.25 \times 2.50 \mathrm{~m}$; preserved height 0.8 m ) and on its eastern side by the excavation boundary (Loci 107A-B) next to Cave 106 and Chamber 108. A layer of marl was exposed on the northeastern part of the floor, as well as limestone collapse that was perhaps the fallen ceiling of the cave (Fig. 18) and a hearth near the eastern corner ( $0.6 \times 1.1 \mathrm{~m}$ ), which contained two burnt, medium-sized fieldstones. The pottery finds dated to the Hasmonean and Early Roman periods. Among those from the Hasmonean period was the upper part of a Rhodian amphora (Fig. 19:1) that had on each of its handles a rectangular seal stamp (Eponym Nikasagovra~2nd dated to c. 131 BCE). The Early Roman period pottery included fragments of cooking pots (Fig. 19:3). The floor of the storehouse and the potsherds above it continued beyond the limits of the excavation and it seemed that this storehouse was connected to the nearby cave (L106). The ceiling of the storehouse was almost certainly high as evidenced by the height of the southeastern ( 2.55 m ) and northeastern ( 2.66 m ) balks, in which abundant pottery vessels that included the handle of a Rhodian amphora bearing a seal stamp (Fig. 19:2;

Eponym Nikasagovra~2 ${ }^{\text {nd }}$ or Teimagovra~1 ${ }^{\text {st }}$ dated c. 131 BCE and 120 BCE respectively), were found.
Two phases were discerned at the site. The first phase included the hewn chamber and the cave with the bedrock floor, whose ceramic finds were dated no later than the Early Roman period. The second phase consisted of the water cisterns and the secondary use of the cave and is dated to the Late Ottoman period (end of the nineteenth century CE), when the Sha'are Moshe neighborhood was established (in 1885). The multitude of water cisterns in a relatively small area apparently stems from the planning of the neighborhood: "...because the houses will be built around the field like a box on all four of its sides... and an empty space will remain in the center...where the cisterns will be" (S. Zacharia 2003. Yerushalayim Shel Mata. Pp. 44-46).


1. Location map.


Cistern 105 בור מים


Cistern בור מים


Cistern בור מים 104

2. Plan.


2-2
3. Cisterns 101, 102, plan and sections.

4. Cistern 101, looking northeast.

5. Cistern 102, looking east.

6. Cisterns 103, plans and sections.

7. Cistern 103, looking southeast.

8. Cisterns 104, plans and sections

9. Cistern 104, looking southeast.


11. Cistern 105, looking south.

12. Hewn chamber, looking north.

13. Pottery from the Late Ottoman period.

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15. Cave, plan and sections.

16. Cave, looking east.

17. Walls 4 and 5 , looking south.

18. Limestone collapse on floor, looking southeast.

19. Pottery from the Hasmonean and Early Roman periods.

# (Volume No. HA-ESI 121 (2009 <br> Jerusalem, Kefar Ha-Shilloah Final Report 

Yuval Baruch



1. The breached opening in the side of the cave, looking south.

2. Plan and sections.

3. Pottery.

During June 2002, a salvage excavation was conducted in a burial cave in the 'Ein el-Lauza neighborhood of Jerusalem (Kefar HaShilloah), south of the City of David (Permit No. A-3652; map ref. NIG 22272/63129; OIG 17272/13129), after the cave's northern side was damaged during the course of paving a road. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Moriya Company, was directed by Y. Baurch, with the assistance of T. Kornfeld (surveying and drafting) and C. Hersch (pottery drawing).
The cave was hewn in soft chalk bedrock terrace on the slope of a hill, c. 500 m south of the City of David (Fig. 1). Numerous fragments of pottery vessels that dated from the Second Temple period until the modern era were found in a trench, which was excavated in the thick layers of soil fill (thickness 2 m ) that covered the roof of the cave.
A sloping corridor that was not excavated led to the opening of the cave, which was set in the northern side. The rectangular opening had rounded corners and the threshold was c .0 .2 m higher than the cave's floor (c. 4.5 sq m ; max. height 1.1 m ; Fig. 2). The cave was elliptical and had a dome-like ceiling. The walls were meticulously hewn and apparently, a broad mallet was used for quarrying. The floor was not leveled and two shallow pits were cut in it. The cave, which was probably plundered in the past, contained fragments of jars (Fig. 3:1, 2), dipper juglets (Fig. 3:3, 5, 7) and piriform juglets (Fig. 3:4, 6, 8, 9) that dated to the Middle Bronze Age. The few bones in the cave were returned to their initial location without being analyzed by an anthropologist. The cave was sealed and covered with soil at the conclusion of the excavation. Its discovery is important since only a few burial caves from this period are known in the vicinity of the City of David in Jerusalem.


1. The breached opening in the side of the cave, looking south.



## Jerusalem, East Talpiyot

Final Report


1. Plan and section.

2. The excavation area, looking south.

3. The pit, looking west.

Annette Nagar
During June-July 2007, a trial excavation was conducted on Olē Ha-Gardom Street in East Talpiyot, Jerusalem (Permit No. A-5167; map ref. NIG 22263/62896; OIG 17263/12896), prior to the construction of the Tolerance Garden. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Moriya Company, was directed by A. Nagar, with the assistance of Y. Ohayon (administration), A. Hajian and M. Kunin (surveying) and T. Sagiv (field photography) and E. Belashov (drafting).

The excavation was conducted along a slope next to the United Nations Observers headquarters, c. 500 m east of the Upper Aqueduct Park. One square was opened and a quarry with a hewn pit was discovered (Figs. 1, 2). Vertical rock-cut sides (A, C, D) were exposed in the quarry (L100), as well as a rock surface (B) that displayed signs of hewing and removal of a masonry stone $(0.60 \times 0.65 \mathrm{~m})$. A straightened bedrock surface was exposed south of Rock-cutting D . It seems that the quarry extended westward, beyond the boundaries of the square. A circular rock-hewn pit (L101; $1.25 \times 1.40 \mathrm{~m}$ at opening of pit, depth c. 0.95 m ; Fig. 3) was exposed in the western side of the quarry. The pit became wider toward the bottom ( $1.65 \times 1.90 \mathrm{~m}$ ), although it was not fully excavated. The pit severed the quarry and it can reasonably be assumed that it postdated it. A meager number of nondiagnostic potsherds were discovered in the excavation.
This area had been surveyed in the past (A. Kloner, 2000, Survey of Jerusalem, the Southern Sector, Sites 24, 77) and building remains that dated to the Iron Age and the Early Roman period were exposed in a nearby excavation (HA-ESI 120).


[^2]
2. The excavation area, looking south.

3. The pit, looking west.

## (Volume No. HA-ESI 121 (2009

## Jerusalem, the Ohel Yizhaq Synagogue

 Final Report

1. The vaulted hall, plan.

2. The vaulted hall, sections.

3. Pottery.

4. Clay tobacco pipes.

Rina Avner and Tawfik De'adle
During October 2003, a trial excavation was conducted in the Ohel Yizhaq synagogue in the Old City of Jerusalem (Permit No. A3845; map ref. NIG 22220-60/63165-75; OIG 17220-60/13165-75). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the 'Ateret Cohanim Association, was directed by R. Avner and T. De'adle, with the assistance of V. Essman and V. Pirsky (surveying and drafting), T. Sagiv (field photography), C. Amit (studio photography), M. Avissar (pottery reading) and A. Pikovsky (pottery drawing).
The excavation was conducted in a vaulted rectangular hall ( $10.3 \times 27.8 \mathrm{~m}$ ), below the synagogue (Figs. 1, 2). The hall was documented and a trial excavation ( $2.5 \times 6.2 \mathrm{~m}$ ) was carried out next to its eastern wall. Two construction strata were revealed in the excavation and the ceramic finds were mostly dated to the Ottoman period. Three seasons of excavation (2004-2005) were conducted in the synagogue, exposing building remains from the Roman, Byzantine, Early Islamic, Crusader and Mamluk periods (HA-ES/119).

The hall is covered with fifteen pointed vaults, arranged in three rows and supported by pillars. Two rows of square pillars were built in the middle of the hall. Each row consisted of four free-standing pillars and two engaged pillars at the ends of each row, one in the eastern wall (W2) and the other in the western wall (W4). Six engaged pillars were built along the southern wall (W3) and along the northern wall (W5), two especially wide corner pillars were constructed, as well as two engaged pillars between them, which were larger than the other pillars in the hall. Stones of different sizes with various dressing styles were incorporated in the construction of the northern wall (Fig. 2: Section 3-3). A section of the lower eastern part of the hall's northern wall was built of dressed stones that had drafted margins. It is possible that these stones were part of an earlier wall that was incorporated within the northern wall, or they may have been dismantled from an ancient wall and combined, in secondary use, in the northern wall. Regular building stones without drafted margins were used in the wall east of this section. A fill, which consisted of small fieldstones with gray plaster between them, was exposed in the passageway that separated the two built segments. Judging by the large dimensions of the pillars in the hall's northern wall and its method of construction, which differs from the rest of the walls, it seems that this wall was probably built at a different time than the other walls in the hall. Other construction remains in the hall indicate a later building phase. These include walls or supports that were added near the free-standing pillars, walls that rested on the two western engaged pillars in the southern W3 and also supports that were added between the southeastern freestanding pillar and the engaged pillar facing it in the eastern W2. A channel that breached the southern W3 was built in the later phase; it continued adjacent to the walls that were built near the western pillars of W3.

The Later Stratum. An east-west oriented wall (W1) that rested on the eastern W2 was exposed. Wall 1 was built of two rows of small fieldstones with gray plaster between them. The southern face of W1 was coated with gray plaster, which covered a chute descending to the west (L100) at the eastern end of the wall. It seems that Wall 1 and the chute were part of an installation associated with liquids, whose bottom part was also coated with the same gray plaster. The chute was built next to the eastern W2 and therefore, it is clear that the chute and Wall 1 postdated W2.

The Early Stratum. The eastern wall of the hall (W2) was exposed. A white plaster floor (L102; exposed area $0.95 \times$ 1.00 m , thickness 2 cm ) was discovered next to the northern engaged pillar in this wall, at a depth of 4.15 m from the top of the pillar. The floor abutted both W2 and the engaged pillar. A stone with an elongated depression (length 0.22 m , width 8 cm , depth 7 cm ) that may have been a socket stone was discovered south of the pillar. Floor 102 also abutted this stone. Dark brown soil fill was excavated to a substantial depth south of Floor 102 and it is clear that W2 continued below Floor 102. It seems that the hall was two-story high and Floor 102 belonged to the upper story. As no excavation was done below the floor, it could not be dated.

The ceramic finds recovered from the excavation originated in layers of fill rather than in sealed loci and therefore, the exposed building remains can not be dated. The finds mostly dated to the Ottoman period (seventeenth-nineteenth centuries CE) and included bowls (Fig. 3:1-7), among them an imported bowl from China (Fig. 3:1), a locally made bow that imitated an imported bowl from China (Fig. 3:2), a dark brown on green glazed bowl (Fig. 3:4) and a green glazed bowl (Fig. 3:6); small cups (Fig. 3:8, 9), kraters (Fig. 3:10, 11), jugs (Fig. 3:12-21), among them jugs with brown glaze on the rim (Fig. 3:14, 15), a jug decorated with incisions on the neck (Fig. 3:16) and two jugs with an Arabic inscription that bless the person drinking to satiation from them (Fig. 3:19, 20), one of which is a filter jug (Fig. 3:19); a decorated body fragment (Fig. 3:22) and a lamp (Fig. 3:23). Many clay tobacco pipes from the Ottoman period were discovered, including pipes from the seventeenth century CE (Fig. 4:1-4); from the eighteenth century CE (Fig. 4:5-8); from the end of the eighteenth-beginning of nineteenth centuries CE (Fig. 4: 9-12) and from the nineteenth century CE (Fig. 4:13-15). Three fragments of pottery vessels that dated to the Mamluk period included a body sherd of a black and turquoise glazed bow (Fig. 3:7; Frit Ware), a krater (Fig. 3:11) and the spout of a jug decorated with punctures (Fig. 3:21).

The ceramic finds indicate that the vaulted hall ceased to be used in the nineteenth century CE and possibly even earlier, in the eighteenth or seventeenth centuries CE. It is unclear when the hall was founded. Its location in relation to the cotton market, which was built in the Mamluk period (1336-1337 CE) and to the remains of the khan that the governor general Tankiz Al-Husami had established, raises the possibility that the hall belonged to the southern wing of the khan or it postdated the khan and was built leaning against the khan's southern wing.

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3. Pottery.

$0 \quad 4$
4. Clay tobacco pipes.
(Volume No. HA-ESI 121 (2009
Jerusalem, the Third Wall
Final Report
Amit Re'em
12/7/2009


1. Location map.
 east.

2. The antechamber, looking north.

3. Pottery.

4. Glass.

During July 2002, a salvage excavation was conducted along the route of Highway 1, next to the intersection of the Prophets, Engineering Corps and Ben Shadad Streets (Permit No. A-3728; map ref. NIG 22164-9/63237-97; OIG 17164-9/13237-97), due to infrastructure work. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Moriya Company, was directed by A. Re'em, with the assistance of A. Hajian (surveying), Y. Nagar (physical anthropology), N. Zak (drafting), A. de Vincenz (ceramics), N. Katsnelson and Y. Gorin-Rosen (glass finds), O. Shorr (glass restoration) and C. Hersch (pottery and glass drawings).
Previous excavations in the area revealed a complex of monasteries, churches and hostels that dated to the Byzantine period: an Armenian monastery and crypt (Fig. 1; Area D-S; ESI 13:80-82) west of the excavation area; a monastery (Area D-N; ESI 13:82-83) to the north; a monastery that included a hostel with a chapel and tombs (Area A; ESI 10:130-133); rooms and tombs arranged around a courtyard (Area C; ESI 13:78-79); and a Byzantine tomb decorated with frescoes (Area E; 'Atiqot 29:71*-75* [Hebrew]).
A rock-hewn burial cave, which was apparently a crypt that dated to the end of the Byzantine period (end of the sixth century-beginning of the seventh century CE), was exposed in the current excavation.
A narrow strip ( $1.0 \times 5.5 \mathrm{~m}$; Figs. 2, 3) was opened, revealing a stone pavement (L200; $0.6 \times 1.0 \mathrm{~m}$, thickness 0.1 m ; Fig. 4) that was partly laid directly on bedrock and partly on fill that consisted of quarrying debris and soil (L260). The northern part of the pavement abutted a robber trench (L100; width c. 1.3 m ; Fig. 5). The excavation of the pavement's foundation and the robber trench did not yield any datable finds.
A stone-built staircase descended from the level of the pavement to a narrow antechamber (L250; $0.7 \times 1.5 \mathrm{~m}$, height 1.8 m ; Fig. 6) whose walls were built of fieldstones and founded on bedrock; the pavement's flagstones constituted the antechamber's ceiling. An entrance in the southern part of the western wall had two crosses engraved above it ( $0.6 \times 0.7$ m ; Fig. 7). A hewn step led to the interior of a cave ( $3 \times 3 \mathrm{~m}$, height 1.1 m ) that was carelessly hewn in hard limestone bedrock. Fieldstones and mortar repairs were discerned in the cave's ceiling.

Some of the poorly preserved bones on the floor of the cave (L300) were articulated, attesting to primary burial. The deceased, aligned east-west, were laid next to each other with their heads in the west. The remains of at least ten individuals were discerned, including eight adults and two children. Two females and at least three males were positively identified among the adults. One of the males was 40-50 years of age and the children were 2-4 and 5-8 years of age. Scattered on the floor of the cave (L300) and in the antechamber (L250) were fragments of pottery vessels, characteristic of the second half of the sixth century-beginning of the seventh century CE, which included a plain type of a Fine Byzantine Ware cup (Fig. 8:1), basins with ledge rims (Fig. 8:2, 3), a jug base (Fig. 8:4), a bag-shaped jar from the north of the country (Fig. 8:5) and a large intact lamp (Fig. 8:6).

Glass vessels and glass fragments (Figs. 9, 10) were collected near the entrance to the cave and beneath a pile of fieldstones (L310). These included bottles with a squat spherical body and a funnel-like neck (Fig. 9:1-4), bottles with a spherical body and a cylindrical neck (Fig. 9:5-8) and a juglet (Fig. 9:9). The bottles with the funnel-like neck are similar to each other and were apparently produced in the same workshop. The vessels were free and mold-blown; a pontil scar was identified only on the juglet. The glass assemblage is dated to the end of the Byzantine period (end of the sixthbeginning of the seventh centuries CE). A similar assemblage was discovered in a nearby crypt that belonged to the same architectural complex (Ancient Jerusalem Revealed, p. 295).
The cave is incorporated in a building that was part of a complex of monasteries, chapels and crypts; therefore, it seems that this was no ordinary burial cave but rather a crypt. That notwithstanding, the outline of the cave is different than that of its neighboring crypts, which had an arched ceiling and burial troughs. The cave contained numerous interments, including children, which may attest to an additional use that it fulfilled. The ceramic and glass artifacts recovered from the cave, as well as its proximity to a complex of buildings that is dated with certainty, sets the time of its use to the end of the Byzantine period (end of the sixth-beginning of the seventh centuries CE).


1. Location map.


2. The excavation area, looking north.

3. The pavement, looking east.

4. The robber trench, looking east.

5. The antechamber, looking north.

6. The entrance with engraved crosses above it, looking east.

7. Pottery.


# (Volume No. HA-ESI 121 (2009 

Jerusalem, Et-Tur

## Final Report



1. Location map.

2. Area A, Chamber 110 and Trough 105, looking south.

3. Area A, Installation 114 and Channel 120, looking south.

4. Area A, Installation 121 and Channel 120, looking east.

5. Area B. Columbarium

107 and Cave 113, plan.

Yonathan Mizrachi

7/7/2009
During December 2003, a salvage excavation was conducted on the eastern slopes of Bethphage, in the vicinity of the separation fence around Jerusalem (Permit No. A-4053; map ref. NIG 22410-28/63132-62; OIG 17410-28/13132-62; Fig. 1). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by Y. Mizrahi, with the assistance of V. Essman and V. Pirsky (surveying and drafting), T. Sagiv (field photography) and C. Hersch (pottery drawing).
The site is founded on easily quarried, soft chalk bedrock, c. 300 m east of ancient remains that had been surveyed and partly excavated by Father Saller (S.J. Saller, Excavation at Bethany, Jerusalem 1957).
The current excavation was carried out in two areas, c. 50 m apart (Fig. 2). The antiquities exposed in the northern area (A) included a rock-hewn chamber, a system of installation, in which at least two phases were identified, a rock-hewn cave, a quarry and a cistern. A burial cave from the Second Temple period was found, but not excavated. The southern area (B) consisted of columbarium remains and an adjacent rock-hewn cave. Other tombs and caves were documented to the north (Area C) and the south (Area D) of the excavation areas.
Area A (Fig. 3)
On the surface in the northern part of Area A, ashlar stones that included two threshold stones, a stone socket and part of a round trough (diam. c. 0.4 m , depth c. 0.15 m ) were found.
A rock-hewn chamber and a system of installations, composed of a series of vats and channels, were discovered in the northeastern part of the area.

The Chamber (L110; Figs. 4, 5) was rock-hewn and rectangular. An arched-shaped niche ( $2.50 \times 2.75 \mathrm{~m}$ ) was cut in its northwestern corner and a rectangular rock-cut trough that sloped to the east (L105; length 2.4 m , width 1 m , depth 0.45 m ; height of rim above floor $0.9-1.0 \mathrm{~m}$ ) was located in its southern part. Three holes were perforated in the northern side of the trough, facing the chamber and slightly above its bottom. A carelessly hewn conduit conveyed liquid to the trough from the south.
Numerous roof tiles and a large quantity of mostly white coarse tesserae, as well as a few red and black ones, were found in the chamber and its vicinity. The chamber probably functioned as a cellar of a two-story building. The upper floor was residential while the house animals were kept in the cellar. The holes in the side of the trough were used to tie the animals or for drainage.

System of Installations. A hewn opening (width 0.8 m ) and rock-cut negatives were noted in the lower eastern side of Chamber 110. At the eastern edge of the northern side was a rectangular rock-hewn negative, to which a plastered stone was affixed with plaster. A channel that gradually became wider (width $5-25 \mathrm{~cm}$ ) and descended sharply eastward emerged adjacent to the plastered stone. The channel (L110A) led to a rectangular installation that was aligned eastwest (L114; $1.00 \times 1.50 \times 1.15 \mathrm{~m}$; Fig. 6) and became wider toward its bottom (width of opening 0.5 m , max. width 1.5 $\mathrm{m})$. Signs of stone dressing around the edge of the opening indicate it was covered with stone slabs. A layer of soil inside the installation overlaid black fill, whose nature is unclear (L122; thickness c. 0.5 m ).
A rock-hewn channel (L120; width 0.25 m ) led to the southeastern corner of Installation 114. The channel's opening became wider at the point where it met Installation 114. More traces of stone dressing were discovered along the edges of the channel where stone slabs had originally been placed. Channel 120 emerged from a square rock-hewn installation (L126; $0.40 \times 0.75 \times 0.75 \mathrm{~m}$ ), which contained black soil and two fragments of a ceramic pipe that were discovered blocked with stones and soil and their narrow openings pointed toward Channel 120 (Fig. 7:1, 2). An oval installation (L121; Fig. 8), built of hydraulic plaster in a later phase and contained white lime, was constructed inside Installation 126 and blocked the opening of Channel 120.
A hewn, square installation (L123; $0.35 \times 1.00 \times 1.00 \mathrm{~m}$ ), which was connected to a channel that extended to the east, beyond the excavation limits (exposed length c. 1 m ), was discovered east of Installation 114. The opening of the channel was c. 0.15 m higher than the bottom of Installation 123 and it therefore seems that the channel conveyed liquid to the installation.
A conical vat (L124; diam. 0.55 m , depth c. 0.3 m ) was situated south of Installation 123 and east of Channel 120.
Fragments of pottery vessels that dated to the Byzantine period, including bowls (Fig. 7:3, 4), were recovered from the installations and on the surface.
Based on the quarrying style it seems that Vat 124 and Installation 123 were contemporary with Installation 114, Channel 120 and Installation 121. Channel 120 was hewn differently than Channel 110A and therefore, it seems that the two channels were not hewn at the same time or were used for different purposes.
The rock-hewn installations, the channels that connected them and Conical Vat 124 should probably be regarded as industrial or agricultural installations, although their precise function remains unclear.

Burial Cave. The cave (L118) whose entrance faced east was discovered south of the installations. Rock-hewn negatives were noted in the cave's courtyard, which terminated in a steep bedrock step. The central chamber of the cave had two kokhim in its western side. The cave, which had been plundered in the past and sealed by orthodox Jewish factions, could not be measured or documented, although its construction style point toward a date in the Second Temple period.

Rock-hewn Cave. The cave (L101; Fig. 9) was discovered east of the burial cave. Three rock-cut steps (length 0.3-0.5 m , height $5-10 \mathrm{~cm}$ ) led to the entrance, which faced east (width 1.2 m , height 0.8 m ). A fourth step was located inside the cave and near it was a niche that probably served as a door hinge. A wall ( W 1 ; height 0.5 m ) extended from this corner into the cave whose shape was irregular (diam. c. 4.1 m , max. height 2 m ).
The potsherds recovered from the cave mostly dated to the Byzantine period. The exposure of Wall 1 revealed a fragment of a Byzantine vessel and a stone fragment that may have belonged to an ossuary. The cave, probably used for burial during the Second Temple period, was converted into a dwelling or a storage facility at a later time, probably in the Byzantine period.

Quarry. Quarrying negatives (Loci 100, 102; c. $5 \times 18 \mathrm{~m}$; Fig. 10) were exposed in the area that descended eastward, south of Cave 101. These indicated that stones of various sizes $(0.8 \times 0.8 \mathrm{~m} ; 0.60 \times 0.85 \mathrm{~m})$ had been detached from bedrock. The area above Caves 101 and 118 was not quarried, although traces of rock-cuttings were visible around the entrance to Cave 118 and next to Cave 101. It can thus be concluded that the quarrymen were aware of the caves' presence and therefore, the caves predated the rock-cuttings.

Cistern. A rock-hewn cistern was discovered east of the quarry and south of Cave 101. The cistern's opening was blocked with stones, including a fragment of a stone basin. The entrance shaft had a square cross-section (L108; $0.82 \times$ 0.90 m ; depth c. 0.8 m ), which became round at the bottom (diam. c. 0.7 m ) and a deep groove was cut in the shaft's northwestern side. The shaft led into a bell-shaped cistern (L109; diam. 1.5-2.0 m, depth c. 1 m ) that was hewn in the soft chalk bedrock.
The direction of the cistern differed from that of the rock-cuttings and it may postdate them. It seems that originally, it was hewn as a water cistern, but its quarrying was suspended before completion. It was apparently decided to adapt it for use as a storage pit. This assumption is based on its relatively wide diameter and the groove in the side of the entrance shaft
that was probably used as a foothold for climbing in and out of the pit.
Area B (Fig. 11)
A rock that bore the remains of columbarium niches (L107) and a rock-hewn cave (L113) to its south were discovered. The western part of the cave was not excavated because the overlying terrace could collapse. Low rock-hewn steps in the northeastern part of the cave were possibly an entrance that accessed it from the east and two niches (c. 1 m apart) were found opposite them. A rectangular rock-cutting $(0.15 \times 0.70 \times 2.60 \mathrm{~m})$ was in the narrow center part of the cave. A layer of brown soil in the cave overlaid a white fill that was probably the remains of the collapsed ceiling (Loci 117, 119; thickness c. 0.2 m ).
Fragments of pottery vessels from the Iron Age and the Second Temple and the Byzantine periods were discovered in the cave and in the vicinity of the columbarium.

## Area C

A tomb and a burial cave were discovered northwest of Area A. The tomb, which had been plundered and was found filled with refuse, contained three hewn troughs, one next to the other. The rounded burial cave ( $3.75 \times 4.50 \mathrm{~m}$ ) was found filled with debris and damaged; the opening had been made wider, part of the ceiling had collapsed and several of its interior walls were destroyed.

Area D
The façade of a cave was documented southwest of Area B; it was discovered filled with soil and refuse and not excavated. The function of the cave is unclear, yet the signs of rock-cutting on its façade suggest it may have been used as a burial cave.


1. Location map

2. Excavation areas, plan.


3. Area A, Chamber 110 and Trough 105, looking south.


4. Area A, Installation 121 and Channel 120, looking east.

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9. Area A, Cave 101, plan and section.


# (Volume No. HA-ESI 121 (2009 Jerusalem, Talpiyot North Final Report 

Annette Nagar 28/7/2009


1. The excavation area and the stone heap in the center.

2. Hand axe.

During September 2007, a trial excavation was conducted on Kaspi Street in the Talpiyot North neighborhood of Jerusalem, next to the Haas Promenade (Permit No. A-5255; map ref. NIG 221575-650/629300-75; OIG 171575-650/129300-75), prior to the construction of a residential building. The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Nagar, with the assistance of Y. Ohayon (administration), O. Barzilai (flint identification) and M. Smilanski (flint drawing).
An area of one and a half squares was opened on a slope covered with a thick layer of construction debris and modern refuse, after probe trenches dug with a backhoe indicated the presence of possible wall remains. The excavation (to a depth of 1.2 m below surface) ascertained that the remains were none other than a modern heap of medium-size flint stones within the refuse layer (min. height 0.6 m ; Fig. 1).
The ceramic artifacts inthe excavation dated to various periods and were not in situ. A hand axe ( $5.80 \times 11.04 \mathrm{~cm}$, thickness 3.2 cm ; Fig. 2), made of brecciated flint of the Mishash formation and dating to the Lower Paleolithic period, was found on surface. The hand axe was formed on a large flake by bifacial knapping along the base and right side of the flake. The left side of the hand axe was extensively flaked from the direction of the ventral surface, which was apparently intended to modify the tool. This artifact joins a group of hand axes that had previously been discovered in this region (B. Arensberg and O. Bar Yosef 1963. 'Emeq Rephaim. MeTiqufat Ha-Even 4-5:1-17 [Hebrew]; N. Shalem 1938. New Prehistoric Deposits in the Land of Israel. Ha-Teva ve Ha-Aretz, Volume 5, Booklet 6 (No. 1111), pp. 257:51, 53 [Hebrew]; M. Stekelis 1948. Rephaim-Baq'a: A Paleolithic Station in the Vicinity of Jerusalem. JPOS XXI: 80-97).


1. The excavation area and the stone heap in the center.


## (Volume No. HA-ESI 121 (2009

Jerusalem, Shu'fat
Final Report
Ya'akov Billig
During July 2006, a salvage excavation was conducted in Jerusalem between Shu'fat and the French Hill neighborhood (Permit No. A-4842; map ref. NIG 2225/6350; OIG 1725/1350), in an area slated for the construction of a car park and a maintenance center for the light railway. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Moriya Company, was directed by Y. Billig, with the assistance of R. Abu-Halaf (administration), V. Essman and V. Pirsky (surveying) and B. Tori (archaeological inspection).

A series of large stones, which turned out to be natural and not intentionally placed, was visible in the western part, between concrete foundations of remains of a modern building.
Sections of roads, in which two phases were discerned, were exposed c. 23 m to the east. A section of road (length 23 m ), oriented east-west, was attributed to the first phase. The road, leveled with a layer of light color soil, was delimited by curbstones. Next to the western end of the section was another road segment that branched off to the north (length 10 m ), whose western row of curbstones was destroyed by the construction of a modern building. Several small worn potsherds from the Late Roman-Early Islamic periods were found in the layers of soil beneath the road sections. Based on the construction and the remains of the road, it seems that it should be dated to the modern era. An alternative road (exposed length c .10 m , width $1-5 \mathrm{~m}$ ) was paved in the second phase, south of and parallel to the previous road sections. The paving of this road was done by means of 'soling' (compacted stones mixed with tar), which was typical to the time of the British Mandate. A narrow drainage channel ( 0.3 m ) of concrete ran along the curbstones on the shoulder of the road.
The exposed road sections predated, in all likelihood, the road that leads today to the village of Anathoth and they were probably from the first half of the twentieth century CE.

# (Volume No. HA-ESI 121 (2009 

## Jerusalem, ‘Atarot

Final Report
Ya'akov Billig


1. Location map.

2. Plan and sections.

3. The cistern, plan and sections.

4. The quarry that 'severed' two deep cup marks, looking north.

5. Pottery and stone vessels.

During April 2003, a salvage excavation was conducted along the northern fence of the 'Atarot airport (Permit No. A-3867; map ref NIG 2215/6412; OIG 1715/1412; Fig. 1), prior to the construction of the separation fence. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by Y. Billig, with the assistance of Y . Mizrahi (area supervision), R. Abu Halaf (administration), T. Kornfeld (surveying and drafting), M. Saltzberger (photography) and I. Pikovsky (pottery drawing).

The excavation was located on top of a spur north of the eastern end of the runway and near the southern houses of the Qalandiya refugee camp. A bedrock surface ( $15 \times 25 \mathrm{~m}$; Fig. 2), in whose eastern part were c. 20 relatively dense cupmarks (max. diam. c. 20 cm , max. depth c. 60 cm ), was exposed. It is unclear whether the cupmarks were natural or man-made, but their proximity to hewn pits (below) suggests they were related to them.

Nine shafts were found (diam. c. 1 m , average depth 1.5 m ); although no burial remains were discovered in them, they were probably hewn for use as shaft tombs, which were common for burial in the Bronze Age. Four of the shafts were located in the ceiling of a large bell-shaped cistern that was hewn in a later period (L2; below); two were in the center of the cistern's ceiling, which was supported by a column that separated between the shafts, and the other two were in the southern end of the cistern, causing a deviation in its circular outline. It seems that the shafts were added on to the cistern after it was hewn and one of the southern shafts was neatly blocked with stones (Fig. 3; Sections: 3-3, 4-4).
Two other shafts were discovered along the southeastern edge of the bedrock surface, in the area of the cupmarks. Only the northern part of the shafts and several cupmarks remained on the eastern edge of the bedrock surface after its southern part had detached and settled into a subterranean cavity (L5; diam. c. 9 m; Fig. 4). Other massive bedrock chunks from the cavity's ceiling were found fallen in its vicinity. The collapse of the subterranean cavity's ceiling probably stemmed from the multitude of cupmarks and shafts, bedrock cracking, undermining tree roots in bedrock cracks and a later quarry (below). A large quantity of various size stones that had filled the cavity prior to the collapse of its ceiling was discerned. The collapse of the ceiling reached a depth of $0.7-1.0 \mathrm{~m}$.
The cavity seems to have been a series of several shaft tombs, two of which can be seen along its eastern edge.
Three other shafts were discovered in their entirety. The first (L9) was not fully excavated since it was blocked with stones, bonded with a hard-lime deposit that hampered their removal. The second (L7) was not completely hewn because natural karstic cavities in bedrock were probably judged unsuitable for hewing by the quarrymen. It contained a few potsherds that dated to the Intermediate Bronze Age, including holemouth jars (Fig. 5:1, 2) and jars (Fig. 5:3, 4). The third shaft (L6), also surrounded by natural karstic cavities, was hewn to a depth of c. 1.7 m and branched out to a smal chamber ( $1.3 \times 2.2 \mathrm{~m}$, height $1.1-1.3 \mathrm{~m}$ ) in the southeast, which contained jar fragments, probably from the Intermediate Bronze Age (Fig. 5:5).
A large quantity of potsherds, mostly from Middle Bronze II and a few from the Intermediate Bronze Age, mixed with stones that covered the area, was found along the southern and eastern edges of the bedrock surface. An intact clay lamp, probably dating to MB II (Fig. 5:6), was found on top of the collapsed bedrock ceiling of the southern cavity (L5)

A bell-shaped cistern (L2; diam. c. 8 m , depth 2.5-4.0 m), meticulously quarried but not plastered, was hewn in a later period. It was quarried in a spiraled manner, namely its bottom was high in the south, lower in the east and deeper in the north and west. The support column stood at the end of the high part in the south. Bedrock bottom was perforated in its northeastern side and it seems that after quarrying had begun, the perforated bedrock was discerned and considered unsuitable for use; hence, the rock-cutting was suspended. The cistern contained various size fieldstones and a small amount of alluvium, as well as potsherds that dated to MB II and the Roman period. The stone fill seems to be intentional and was a result of stone clearance in the surrounding area. A non-excavated cave was located at the bottom of a hewn cliff, to the northeast of the cistern.
A quarry, later than the shafts and apparently dating to the Second Temple period on account of the few potsherds it contained, damaged some of the shafts and the cupmarks, located mostly in the south and west (L4). The quarry had possibly caused the collapse of the southeastern cavity's ceiling (L5). Rectangular stones (average size $0.30 \times 0.35 \times$ 0.80 m ) were carved out from the quarry.

A quarry with decreased rock-cutting activity was located on the northeastern edge of the bedrock surface. Its continuation to the north displayed a long high hewn step, at whose bottom was a cave (L10) that was not excavated. Eighty five flint items were discovered, all were knapping debitage, mostly flakes, a few chunks, blades and a single core for producing flakes. Datable flint tools were not found, yet a few fragments of a limestone vessel (Fig. 5:7) were discovered

It is unclear whether the exposed remains are connected to Site 114, Khirbat el-Hammam, which was documented in the 1968 survey (M. Kohavi (ed.), Judea, Samaria and the Golan, Archaeological Survey in 1968, Jerusalem, p. 182) and Site 179 in the Survey of the Hill Country of Benjamin (Y. Magen and I. Finkelstein [eds.] Archaeological Survey of the Hill Country of Benjamin, Jerusalem, pp. 163-164). The description of this site states that it is closer to the JerusalemRamallah road and building remains on several levels were observed. In addition, the description of finds from these surveys does not mention any artifacts from the Bronze Age. However, Site 180 of the Survey of the Hill Country of Benjamin, located on another ridge, c. 1 km south of our site, is characterized by nine blocked shafts that were probably used as burial sites for a settlement situated nearby.


1. Location map.


2. The cistern, plan and sections.

3. The quarry that 'severed' two deep cup marks, looking north.

4. Pottery and stone vessels.

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## Jerusalem, East Talpiyot

## Final Report

## Zubair 'Adawi


2. Caves C-A, plan and section

3. Pottery.

5. Cave D, entrance to Chamber 302, looking west.

7. Cave E, looking south.

9. Cave F, the opening of Kokh 510, looking north.

During June 2002, a salvage excavation was conducted in seven burial caves in the East Talpiyot neighborhood of Jerusalem (Permit No. A-3656; map ref. NIG 222/629; OIG 172/129), which were damaged by private construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by Z. 'Adawi, with the assistance of T. De'adle and B. Tori (assistants to excavation director), A. Hajian and V. Pirsky (surveying and drafting), D. Weiss (GPS), B. Zissu (field photography), A. Pikovsky (pottery drawing) and O. Raviv (stone laboratory).
The burial caves (A-G; Fig. 1), hewn in soft limestone bedrock, were found in two clusters, c. 500 m apart; Caves A-C (map ref. 22326/62967; Fig. 2)—in the northern slope of Jebel el- Mukkabir and Caves D-G (map ref. 22254-8/62950-1)—in the northern slope of Armon Ha-Naziv. The northern side of Caves A-C, which were adjacent to each other, was destroyed. The sides of these three caves displayed numerous fissures and the rock-cutting was careless and incomplete in many places. The artifacts recovered from all of the caves included a few potsherds, smashed bones and fragments of clay ossuaries. Soil fill that originated in the caves and was found next to the two clusters contained fragments of ossuaries and lids that dated to the Second Temple period. An engraved inscription was discovered on several fragments that belonged to one lid (below). Based on their plan and the ceramic artifacts, it seems that the caves were hewn in the Early Roman period (the time of the Second Temple) and formed part of Jerusalem's southern necropolis. Artifacts that pointed out to the apparent use of the caves in later periods were discovered in several caves.
Cave A. The cave included a rectangular chamber whose quarrying was incomplete (L1; c. $1.7 \times 2.2 \mathrm{~m}$, height c. 1.25 m ). It connected to a niche (L11; c. $0.70 \times 0.75 \mathrm{~m}$, depth c. 0.25 m ) and two burial kokhim (L2-0.55 $\times 1.70 \mathrm{~m}$, height $0.75 \mathrm{~m} ; \mathrm{L} 3-0.6 \times 1.6 \mathrm{~m}$, height 0.75 m ) that were at a higher level than that of the chamber and niche. The remains of another niche ( $\mathrm{L} 14 ; 0.20 \times 0.55 \mathrm{~m}$, height c .0 .4 m ), which may also have belonged to this cave, were discovered west of Kokh 3. The bottom of the cave was overlain with alluvium (thickness c. 0.2 m ), which yielded smashed human bones and several potsherds that could not be dated.

Cave B. The front of the cave (width 2.2 m , height 1.9 m ) was vertically hewn in a meticulous manner, yet the opening of the cave was not preserved. The cave consisted of two chambers (Loci 4, 13) and a burial kokh (L12). A bench (width c. 0.5 m , height c .0 .44 m ) was cut along the eastern side of Chamber 4 (c. $2.25 \times 2.40 \mathrm{~m}$, average height 1.2 m ) and a carved-out bone repository ( $\mathrm{L} 5 ; 0.5 \times 0.5 \mathrm{~m}$, depth 0.2 m ) was at the foot of the bench, near the chamber's northern side. A hewn step (length 1.6 m , width 0.4, height 0.2 m ) at the base of the chamber's southern side extended between the western side and the bench. A rectangular opening (width 0.5 m , height 0.6 m ) that led to Chamber 13 (width 2.7 m ) was hewn in the southern side of the chamber. A hewn double frame that had partly collapsed surrounded the opening. Kokh $12(0.70 \times 1.40-1.95 \mathrm{~m}$, height 0.7 m$)$, east of the two chambers and connected to them, was hewn at the level of Chamber 4. The cave's ceiling was not straight and cracks that existed at the time of quarrying the cave were clearly visible. Yellowish gray alluvium (thickness $0.2-0.3 \mathrm{~m}$ ) that was discovered on the bottom of the cave contained fragments of a thin-walled carinated bowl with a plain rim (Fig. 3:3), dating from the end of the first century BCE to the year 70 CE , as well as smashed human bones.

Cave C. The cave comprised a small chamber (L8), two burial kokhim (Loci 6, 9) and a niche (L7). The plan of the space that connected the different components of the cave is unclear. Chamber 8 was rectangular ( $1.05 \times 1.70 \mathrm{~m}$, height 0.7 m ) and its quarrying was incomplete. Kokh $6(0.6 \times 1.9 \mathrm{~m}$, height 0.7 m$)$ was hewn at the same level as Chamber 8 , whereas Kokh $9(0.9 \times 2.0 \mathrm{~m}$, height 0.8 m$)$ was at a lower level than Chamber 8. It is possible that Niche $7(0.5 \times 0.6 \mathrm{~m}$, height 0.5 m ) was intended as a bone repository or perhaps, it was a burial kokh whose quarrying was not finished. Brown alluvium (thickness $0.15-0.30 \mathrm{~m}$ ), overlaying the bottom of Chamber 8 and Kokh 6, contained fragments of a cup (Fig. 3:1), cooking pots (Fig. 3:6,8) and a jar (Fig. 3:9) that dated to the Early Roman period, particularly the first century CE, as well as a fragment of a Jerusalem rouletted bowl (Fig. 3:4) and a jar (Fig. 3:10) that dated to the Late RomanByzantine period (third-fourth centuries CE). It is possible that the later vessels were either swept into the cave or associated with later phases of use in the cave.

Cave D (Fig. 4). The cave, which had been plundered in the past, consisted of an elongated rectangular space (L310) that may have served as an anteroom and two burial chambers (Loci 301, 302). Space 310 ( $6.2 \times 8.3 \mathrm{~m}$, height 3.5 m ) was destroyed by mechanical equipment and is today open to the north. Another cavity ( $L 311$; $3.8 \times 9.0 \mathrm{~m}$, height 2.7 m ), accessed through the southeastern side of Space 310, became narrower and lower toward the inside. This was probably another chamber of the cave whose quarrying was never finished. Space 310 was used as an animal pen in recent generations. An opening (width 0.4 m , height 0.65 m ; Fig. 5) hewn in the western side of Space 310 led to the two burial chambers. The opening was composed of a large ashlar threshold stone (length 1.15 m , height 0.45 m ), with doorjambs and a lintel, carved out from a single block of stone, above it. Chamber $302(2.4 \times 2.7 \mathrm{~m})$ was partly excavated. Arched, rectangular openings were hewn in the western, southern and northern sides of the chamber. The southern and western openings probably led to kokhim or other burial chambers. The northern opening ( $0.45 \times 0.60 \mathrm{~m}$, height 1.1 m ) led to Chamber 301, whose northern part ( $2.2 \times 2.3 \mathrm{~m}$, height 1.8 m ) was destroyed during earthmoving work. A standing pit $(1.2-1.3 \times 1.9 \mathrm{~m}$, depth 0.2 m ) in this chamber was enclosed by a bedrock shelf (width 0.5 m ). Two kokhim (L303$0.7 \times 1.9 \mathrm{~m}$, depth $0.75 \mathrm{~m} ; \mathrm{L} 304-0.5 \times 2.0 \mathrm{~m}$, depth 0.75 m ) were discovered in Chamber 301. Kokh 303 was mostly destroyed, save its bottom and southern side. On a higher level above Kokh 304 was an arched niche ( $0.6 \times 1.2 \mathrm{~m}$, height 1.15 m ) that consisted of three hewn kokhim (L305- $0.35 \times 0.85 \mathrm{~m}$, height 0.6 m ; L306- $0.3 \times 0.6 \mathrm{~m}$, height 0.55 m ; L307- $0.35 \times 0.85 \mathrm{~m}$, height 0.55 m ). Kokh 307 was in the center and on a higher level than Kokhim 305 and 306 (Fig. 4: Section 3-3). The dimensions of the kokhim indicate that they may have been meant for ossuaries. The artifacts in the standing pit of Chamber 301 included fragments of several ossuaries and a lid, human bones that belonged to at least one individual, and a jar fragment (Fig. 3:12) that dated to the Ottoman period.

Cave E (Figs. 6, 7). Most of the cave was damaged by mechanical equipment during earthmoving work and its remains were discerned in the bedrock section. Remains of five kokhim (width $0.60-0.65 \mathrm{~m}$, height $0.75-0.85 \mathrm{~m}$ ) were visible; three were hewn in the southern side of the cave (Loci 401-403) and two-in its western side (Loci 404, 405). Remains of fours steps that descended toward the cave, probably in a shaft, were discerned on the bedrock side, above the kokhim.

Cave F (Fig. 8). The cave consisted of two square chambers (Loci 500,514) with hewn kokhim. The entrance was not discovered and it seems to have been hewn in the northern side of the cave that was not preserved. A hewn standing pit (L515; $1.6 \times 1.9 \mathrm{~m}$, depth 0.4 m ) in Chamber $500(3.0 \times 3.3 \mathrm{~m}$, height 1.75 m ) was enclosed by a bedrock shelf (width c . 0.7 m ). Three kokhim of similar sizes (Loci 501-506; 0.40-0.45 $\times 2.00 \mathrm{~m}$, height 0.75 m ) were hewn in each of the eastern and southern sides of the chamber. They had an arched ceiling and a rectangular frame around their openings. Human bones were discovered in each of the kokhim, except for Kokh 504. Although the northern side of the chamber was destroyed, the remains of three kokhim (Loci 507-509) were discerned along its bottom and only the dimensions of Kokh 509 could be reconstructed $(0.4 \times 1.9 \mathrm{~m})$. A hewn opening $(0.5 \times 1.0 \mathrm{~m}$, height 1 m$)$ in the southwestern corner of the chamber led to Chamber 514. Three arched kokhim were hewn in Chamber $514(2.3 \times 2.3 \mathrm{~m}$, height 1.4 m$)$, one in the southern side (L512; $0.50 \times 1.85 \mathrm{~m}$, height 0.7 m ) and two in the western side (Loci 510, 511; $0.5 \times 2.0 \mathrm{~m}$, height 0.7 m). A rock-cut rectangular frame surrounded the openings of Kokhim 510 and 511 and white chalk plaster was applied to
the area around them, probably to reinforce the blocking stone that was not preserved. Three illegible letters were engraved in the plaster of Kokh 510 (Fig. 9). A complete blocking stone ( $0.39 \times 0.54 \mathrm{~m}$ ) and fragments of two others (width 0.39 m ) were discovered in Chamber 500. Potsherds recovered from Kokh 506 included a burnished bowl from Iron III (seventh century BCE; Fig. 3:2), a cooking pot from the end of the first century BCE (Fig. 3:7) and a juglet from the first century CE (Fig. 3:13). It seems that the bowl fragment had been swept into the cave. Several ossuary fragments were discovered in Chamber 514.

Cave G (Fig. 10). The cave consisted of two chambers (I, II) with rock-cut kokhim. A standing pit (L600; c. $2 \times 2 \mathrm{~m}$, depth 0.5 m ) was hewn in Chamber I (c. $2.9 \times 3.1 \mathrm{~m}$ ). Two hewn kokhim (L601-0.20 $\times 0.35 \mathrm{~m}$, height 0.5 m ; L602-0.5 $\times 2.1$ m , height 0.7 m ) were cut in the western side of the chamber. The ceiling of Kokh 602 was concave and Kokh 601 was rounded and became wider toward the interior. A crack in the side of the kokh was partly treated with plaster. It is possible that due to this crack the hewing of the kokh was not completed and it was used as a repository for gathering bones. Two arched kokhim (L606-0.5 $\times 2.0 \mathrm{~m}$, height 0.7 m ; L607-0.45 $\times 0.60 \mathrm{~m}$, height 0.7 m ) were hewn in the eastern side of the chamber and three arched kokhim (L603-0.5 $\times 2.0 \mathrm{~m}$, height 0.8 m ; L605- $0.5 \times 1.8 \mathrm{~m}$, height 0.75 ; L604- $0.45 \times 2.00 \mathrm{~m}$, height 0.65 m ) were in the southern side of the chamber, as well as a rectangular niche close to the ceiling (L611-0.40 $\times 0.45 \mathrm{~m}$, height 0.4 m ) that contained bones and had a cut frame around its opening. Inside and on the bottom of Kokh 604 was a hewn elongated opening ( $0.35 \times 0.80$, height 0.8 m ) that led to Chamber II. A rectangular rock-cut standing pit (L608; $1.2 \times 1.4 \mathrm{~m}$, depth 0.25 m ), surrounded by a bedrock shelf (width 0.3 m ), was cut in Chamber II ( $1.7 \times 2.0 \mathrm{~m}$, height 1.5 m ). A single kokh (L609; $0.5 \times 2.2 \mathrm{~m}$, height 0.7 m ) in the southwestern corner of the chamber had, on its western side, a round hewn niche with a curved ceiling (L610; $0.4 \times 0.8 \mathrm{~m}$, height 0.75 m ). The finds in Standing Pit 600 included fragments of a cooking pot from the end of the first century BCE (Fig. 3:5), as well as several fragments of an ossuary and lid. The finds in Standing Pit 608 included human bones and fragments of a jar from the first century CE (Fig. 3:11).

## Inscription on the Ossuary Lid

Ronny Reich
Fragments of an ossuary lid with an engraved inscription (Fig. 11:1) were discovered in the excavation. Most of the fragments were restored, although the right side of the inscription was not found. One fragment with three engraved lines (Fig. 11:2) could not be connected to the lid. The lid is convex and the inscription is engraved lengthwise, in the middle of the high part. The left portion of the inscription is easily deciphered: למפתח. All that remained of the lamed is the upper end of the characteristic 'flag'. The marks to the right of the upper end of the lamed are probably the bottom part of that letter or part of another letter. The letter mem, in the word למפתn is closed (the final form of the letter); first, a long vertical line was engraved, followed by a curved line that was engraved to the right. The reading of the word is unclear and it joins other similar inscriptions that have been found on ossuaries and on the sides of tombs (J. Naveh, 1992, On Sherd and Papyrus; Aramaic and Hebrew Inscriptions from the Second Temple, Mishnaic and Talmudic Periods, Jerusalem, pp. 193-195 [Hebrew]). Nevertheless, the full formula of these inscriptions is i.e., 'and do not open'. Nothing remains of the negation word in the inscription. It should be noted that the part of the ossuary on the right of the long vertical line has deteriorated. The formula requires an explanation. The first thought that comes to mind is that the inscription was meant to protect the ossuary and the burial contained within it from grave robbers, namely from being opened for the purpose of plundering valuable objects. Then again, we know from tombs and ossuaries discovered undisturbed in Jerusalem that they are completely lacking in luxury items because the placement of valuable objects together with the deceased was not a practiced custom at the end of the Second Temple period. That being the case, what was the reason behind warning people from opening tombs? After all, old bones are of no use to anyone. It seems that the warning was meant to ensure that the bones would not be moved from their location and no other bones would be added to the ossuary. However, it seems that the warning in these inscriptions was not very effective. Many ossuaries contained the bones of more than one individual, despite the fact that according to its size, each ossuary was supposed to contain the remains of a single individual. As a result, harsher warnings were required to prevent the ossuaries from being opened. For example, an inscription on another ossuary (Naveh, ibid., p. 198, Fig. 138) warns that it is forbidden to profit from this ossuary (and by reusing the ossuary one benefits from it) because it (and its contents) were vowed by the deceased as a sacrifice to the Lord.
The right-hand part of the inscription is difficult to decipher. The remains of four symbols are visible, each one is likely to match more than one letter: aleph/zadi, dalet/resh/hey, vav/yod, (final) nun/(final) peh. The two center symbols (the two parts of the second symbol and the third symbol) are also likely to be parts of one letter. It seems that these four symbols are slightly lower than the left part of the inscription and they were probably written separately and not at the same time. A given name should appear here, but the symbols do not form a suffix of a first name that was customary in this period. The reading ארון (coffin) is the most reasonable, but it is difficult and not actually possible because an ossuary is not a burial coffin; it is referred to in Aramaic as nor חלתא (Naveh, ibid., p. 198, Fig. 138; L.Y. Rahmani, 1994. A Catalogue of Jewish Ossuaries, Jerusalem. Nos. 226, 461,502). If we suppose that the two middle symbols in the right part belong to one letter, then the following reading can be proposed: 'אין לפתוח (אותם) 'Do not open (them)'.


$\therefore ?_{7}$





5. Cave D, entrance to Chamber 302, looking west.

6. Cave E, plan and section.

7. Cave E, looking south.


9. Cave F, the opening of Kokh 510, looking north.


11. Ossuary fragments.

# (Volume No. HA-ESI 121 (2009 Jerusalem, North Final Report 

Annette Nagar


1. General view of excavation, looking northeast.

2. The southern rock side, looking south.

3. Rock-hewn steps, looking east.

During May 2007, a trial excavation was conducted near Hayyim Barlev Boulevard in Jerusalem (Permit No. A-5137; map ref. NIG 22194-200/63391-7; OIG 17194-200/13391-7), prior to the construction of the light railway. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Moriya Company, was directed by A. Nagar, with the assistance of R. Abu Halaf (administration), T. Sagiv (field photography), E. Belashov (drafting), R. Vinitsky (metallurgical laboratory), N. Katsnelson (glass) and D.T. Ariel (numismatics).
The excavation was carried out on a gentle hill slope that descends to the east, between the National Headquarters of the Israel Police and Ammunition Hill. The site is located along an ancient road that linked Jerusalem to Samaria. The excavation revealed a stone quarry on a bedrock outcrop (length c. 38.5 m ; Fig. 1).

Two vertically hewn bedrock sides (southern-width 0.86 m , height 0.27 m ; eastern-width 0.95 m , height 0.2 m ) and severance channels of three medium-sized stones that had not been completely quarried out were exposed in the southern part of the outcrop (Fig. 2). Two rock-hewn steps, c. 14.5 m north of these rock-cuttings, were discovered (Fig. 3). The upper step was narrow (length 1.45 m , width 7 cm , max. height 0.25 m ) and the lower step was wider (length 1.45 m , width 0.65 m , height 0.4 m ). Three severance channels around a stone ( $0.45 \times 0.55 \mathrm{~m}$ ) that had not been detached were exposed on the southern side of the lower step.

The ceramic finds from the excavation were mixed and ranged in date from the Iron Age until the Ottoman period. Other finds from the excavation included three coins, two of which dated to the second-third centuries CE (IAA 111736, 111737) and the third, found north of the excavation, to the fourteenth century CE (IAA 111738); pieces of lead and a glass fragment that is dated to the Roman-Byzantine periods. The finds were not discovered in situ; they apparently came from the alluvium or fill that was brought to the site when the adjacent road was paved. Hence, the date of the quarry is unknown.


1. General view of excavation, looking northeast.

2. The southern rock side, looking south.

3. Rock-hewn steps, looking east.
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## Jerusalem, Survey in Ramat Rahel

 Final ReportYehuda Dagan and Leticia Barda

During December 2006, a survey prior to development was conducted in the apple orchard of Kibbuts Ramat Rahel (Permit No. A-4966; map ref. NIG 22052-104/62786-824; OIG 17052-104/12786-824). The survey, on behalf of the Israel Antiquities Authority, was conducted by Y. Dagan and L. Barda, with the assistance of O. Barzilai and O. Marder (flint artifacts).

The survey area descends gently to the west in the direction of the Jerusalem-Bethlehem highway and it is mostly covered with an abandoned apple orchard. The soil in the area is red rendzina, in which numerous flint pebbles are mixed. It appears that mechanical equipment was used in the past to prepare the ground for an orchard and stones were cleared from the area. Seven survey sites were documented (1-7; Fig. 1). Large scatters of flint flakes that dated to the Lower Paleolithic period were documented on the surface in Sites 1, 2, 3 and 5. This is indigenous flint that was neither fluvial transported nor underwent later deposition. A fragment of a basalt bowl was collected at Site 2 and a few potsherds that dated to the end of Iron II (seventh-six centuries BCE) were gathered at Site 3. A section of flat fieldstones arranged on the ground was documented at Site 4 and may possibly represent part of the Roman road that linked Jerusalem to Bethlehem. Wall remains of farming terraces, aligned north-south, were documented at Sites 6 and 7; cypress trees are today planted on them. The remains at Site 7 were probably part of the High-Level Aqueduct to Jerusalem.


1. Survey map.

# (Volume No. HA-ESI 121 (2009 

## Jerusalem, 'Ir Gannim

Final Report
Annette Nagar


1. Location map.

2. Area E, Cave A, the blocking stone.

3. Area E, kokhim in the northern side.

4. Area E, Cave A, a lamp from the Roman period.

5. Area F, looking south.

During September, November and December 2005, a salvage excavation was conducted in the 'Ir Gannim neighborhood in Jerusalem (Permit No. A-4590; map ref. NIG 21630-44/62876-81; OIG 16630-44/12876-81), prior to the construction of residential buildings. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Kotler-Adika Construction Company, was directed by A. Nagar, with the assistance of R. Abu Halaf (administration), T. Kornfeld (surveying and drafting), T. Sagiv (field photography), R. Berin (final plans), C. Amit (studio photography), R. Vinitsky (metallurgical laboratory), F. Vitto and R. Bar-Natan (pottery reading), C. Hersch and I. Lidski-Reznikov (pottery drawing) and D.T. Ariel (numismatics).
Two areas (E, F) were excavated along the southeastern slope of a spur, between Costa Rica and Ha-Nurit Streets (Fig. 1). The antiquities exposed in Area E (c. 68 sq m ) included a rock-hewn burial cave (A), another hewn burial cave (B) whose quarrying was not completed, both dating to the Early Roman period and a wall (W1). The northern part of this wall and the area to its east had previously been excavated (HA-ESI 121 [A4556]). Two excavation squares were opened in Area F; four walls (W1-W4) and two hewn pits (Loci 113, 114) were exposed. The finds from the area were mixed and ranged in date from Iron II until the Byzantine period.

Area E (Fig. 2). A farming terrace covered Cave A, which was exposed by means of mechanical equipment. A rectangular courtyard (L506; $2.4 \times 3.8 \mathrm{~m}$ ), on whose floor a layer of black ash was discerned, fronted the cave. A rectangular entrance ( $0.4 \times 0.6 \mathrm{~m}$; Fig. 3), whose blocking stone was discovered nearby (Fig. 4), was hewn in the northern side of the courtyard. The entrance led to a burial chamber ( $2.5 \times 2.6 \mathrm{~m}$ ) that had three rectangular kokhim (lIII; Fig. 5) in its northern side. The entry to Kokh I was c. 0.4 m higher than the floor of the chamber and its blocking stone was lying alongside it, unlike the blocking stones of Kokhim II and III that were found in situ. All the kokhim were empty. Four stone ossuaries, two fragments of ossuary lids and scattered human bones that were not examined were discovered in the burial chamber, mostly along its eastern side. Two of the ossuaries were intact ( $1-0.15 \times 0.34 \mathrm{~m}$, height $0.16 \mathrm{~m} ; 2-0.25 \times 0.52 \mathrm{~m}$, height 0.24 m ; Fig. 6) and contained human bones. Ossuary 1 is especially small and one of its long sides is decorated with two incised complete rosettes and two half rosettes within a ring frame. Ossuary 2 has an arched lid. An intact lamp decorated with seven crosses and dating to the third-fourth centuries CE (Fig. 7) was discovered in the northwestern corner of the burial chamber, as well as a bronze earring (diam. 1.6 m , thickness 0.1 m ; Fig. 8) next to it. The plan and the stone ossuaries indicate that the cave was apparently hewn in the Early Roman period and continued to be used until the third-fourth centuries CE.
Cave B consisted of just a rectangular courtyard ( $3.5 \times 5.5 \mathrm{~m}$ ) that had two hewn sides. The beginning of an entrance $(0.6 \times 0.7 \mathrm{~m}$, depth 0.1 m$)$ was discerned in the northern side of the courtyard and remains of plaster, composed of ground chalk and small fragments of stone, were discovered on the eastern side of the courtyard. The proximity to Cave A and the plan of the courtyard indicate that this cave should also be dated to the Roman period. Burial caves from the Early Roman period had been documented nearby in the past (A. Kloner, 2000, Survey of Jerusalem, the Southern Sector, Site 33) and this region seems to have been a large burial field during this period.
The southern part of a wall (W1; length 4.8 m , max. width 0.3 m ; Fig. 9) was exposed in an area of farming terraces above Cave A. The wall, built of medium and large fieldstones, was preserved a single course high. This was probably a retaining wall of a farming terrace that was part of the farming terraces system in the region.
Area $\mathbf{F}$ (Figs. 10, 11). A wide wall (W1; length 5.45 m , width $0.50-0.95 \mathrm{~m}$; Fig. 12) was discovered in the western part of the excavation area. Wall 1, built of two rows of various size ashlar stones with a core of fieldstones and preserved three courses high ( 1.05 m ), was founded on bedrock. The southern face of the wall was mostly built of extremely large stones. Wall 1 extended to the east and west, beyond the limits of the excavation. South of Wall 1 were the scant remains of another wall (W2; length 3.25 m , width 0.3 m ), which was built on bedrock of fieldstones and ashlars and was preserved a single course high. It seems that this was a retaining wall of a farming terrace that was dismantled when the area was exposed prior to the excavation. A wall ( W 3 ; length 2.25 m , width 0.65 m , height 0.85 m ) in the center of the excavation area was founded on soil fill (thickness 1 m ), deposited on bedrock and above W1. Wall 3, preserved two courses high, was built of two rows of medium-sized fieldstones. The northern end of W3 adjoined another wall (W4) that was built of very large stones, which were founded on alluvium fill that covered bedrock. Two hewn pits (installations ?; L113-0.6 $\times$ 0.9 m , depth 0.8 m ; L114- $0.35 \times 0.85 \mathrm{~m}$, depth 0.4 M ; Fig. 13), separated by a partition wall (W5), were exposed in the eastern part of the excavation area.
The ceramic finds from Area F were mixed and dated to Iron II and the Early Roman and Byzantine periods. The Iron II finds included a bowl fragment (Fig. 14:1). The finds from the Early Roman period included a bowl (Fig. 14:2), cooking pots (Fig. 14:3-6), jars (Fig. 15:1-16), jugs (Fig. 14:7-13), juglets (Fig. 14:14-18), two of which were fragments of fusiform ungentaria (14, 18), a flask (Fig. 14:21) and lamps (Fig. 14:19, 20). The finds from the Byzantine period included a bowl with a rouletted design (Fig. 16:1) and basins (Fig. 16:2-12). Other artifacts in Area F included a mother-of-pearl shell and two coins: one was struck in Jerusalem during the reign of Alexander Yannai (104-76 BCE.; IAA 110023) and the other was minted in Ashqelon during Trajan's reign (112/113 CE; IAA 110022). A loom weight of blue glass was discovered 20 m east of the excavation area (Fig. 17).
It seems that the remains in Area F belonged to two construction phases. The early phase consisted of Wall 1, which may have been part of a building that was not preserved. The pottery finds of the wall dates to no later than the Byzantine period. After Wall 1 was no longer in use, Walls 2 and 3 were built in the later phase and apparently served as retaining walls for farming terraces that were dominant in the region.




5. Area E, kokhim in the northern side.

6. Area E, Cave A, Ossuary 2.

7. Area E, Cave A, a lamp from the Roman period.


10. Area F, plan and sections.

12. Wall 1, looking east.

13. Pits 113,114 , looking southwest.

14. Pottery: Iron II and the Roman period.




15. Pottery: Early Roman-period jars.

16. Pottery: Byzantine-period bowls.


# (Volume No. HA-ESI 121 (2009 

Jerusalem, the Jewish Quarter Final Report



1. Location map.

2. Pottery: bowls.

3. Pottery.

4. Glass.

Rina Avner
During June 2007, a trial excavation was conducted at 5 Misgav Lidakh Street in the Jewish Quarter (Permit No. A-5145; map ref. NIG 22203/63153; OIG 17203/13153; Fig. 1), in the wake of lowering floor levels in a private house. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by Mrs. A. Kremintski, was directed by R. Avner, with the assistance of Y. Ohayon (administration), V. Pirsky and D. Porotsky (surveying), T. Sagiv (field photography), M. Avissar (ceramics), I. LidskiReznikov (pottery drawing), Y. Gorin-Rosen and N. Katsnelson (glass) and C. Hersch (glass drawing).
The excavation was conducted inside two of the building's rooms, north of the inner courtyard (Area N; Fig. 2) and east of it (Area E). Walls and pillars, partly incorporated in the current building, as well as fragments of pottery and glass vessels from the Mamluk (thirteenth century CE) and Ottoman (fifteenth-sixteenth centuries CE) periods, were exposed.

## Area N

Three main construction phases were identified in the area (c. 21 sq m ).
First Phase. Rectangular engaged pillars located at the end of wall (W11) were ascribed to this phase. The pillars were built of large meticulously dressed ashlar stones and gray mortar. The foundation courses of the pillars were not exposed. A section of a brown, tamped earthen level (L15; $0.15 \times 0.20 \mathrm{~m}$ ) was uncovered alongside the eastern pillar. It was probably the remains of a floor or floor bedding that overlaid fragments of pottery and glass vessels from the Mamluk period.
Second Phase. Wall 11 and a red plaster floor (L10) were ascribed to this phase. A section of the floor ( $1.0 \times 3.5 \mathrm{~m}$ ) was preserved next of the western end of W11. A red strip that ran along W11 indicated that Floor 10 abutted it. The foundation of W11 was not exposed; hence, Floor 10 was probably not the original floor contemporary with the construction of the wall and an earlier floor must be below it. Floor 10 was placed on top of a vault, which covered a cistern that was coated with gray hydraulic plaster (L18). The vault was built of medium-sized fieldstone slabs and hard gray mortar. It collapsed when its dismantling had begun and the excavation was suspended. A wall (W12) that was incorporated in the eastern pillar from the first phase should probably be also ascribed to this phase.
The third and final phase is of the modern era. A concrete floor $(1 \times 2 \mathrm{~m})$ in the western part of the room and a layer of white plaster, as well as reinforced concrete that was meant to strengthen the walls of the structure, were attributed to this phase.

## Area E

Three main building phases were discerned in the area (c. 14 sq m ).
First Phase. A wall and two pillars were ascribed to this phase. The wall ( W 26 ; length 6.4 m , width 0.75 m ), built of large ashlar stones and gray mortar, was oriented north-south. The base of one of the pillars was incorporated in W26, whereas the other pillar was engaged in the room's southern wall (W23), 2.2 m south of the first pillar. It seems that the two pillars flanked an opening in W26. A flagstone to the west of the presumed opening location was the only remnant of a stone floor that abutted W26.
Second Phase. The blockage (W26A) in W26 should be attributed to this phase, as well as an east-west oriented wall (W27; length 3.5 m , width 0.7 m ) whose foundation courses were not exposed. A plaster floor (L24) abutted W27 from the south and at a level that was higher than the base of the pillar in W26 in the west. It therefore seems that W27 and the blockage of the passageway in W26 belong to the same phase.
Third Phase. The remains from this phase were modern. The walls of a room (W21-W24), a channel that had cut Floor 24 from the west and an iron sewage pipe embedded in it, as well as gray reinforced concrete mixed with gravel that reinforced the walls of the room, were all ascribed to this phase.

The limited scale of the excavation precluded the evaluation of the building's plan from the Mamluk period. That notwithstanding, the dimensions of the opening in W26 indicate that this was a public building, which was probably also associated with the contemporary remains exposed at the corner of Misgav Ladakh and Ha-Shalshelet Streets (Permit No. A-5109). The building also continued to be used in the Ottoman period, undergoing changes that included the construction of an underground water reservoir, installing a new floor (L10) and building walls (W11). The structure was reinforced at the end of the twentieth century CE and continued to be in use in the modern era.

## Pottery

Miriam Avissar
The fill in the two rooms contained potsherds, mostly dating to the Mamluk period, primarily to the thirteenth century CE. These included a handmade bowl, slipped red and painted white (Fig. 3:1), a red-slipped bowl, painted white on its sides and its pedestal is decorated with diagonal lines and rhomboids (Fig. 3:2), a base of a bowl decorated with a star pattern on both sides (Fig. 3:3), a bowl slipped with a brown glaze and decorated with a yellow stripe on and below the rim (Fig. 3:4), a bowl decorated in a similar manner and adorned with wavy or curved lines, without stripes (Fig. 3:5), a greenglazed and slipped bowl whose base is decorated on the inside with light green stripes (Fig. 3:6, 7) and a yellow-glazed and slipped bowl adorned with a brown stripe on its rim (Fig. 4:8). The latter is characteristic of Jerusalem and its sides are decorated with an incised geometric pattern, painted brown that is probably meant to imitate letters.
Two bowl fragments that may belong to the same vessel are made of white clay (frit or soft paste). They are decorated with a blue painted geometric pattern and black outlines and are slipped with a transparent green glaze, paint runs of which are evident near the base (Fig. 3:9, 10). These bowls are dated to the fifteenth or sixteenth century CE, based on the free style of the decoration that is visible on the base and along the interior. A handmade krater, slipped red and decorated with a reticulated pattern and rhomboids (Fig. 4:1), belongs to a type that continues to appear in the fourteenth century CE. The two jugs (Fig. 4:2, 3) and the pomegranate-like vessel that is mold-made and decorated with a pinecone motif (Fig. 4:4) are characteristic of the thirteenth century CE. The sandal-like lamp (Fig. 4:5) and the pipe (Fig. 4:6) have a broad chronological range that also includes the thirteenth century CE .

## Glass

Natalya Katsnelson
The excavation yielded five glass fragments from unsealed construction fills.
The fragments are parts of small bowls, beakers and oil lamps, dating to the Mamluk period. These include a rounded rim of a colorless bowl/beaker with slanted walls (Fig. 5:1) and fragments of two bowls of purple glass, decorated with ar opaque white trail marvered into the surface (Fig. 5:2, 3). The small rounded bowl (Fig. 5:2) has an applied trail around its incurved rim, continuing in a rich festoon pattern on the body. The bowl in Fig. 5:3 is decorated with a marvered spirally. wound trail that is blown into an open mold, creating vertical ribs that rise from the bottom.
Two cylindrical beakers or oil lamps are made of colorless glass covered with a crust of weathering. The beaker in Fig 5:4, with its overhanging rounded rim, could have also served as an oil lamp, as did the beaker in Fig. 5:5, which has twc external horizontal folds on the body, probably for suspension.
Comparisons come from other excavations in the Jewish Quarter of Jerusalem's Old City. N. Brosh (2005. Islamic Glass Finds of the Thirteenth to Fifteenth Century from Jerusalem—Preliminary Report. Annales du $16^{e}$ congrès de l'associatior internationale pour l'histoire du verre, London 2003. Nottingham. Pp. 186-190) suggested that similar colorless anc marvered glass vessels were manufactured in Jerusalem from the thirteenth to the fifteenth centuries CE.
The vessels from Misgav Ladakh Street, although not from stratigraphical contexts, are additional examples of local glass


1. Location map


2. Pottery: bowls.


0


10

4. Pottery.


## (Volume No. HA-ESI 121 (2009

## Jerusalem, Ramat Rahel

 Final ReportOmry Barzilai, Michal Birkenfeld and Onn Crouvi
During May 2006, a salvage excavation was conducted at Ramat Rahel (Permit No. A-4776; map ref. NIG 221392-414/629000038; OIG 171392-414/129000-038), in the wake of construction work. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by 'Shikun 'Ovdim' construction company, was directed by O. Barzilai (photography) and M. Birkenfeld, with the assistance of T. Kornfeld (section drawing), O. Crouvi (geology), M. Smilansky (flint drawings) and O. Marder and A.M. Buler (comments on paper).
The site was discovered by N. Agha at the building site of Ramot Rahel in the Talpiyot-East Talpiyot district in south Jerusalem. At the time of discovery, more than $80 \%$ of the site was destroyed. The exact size of the Ramat Rahel Palaeolithic site is unclear, as most of this area is built-up (Fig. 1). Still, it seems to have extended over a large area, since lithic concentrations, including hand axes, were noted in the fields of Qibbuz Ramat Rahel. The site lies within a flat elongated north-south plateau, at the eastern edge of the regional Mediterranean-Dead Sea water divide (c. 780 m asl; Fig. 2). The geological unit in the area is the Mishash formation, composed of thick layers of chert and chalk (overall thickness 12 m ). It is mantled by sediments and soils (overall thickness 14 m , based on engineering drills). Within the upper 6 m of these sediments, a square ( 2 $\times 2 \mathrm{~m}$ ) whose contents were dry screened, using a 5 mm mesh, was opened; 12 probe trenches (1-IV; 1-8) were cleaned and diagnostic flint artifacts from the dirt piles around the construction site were collected.

The exposed sediment and soil sequence consisted of three Pedo-sedimentary units (Fig. 3; Table 1). The upper Unit 1 (thickness $0.2-0.8 \mathrm{~m}$ ) is a recently disturbed soil profile, consisting of scattered chert clasts mixed with modern waste. This soil underwent agricultural use and thus, was not analyzed. Unit 2 is a clay-textured buried vertisol (thickness $0.5-$ 1.2 m ), containing Byzantine potsherds and Paleolithic flint artifacts. An abrupt wavy unconformity (gilgai micro-relief) separates this unit from theunderlyingUnit 3, which is a clay-textured buried vertisol, with cracks, slikenslides and manganese concretions (thickness $>4 \mathrm{~m}$ ). The evidence suggests that this unit and, to a lesser extent, Unit 2, comprised a high amount of swelling clay minerals (>30\%). A calcic horizon (thickness c. 1 m ) composed of $20-30 \%$ calcite nodules (size 1-3 cm), appears at a depth of c .0 .5 m from the top of Unit 3. Most of the Paleolithic flint artifacts were found scattered in this unit, having no horizontal order

Table 1: Pedo-sedimentary unit characteristics

| Unit | 1 | 2 | 3 |
| :---: | :---: | :---: | :---: |
| Thickness (m) | 0.2-0.8 | 0.5-1.2 | +4 |
| Soil type | N/A | Vertisol | Vertisol |
| Color (dry; determined by Munsell Color Charts) | N/A | Brown <br> (7.5YR 4/2) | Dark grayish brown (10YR 4/2) |
| Field texture | N/A | Clay | Clay |
| Grain-size fractions (\%): Grainsize distribution was analyzed using the Malvern MS-2000 laser diffraction (LD) instrument. The LD underestimates the clay fraction comparing the traditional methods (e.g., pipette): 15\% clay measured using the LD is equivalent to $\sim 40 \%$ clay measured using traditional methods. |  |  |  |
| Medium and coarse sand (260$2000 \mu \mathrm{~m}$ ) | N/A | 0 | 0 |
| Fine sand (63-260 m ) | N/A | 6 | 3 |
| Silt ( $2-63 \mu \mathrm{~m}$ ) | N/A | 78 | 82 |
| Clay ( $<2 \mu \mathrm{~m}$ ) | N/A | 16 | 15 |
| Structure | N/A | Angular blocky | Angular blocky |
| Boundary | Gradual and smooth | Abrupt and wavy (Gilgai micro relief) | Not exposed |
| Calcite (\%)Calcimeter used for analysis; error is 5\% | N/A | 10.7 | 11.3 at the calcic horizon 9.1 beneath the calcic horizon |
| Special features | Chert clasts, Modern waste | Flint tools and pottery | Cracks, slikenslides; common very coarse irregular calcite nodules; few fine Mn concretions; big chert clasts (0.5-1 m) at lower part; flint tools |

Throughout the excavation, a total of 4073 flint items was collected, comprising 1973 chipped stone artifacts and 2100 natural flint chunks (Table 2). Most were abraded and heavily patinated, with only a few fresh items. The flint type was local brecciated Campanian flint, common to the site area. Among these were extremely large blocks ( $20 \times 50 \times 50 \mathrm{~cm}$ ) and small chips $(1 \times 1 \times 1 \mathrm{~cm})$ that were naturally embedded in the sediment of Unit 3 (Fig. 4).

| Excavation | (test pit) | East-section cleaning | Trenches 1-8 | Trenches I-IV | Surface | Total (n) | Total (\%) |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| PE | 16 | 107 | 19 | 52 | 62 | 256 | 31 |
| Flakes | 41 | 175 | 46 | 74 | 121 | 457 | 56 |
| Levallois | 0 | 0 | 2 | 2 | 1 | 5 | 1 |
| Blades | 2 | 14 | 3 | 7 | 9 | 35 | 4 |
| CTE | 7 | 27 | 11 | 11 | 13 | 69 | 8 |
| BS | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Total | 67 | 323 | 81 | 146 | 206 | 823 | 100 |


| Debitage | 67 | 323 | 81 | 146 | 206 | 823 | 42 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Debris | 551 | 312 | 5 | 83 | 12 | 963 | 49 |
| Tools | 3 | 39 | 10 | 24 | 32 | 108 | 5 |
| Cores | 4 | 16 | 10 | 6 | 17 | 53 | 3 |
| Total | 625 | 690 | 106 | 259 | 267 | 1973 | 100 |
| Total artifacts | 628 | 696 | 110 | 264 | 273 | 1973 | 48 |
| Natural pieces | 391 | 982 | 193 | 460 | 74 | 2100 | 52 |
| Total Flint | 1019 | 1678 | 303 | 724 | 347 | 4073 | 100 |

The lithic assemblage comprised mainly debitage and debris, while cores and tools were extremely rare. The few burnt items $(\mathrm{N}=36)$ may point to fire activities at the site
Technologically, two flake industries were identified. The first and dominant one was of unprepared flakes (Figs. 5, 6:13). This knapping method was relatively simple, lacking preparations. This is supported by the debitage composition of mainly flakes and primary elements, while core trimming elements that usually imply planning, were scarce. The target products were thick flakes that could be divided into two groups according to size: medium ( $6-8 \mathrm{~cm}$ ) and small (3-4 cm). The size seems to be an outcome of the initial core size rather than their ordinal stage within the reduction sequence.
The second and minor industry was Levallois, represented only by five flakes (Fig. 7). As opposed to the thick flakes, the thin Levallois blanks had a curved profile and were carefully prepared. Their low quantity in the assemblage was probably related to raw material. The local brecciated flint is hard and tends to break; hence, it is unsuitable for producing thin items, such as the Levallois flakes.

The cores consisted of six types (Table 3). The most frequent ( $N=16$ ) were polyhedral flake cores (Fig. 6:4), which had at least three platforms with no hierarchy among them. The central surface cores $(N=10)$ were the second most frequent type, as exemplified by a bifacial tool made on an exhausted core (Fig. 8:1). Conceptually, they resembled Levallois technique, lacking preparations by having a preferential flaking platform. The rest were core on flakes, tested nodules, core fragments ( $\mathrm{N}=8$ each) and blade cores ( $\mathrm{N}=3$ ).

Table 3. Core-type frequencies

| Type | N | $\%$ |
| :--- | :--- | :--- |
| Nodules | 8 | 15 |
| Polyhedral cores | 16 | 30 |
| Blade cores | 3 | 6 |
| Preferential | 10 | 19 |
| Cores on flakes | 8 | 15 |
| Core fragments | 8 | 15 |
| Total | 53 | 100 |

The tools consisted of 108 items, with a predominance of scrapers and retouched flakes (Table 4). Rounded, side and distal sub-types were common within the scrapers ( $\mathrm{N}=45$; Fig. 8:2, 3). The retouched flakes ( $\mathrm{N}=28$ ) included fine and inversely retouched items (Fig. 8:4, 5). Some of the tools were quite massive, having a bifacial retouch (Fig. 9). The remainders were notches and denticulates, retouched blades, burins, perforators, pointed flakes and varia.

Table 4. Tool-type frequencies

| Type | N | $\%$ |
| :--- | :--- | :--- |
| Retouched flake | 28 | 26 |
| Retouched blade | 6 | 6 |
| Pointed flake | 4 | 4 |
| Notch/denticulate | 9 | 7 |
| Scraper | 47 | 43 |
| Perforator | 2 | 2 |
| Burin | 2 | 2 |
| Bifacially retouched tool | 4 | 4 |
| Varia | 6 | 6 |
| Total | 108 | 100 |

The excavation at Ramat Rachel revealed important aspects regarding the site geology, post depositional processes, function and chronology
Geologically, the origin of Unit 3 sediments is probably a combination of two processes: (1) Long-distance dust transport and deposition from distal sources (i.e., the Sahara). The chert of the Mishash formation usually forms a rough landscape, making it an ideal trap for eolian dust; and (2) In-situ chemical weathering of bedrock and of eolian dust that can partly explain the high amount of clay minerals. Unit 2 is assumed to be mostly of eolian origin, since no rock outcrops were available for chemical weathering during its formation.

The major post-depositional process at the site seems to have been a vertical movement (Pedo-turbation). The Paleosol of Unit 3, which contained most of the flint artifacts, shows the characteristics of a swelling clay soil (vertisol): clay texture, weakly expressed horizontality, lack of color change, slikenslides and wavy micro-relief. These findings suggest Pedo-turbation of the soil.
The upper boundary of Paleosol in Unit 3 is a sharp wavy micro-relief, known as gilgai, which is common in swelling clay soils, such as Vertisols. This boundary is also an unconformity that probably marks the decrease in the accumulation/formation rate of Unit 3 . The occurrence of the calcite nodules in Unit 3 is probably related also to this unconformity, which enabled soil development and the calcite accumulation, 0.5 m below the contact. It is suggested that during this time (the unconformity between Units 3 and 2), the Palaeolithic site was active, namely knapping activity took place. Since the soil Pedo-turbation continued due to wetting and drying cycles, the flint artifacts fell into the exposed cracks, moving downward and later upward through the soil. This process is probably also responsible for the abrasion of the tools and the patina
Nevertheless, we can not rule out the possibility that the genuine site was set in the lower part of Unit 3, close to the contact with bedrock, because the flint items, including large flint blocks, are embedded within Unit 3, having no horizontal order. Furthermore, the decrement in density along the profile (from Unit 3 to Unit 1) suggests that they had come from below.
The site function is quite difficult to estimate, since it is in secondary deposition and no organic materials (bones) were preserved. However, we assume it is related to the flint source, as large chert blocks were found embedded in Unit 3. These indicate the proximity of a flint exposure/s and even today, brecciated Campanian chert exposures are visible in at
least three localities within the site area (see Fig. 2).
Chronologically, it is rather difficult to date the lithic assemblage as it comprised mainly non-diagnostic flake products. Still, it seems to share characteristics with levels A1-2 at 'Emeq Refa'im, which were attributed by the excavators to the Achelo-Yabrudian complex (Arensburg, B. and O. Bar Yosef. 1962. Emeq Rephaim (1962 excavation). Mitekufat Haeven 4-5:1-16). Both sites have a high occurrence of unprepared flakes, accompanied by low indices of Levallois and dominance of scrapers within the tools is discerned. Technologically, the Ramat Rahel assemblage fits the Late Lower Palaeolithic/early Middle Palaeolithic period, due to the high
presence of unprepared flakes that are produced from polyhedral and central surface
cores, together with a minor presence of Levallois flakes, resembling the assemblage from Kefar Menahem Lashon (Goren N. 1979. Kefar Menahem Lashon. Mitekufat Haeven 16:69-87).

The site of Ramat Rahel, together with 'Emeq Refa'im and the recently discovered Kalandiya site, indicate that the Jerusalem area was inhabited during the Palaeolithic period. At present, it seems that all three are open air sites located next to flint sources. Their occurrence at the top of the Judean hills must have been interlinked with other sites in the region, possibly with some of the cave sites in the Judean desert.


2. The excavation area, looking west.

3. The east section of the excavation.


2

5. Flakes.

$\stackrel{+}{2}$
7. Levallois flakes.


9. Bifacial retouched tool.

## Jerusalem, Har Homa

 Final ReportYehuda Dagan and Leticia Barda
29/9/2009

2. Winepress 5, looking south-east.

3. Capstone on Cistern 6, looking south.

4. Opening to Burial Cave 7. looking west.

6. Farming Terrace 1, looking north.

7. Cup marks hewn in bedrock surface (23), looking north-east.

During June 2006, a survey prior to development was conducted at Har Homa (Permit No. A-4821; map ref. NIG 2215-25/6245-55; OIG 1715-25/1245-55), in a region slated for the construction. The survey, on behalf of the Israel Antiquities Authority, was directed by Y. Dagan and L. Barda.

Two hills were surveyed east of Giv'at Homa and west of Khirbat Luka, c. 500 m from Khirbat Mazmuriya, in a region that had previously been surveyed (Fig. 1; A. Kloner, 2002, Survey of Jerusalem, The Southern Sector, Sites 134, 135 and Site 136-Kh. Mazmuriya).

Rock-hewn installations were surveyed on the northern hill, including a winepress (Figs. 1:5; 2); cup marks (Fig. 1:8, 12, 13); two hewn cisterns with round shaft openings (Fig. 1:6, 18), one of which was covered with a round capstone, (Fig. 3 ); and two burial caves, fronted by remains of courtyards (Figs. 1:7, 16; 4, 5). Numerous potsherds that dated to the Roman period were found in the opening of Burial Cave 16. Other antiquities included a bodeda for producing oil that consisted of a hewn basin connected by way of a narrow channel to a cup mark (Fig. 1:9), two adjacent rock-hewn elliptical shafts (Fig. 1:15) that were surrounded by a dense concentration of potsherds and two rock cuttings: remains of an installation (Fig. 1:11) and a hewn channel (Fig. 1:14).
Potsherds that ranged in date from Iron II until the Byzantine period were found on the surface, at the top of a rocky hill. Fieldstone-built farming terraces (Figs. 1:1-4, 17, 21; 6) and caves (Fig. 1:10, 19, 20) were surveyed along the slopes of the hill.
The antiquities on the southern hill included three caves (Fig. 1:28-30), a quarry in which a stone that had not been detached was discerned (Fig. 1:26), farming terraces built of fieldstones (Fig. 1:22) and dressed stones (Fig. 1:27) and a concentration of dressed stones (Fig. 1:25).
Small cup marks arranged in rows were hewn on a bedrock surface, located between the two hills (Figs. 1:23; 7) and a rectangular rock hewn tomb (Fig. 1:24) was noted close to this surface.

Rock-hewn agricultural installations that dated to various periods were discovered at most of the survey points; these served the people of the adjacent settlements, Khirbat Luqa and Khirbat Mazmuriya. The ceramic finds dated to the Roman and Byzantine periods. The small bedrock-hewn cup marks (No. 23) probably attest to a nearby prehistoric site (Neolithic?).


1. Survey map.

2. Winepress 5 , looking south-east.

3. Capstone on Cistern 6, looking south.

4. Opening to Burial Cave 7, looking west.

5. Opening to Burial Cave 16, looking north-west.

6. Farming Terrace 1 , looking north.

7. Cup marks hewn in bedrock surface (23), looking north-east.

8. Plan and sections.

9. The cistern, looking northeast.
(Volume No. HA-ESI 121 (2009
Jerusalem, Liberty Bell Park Final Report

Gideon Solimany and Amit Re'em
13/9/2009
During October 2001, a salvage excavation was conducted on Pinsker Street in Jerusalem (Permit No. A-3522; map ref. NIG 22086/63070; OIG 17086/13070), prior to the construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by G. Solimany and A. Re'em, with the assistance of V. Essman (surveying).

Three phases were discovered in the excavated area ( $4 \times 5 \mathrm{~m}$; Fig. 1) .
Phase 1. An entrance (L100; height 0.5 m , width 0.5 m ) to a burial cave that was surrounded by a frame for a rolling stone (L101; threshold dimensions $0.4 \times 2.0 \mathrm{~m}$, depth 0.2 m ) was discovered. Part of the burial chamber (L102) and a burial trough (L103) were preserved in the cave.
Phase 2. The area was turned into a quarry (L104) that destroyed the cave and the negatives of quarried stones were discerned in its center. The fill in the quarry contained alluvium and gravel from the rock-cutting.
Phase 3. A cistern whose ceiling had collapsed and was both built and hewn (L105; diam. 1.8 m , height 1.4 m ; Fig. 2) was found. The northern side of the cistern was bedrock-hewn and the other sides were built of fieldstones and pale gray mortar. Whitish layers of hydraulic plaster that contained grog, small pieces of gravel and pieces of charcoal and lime were applied to the sides of the cistern. The fill in the cistern contained a large amount of silt that was devoid of potsherds or any other datable finds.
Hence, it was difficult to date the documented phases.


1. Plan and sections.

2. The cistern, looking northeast.

# (Volume No. HA-ESI 121 (2009 <br> Jerusalem, the Western Wall Plaza Excavations, 2005-2009 Preliminary Report 



1. Location map.

2. Iron Age building, looking east.

3. A personal seal bearing a decoration.

4. The cardo, looking southwest.

5. A pavement of tesserae and marble fragments in secondary use, looking east.

## Shlomit Weksler-Bdolah, Alexander Onn, Brigitte Ouahnouna and Shua Kisilevitz

 23/9/2009Large-scale archaeological excavations were conducted from 2005 to 2009 in the northwestern part of the Western Wall plaza in Jerusalem (Permit Nos. A-4604, A-4710, A-5002, A-5432, A-5568; map ref. NIG 22219-20/63155-58; OIG 17219-20/13155-58; Figs. 1, 2). The excavations, undertaken on behalf of the Israel Antiquities Authority and initiated and underwritten by the Western Wall Heritage Foundation, were directed by S. Weksler-Bdolah and A. Onn, with the assistance of B. Ouahnouna, S. Kisilevitz, L. Shilov, P. Betzer and I. Zilberbod (area supervision), Y. Ohayon, R. Abu Ta'a, A. Gavri'eli and E. Bahar (administration), B. Ajami (safety inspection), V. Essman, M. Kipnis, M. Kunin, T. Kornfeld and V. Pirsky (surveying), T. Sagiv, A. Peretz and S. WekslerBdolah (field photography), D. Gahali and P. Partush of Skyview Company (baloon photography), N. Zak and I. Berin (drafting, final plans), C. Amit and M. Sulzberger (studio photography), R. Vinitsky, Y. Kupershmidt and G. Beiner (metallurgical laboratory), O. Raviv and R. Vinitsky (stone and bone laboratory), Y. Bukengolts and A. Ganor (pottery restoration), D. Wineblatt (pottery, stone and glass drawing). Additional scholars who participate in the processing of finds and publication include $Z$. Greenhut (lron Age pottery) R Rosenthal-Heginbottom (Roman and Byzantine pottery), M Avissar (Islamic and Ottoman pottery), Y Gorin-Rosen T. Winter, N. Katsnelson and B. Ouahnouna (glass vessels), G. Bijovsky and D.T. Ariel (numismatics Roman period), R. Kool (numismatics later periods), L. Di Segni (bread seals), B. Sass (epigraphy), T. Ornan (glyptography), D. Weinstoub (grafitto on pottery vessels), B. Brandl and S. Kisilevitz (bone objects), R. Kletter (Iron Age figurines), K. Cytryn (frescoes), L. Horowitz (archaeozoology), Y. Goren (micromorphologic analyses), Y. Nagar (physical anthropology), G. Stiebel and A. Lester (metallic artifacts), D. Gil (geology) and O. Peleg (architectural elements from the Roman period). The excavations were conducted with the aid of c. 60 laborers from the IAA and a manpower company. Preliminary conservation of the architectural remains was carried out by the IAA Conservation Department, headed by G. Ivanovski and A. van Zaiden, who also studied construction methods. Thanks are extended to the Western Wall Heritage Foundation and its director M. (Solly) Eliav, as well as to H. Kanari, R. Kutchmark, O. Cohen, Shoham Galnor Engineering Co., Ltd and Mr. Y. Sandetch, Ashmar Co., Ltd, E. Stekel and R. Marziyano for all the technical assistance rendered throughout the excavation.

The excavation area (c. 1.5 dunams) is located c. 100 m west of the Temple Mount to the foot of a high bedrock cliff, separating today the Jewish Quarter from the Western Wall plaza. The excavation was carried out in an area, slated for the construction of a visitor's center. The exposed remains will be preserved as the ground floor of the planned building. The first season of excavations took place in September 2005 and the excavations were renewed in April 2006 and continued uninterrupted until February 2009. Concurrent with the inception of fieldwork, stabilization and support work to the buildings adjacent to the excavation area were carried out, as well as preliminary conservation measures of the exposed ancient remains.
The area of the excavation is located along el-Wad (Ha-Gāy) Street, which existed in this region until 1967. This street, leading from Damascus Gate in the north to the Dung Gate in the south of the city, preserves the line of the eastern colonnaded street (cardo) of Jerusalem and serves to this day as one of the principal arteries in the Old City of Jerusalem. The entire width of the ancient street, including the sidewalks and the row of shops alongside it, was exposed at a depth of c. 4.5 m below the current plaza level. The excavation enabled us to follow the development of the street from its paving in the second century CE until 1967. During this period of time the level of the street rose c. 4 m and its width was reduced from 11 m to just 3 m .
A short preliminary summary of the principal excavated finds is presented below. The description begins with natural bedrock, going up, that is from the earliest level to the latest.

## Natural bedrock

The excavation area extended over the northeastern slopes of the western hill, which is the Upper City of the Second Temple period. The surface of natural bedrock in the region of the excavations drops precipitously from the level of the western hill (today the Jewish Quarter area) to the northeast, toward the confluence of the Transversal and the Tyropoeon Vallies. The natural topography was intensified by the quarrying activity that first occurred at the end of the First Temple and continued in the Second Temple periods. This activity created a rocky stepped cliff with an overall height of c. 18 m ; it descends from an elevation of $c .740 \mathrm{~m}$ above sea level at the top of the bedrock cliff in the southwestern part of the excavation area down to 722 m in the quarries of the area's northeastern part. Natural bedrock surface in the excavation area was reshaped in the Roman period when the eastern colonnaded street was built at the foot of the bedrock cliff, which was hewn as a vertical rock wall (max. height c. 10 m ), aligned north-south; today, it separates the houses of the Jewish Quarter from the Western Wall plaza.

## 1. Quarries

The remains of quarries, exposed across the width of the natural bedrock slope, were ascribed to the initial phase of human activity in the investigated area. The line of quarries produced a prominent bedrock terrace that extended along a zigzag line from the northwestern part of the excavation area to the southeast (Fig. 3). The remains included vertical bedrock walls (height 3-4 m), hewn stepped surface and severance channels. Diagonal rock-cutting marks, cut with single-point chisels, could be discerned on the bedrock walls. The quarries in the northwestern part were sealed with earthen fills that contained numerous potsherds, dating to the eighth-sixth centuries BCE. Walls of buildings from the seventh century BCE adjoined the rock-hewn bedrock walls and therefore, the remains of quarries could not be dated later than the seventh century BCE.

## 2. Late First Temple Period, the Iron Age (seventh century BCE)

The remains of buildings, including an alley (Fig. 3:1-9), were exposed on the lower bedrock terrace in the northern part of the excavation area. The main building (Figs. 3:1-6; 4) was probably a four-room house, although its complete plan may have included other rooms that were neither preserved nor exposed (Weksler-Bdolah S., Greenhut Z., Onn A., Kisilevitz S., Ouahnouna B. 2008. An Impressive Building from the End of the First Temple Period in the Western Wall Plaza. In D. Amit and G.D. Stiebel [eds.]. New Studies in the Archaeology of Jerusalem and Its Region, Collected Papers, Vol. 2. Pp. 35-43 [Hebrew]). Wall sections (Fig. 3:8, 9) to its west probably belonged to another building. Three long rooms of the main building and a perpendicular broad room, which was divided into three small spaces, were exposed. The building remains were impressive. The walls, founded on natural bedrock, were preserved c. 5 m high (Fig. 5). Tamped-earth floors mixed with crushed chalk were revealed in the rooms. The latest potsherds in the floor beddings and the soil fills beneath them enabled us to date the building's construction to the seventh century BCE. Evidence of repairs and slight modifications to the building, without altering its basic plan, had occurred during the course of its existence and were discovered in the walls of the western room (Fig. 3:4), as well as west and south of the building itself. A large stone collapse on the floor of Room 2 bears witness to the rapid devastation of the building, which could be attributed to the destruction of the First Temple. Nevertheless, the absence of complete vessels below the destruction layer indicates that the building was abandoned prior to its destruction. Following the destruction, the building was filled up with accumulated soil to the top of its walls' height. This soil fill contained a plethora of finds from the end of the First Temple period and most likely originated from the erosion of the Western Hill's upper slopes. The flagstones of the Roman cardo, which were placed directly on the tops of the walls from the First Temple period, sealed the building and protected it until the present. Noteworthy among the finds from the building were five personal seals that bear Hebrew names (Ornan T., Weksler-Bdolah S., Greenhut Z., Sass B. and Goren Y. 2008. Four Hebrew Seals, One Depicting an Assyrian-like Archer, from the Western Wall Plaza Excavations, Jerusalem. 'Atiqot 60:115-129). The image of an archer with a bow in an Assyrian style is engraved on one of the seals and the Hebrew name לחגב (lhgb) appears next to him (Fig. 6). Another seal bears the inscription 'לנתניה בן יאש' (Intnyhw bn y’š) and yet another - 'לידעיהו אושא' (Iyd'yhw 'wš'). Other artifacts included a seal or amulet decorated with a winged uraeus, an Egyptian scarab, several ancient Hebrew
script graffiti, c. 17 jar handles with Imlk stamped impressions and concentric circles, c. 450 fragments of female and animal figurines and numerous fragments of local pottery vessels. It should be mentioned that no jar handles with rosette impressions were found
3. Late Second Temple Period, the Early Roman Period, Phase 1 (first century BCE-first century CE)

Meager remains, mostly rock-hewn installations and no building remains were ascribed to this phase. On the upper part of the high bedrock cliff, remains of a rock-hewn aqueduct that descended gently from south to north (L116; exposed length c. 11 m , elevation 737.90 m above sea level; Fig. 3), were discovered. This is a section of the Lower aqueduct to Jerusalem, parts of which had been discovered in the past (Mazar A. 2002. A Survey of the Aqueducts to Jerusalem. In D. Amit, J. Patrich and Y. Hirschfeld [eds.], The Aqueducts of Israel, Journal of Roman Archaeology, Supplementary Series, 46 , Portsmouth RI: 210-244; HA-ES/ 117; $H A-E S / 118$ ). The western side of the aqueduct survived to c. 1.4 m high, whereas the eastern side was removed at a later time. A ceramic pipe was inserted inside the aqueduct during the Ottoman period, similar to other sections of the aqueduct that had been exposed. The Lower aqueduct from the time of the Second Temple conveyed water from the Solomon's Pools to the Temple Mount. This segment of the aqueduct is the northernmost section currently known. It is customary to ascribe its beginnings to the time of the Second Temple probably the Hasmonean or Herodian period. It seems that the current bedrock cliff had not yet been hewn at the time. The upper part of a small ritual bath (miqwe), bedrock-hewn and coated with gray hydraulic plaster (L2022; Fig. 3), was exposed c. 15 m north of the aqueduct. Six rock-cut steps were preserved (width over 0.8 m , average height c. 0.35 m , depth of bottom step c .0 .5 m ), one of which had a built repair. The bottom parts of two other hewn plastered installations - a bell-shaped cistern (L6170; Fig. 3) and a square installation (L5333; Fig. 3) - were discovered east and north of the miqwe, on a lower bedrock terrace. Gray hydraulic plaster, characteristic of installations and ritual baths that dated to the Second Temple period, was discovered on the sides of the square installation. It seems that these installations had originally been integrated in the ground floor of structures from the Second Temple period built on the lower part of the Upper City, which were damaged when the Eastern Cardo was paved. Remains of a quarry (L8170; Fig. 3) were discovered on the low bedrock terrace in the northeastern part of the excavation area (elevation c. 722.5 m above sea level). The soil and stone fill that blocked the quarry contained fragments of pottery vessels from the Second Temple and the Roman periods, after the year 70 CE. Thus, it seems that the quarry should be dated to the Second Temple period, although this cannot be determined with certainty

## 4. The Early Roman Period, Phase 2 ( $70-130$ CE)

A broad retaining wall, oriented north-south (W804; length c. 20 m , width 2.9 m , max. preserved height 3.5 m ; Fig. 7) was ascribed to this phase. It followed the course of the northern built part of the Roman cardo's eastern stylobate. The wall's appearance was rather crude and heavy. Large broken architectural elements, such as a stone threshold, were incorporated in secondary use in the wall, whose foundation was set on the quarries from the Second Temple period and its foundation trench had cut through the soil fill that accumulated and blocked the quarries prior to its construction. The accumulated soil and ash fill on both sides of the wall, particularly on its eastern side that was completely excavated, yielded a rich and diverse assemblage of pottery vessels, including numerous vessels that were similar to those discovered in the pottery workshop of the Tenth Legion at Binyane Ha-'Umma (ESI 13:64-68), locally manufactured vessels, imported lamps and fine tableware. Other finds included fragments of clay masks, military bread stamps that bear names (Fig. 8; Di Segni L. and Weksler-Bdolah S. [in press]. Three Military Bread Stamps from the Western Wal Plaza Excavations, Jerusalem. 'Atiqot), rare glass vessels and coins. The finds were dated to the time period between the years 70 and 130 CE , that is, after the destruction of the city and prior to the founding of Aelia Capitolina. The abundance of artifacts can be attributed to the Roman Tenth Legion that was garrisoned in Jerusalem at the time. It should be mentioned that none of the recovered finds bore a stamped impression of the Tenth Legion.
It could not be determined whether W804 was built as a retaining wall to support the fill on which the colonnaded street was founded, or if it was constructed for some other purpose before the paving of the cardo and was used as a foundation for the street's eastern stylobate at a later time.

## 5. The Roman-Byzantine Periods (second-sixth centuries CE)

The remains of the eastern colonnaded street (cardo) whose entire width was exposed, including the sidewalks and shops alongside it (Figs. 7, 9), were ascribed to this phase. The street remains were exposed to a length of c. 45 m , at a depth of c. 4.5 m below the current level of the Western Wall plaza. The exposed section of the street was paved in a straight, north-northwest-south-southeast direction, sloping gently along a course parallel to the Western Wall of the Herodian Temple Mount. Its average elevations in the north and south were 726.6 m and 726.1 m above sea level respectively. It was 11 m wide between the two rows of columns that apparently stood alongside it (Fig. 7: A). On either side of the street was a sidewalk (width c. 6.0-6.5 m; Fig. 7: B, D) and beyond the western sidewalk was a row of shops, hewn in the bedrock cliff (Fig. 7: C). The overall width of the street and the sidewalks, including the stylobate walls, reached c. 23.5 m (Weksler-Bdolah S., Onn A., Ouahnouna B., Avissar M., 2008. The Eastern Cardo of Roman Jerusalem and its Later Reincarnations in Light of the Western Wall Plaza Excavations. In Y. Patrich and D. Amit [eds.]. New Studies in the Archaeology of Jerusalem and Its Region, Collected Papers. Vol. 1. Pp. 75-84). Other sections of this street had been discovered in the past along El-Wad Street, north and south of the currently excavated segment (See Fig. 1; Wilson R.E. and Warren R.E. 1871. The Recovery of Jerusalem. London: 281-284; Warren C. and Conder C.R. 1884. The Survey of Western Palestine III: Jerusalem, London: 236; Johns C.N. 1932. Jerusalem: Ancient Street Levels in the Tyropoeon Valley within the Walls. QDAP 1:97-100; Johns C.N. 1948. Discoveries in Palestine since 1939-1948. PEQ 80: 81-101; Hamilton R.W. 1932. Street Levels in the Tyropoeon Valley. QDAP 1:105-110; Hamilton R.W. 1933. Street Levels in the Tyropoeon Valley II. QDAP 2:34-40; Barbe H. H. and De'adle T. 2006. Jerusalem - Ohel Yizhaq. In E. Baruch, Z. Greenhut and A. Faust [eds.] New Studies on Jerusalem 11:19-29; Jerusalem, Ohel Yizhaq, HA-ESI 119, as well as the following Hebrew articles: Hess O. and Eisenberg E. 1977. Jerusalem-Ha-Gāy Street. HA 63-64:48; Ben Dov M. 1982. The Temple Mount Excavations in the Shadow of the Walls and in the Light of the Discoveries. Jerusalem. Pp. 227-233; Bar, D. 2001. Aelia Capitolina's Main Street Layout: The Main Cardo versus the Secondary Cardo. In A. Faust and E. Baruch [eds.]: New Studies on Jerusalem 7:159-168; Baruch Y. and Reich R. 2003. With Regard to the Eastern Cardo in Roman-Byzantine Jerusalem. In E. Baruch, U. Leibner and A. Faust [eds.]: New Studies on Jerusalem 9:147-160; Kloner A. and Bar-Natan R. 2007. The Eastern Cardo of Aelia Capitolina. Eretz Israel 28 (Teddy Kollek Volume):193-205; Gutfeld O. 2007. The Planning of Byzantine-Period Jerusalem's Streets. Eretz Israel 28 [Teddy Kollek Volume]:66-73).
The street (Fig. 7: A) was paved with large flagstones of pale red hard limestone, which were laid in a meticulous manner and placed diagonally relative to the axis of the street. The paving stones' surface was usually smooth and without grooves. One or two steps were built along the street to bridge the difference in elevations between the street and the sidewalks. The steps were composed of flagstones, similar to those of the street, yet placed along a north-south axis, parallel to the direction of the street. A sophisticated drainage system (Fig. 7: Channels a-h), consisting of a deep channel in the middle of the street and other channels that drained into it, was installed below the flagstones of the street and the western sidewalk. The main drainage channel (b) continued to be used until the twentieth century CE. The latest find discovered below the cardo's paving stones was a coin that is dated to the reign of Hadrian (117-135 CE). The fill wherein the coin was found was not sealed by a paving stone that had been previously robbed and therefore, it is not a reliable find for dating the street. However, the fragments of the latest pottery vessels found beneath the paving stones were consistent with this date. The finds in general make it possible, therefore, to determine that the road was paved in the second century CE, at the latest during the reign of Hadrian.
A single column of those that adorned the street had remained in situ in the western colonnade. This monolithic column rose to c .2 m high above its base and was discovered engaged within a later pillar that was built around it (Fig. 10). Similar bases, fragments of other columns and also two Corinthian capitals that had apparently decorated the columns along the road, were incorporated in secondary use in the walls of the Early Islamic structure that was built above the street (below).

Hewn cisterns, in use until the twentieth century CE, were discovered below the level of the western sidewalk (Fig. 7: B). Cistern 300 was square; its sides were bedrock-hewn as vertical walls and its ceiling consisted of stone slabs that were set on stone arches built in dry construction (Fig. 11). Cistern 712, located to its south, was roofed with some thin flagstones that were laid above the vaulted ceiling.
The outline of eight shops, seven of which were of similar size (interior dimensions c. $3.5 \times 4.5 \mathrm{~m}$; Fig. 7:4-10) were discerned in the row of shops hewn at the foot of the cliff (Fig. 7: C), west of the western stoa. Three of the shops (8-10) were joined to form a single space in a later period and the reconstruction of their original size was based on the imprints left in the hewn bedrock. The bedrock walls that separated the shops were preserved to c .3 .5 m high. The southern shop (Fig. 7:11) was longer and wider than the others and its bedrock ceiling was preserved. The original rectangular-shaped entrances and their straight doorjambs were partly preserved in two of the shops (Fig. 7:4, 7). The negative of a stone lintel that had not survived and a relieving arch, which was built above it, was preserved above one of the shops' entrances (Fig. 7:7). Some of the shops were connected by square openings, hewn in their common walls, which were probably added in later periods.
An ancient cistern (L6170) in the northern part of the shop's row (Fig. 7:3) was furnished with a new ceiling of thick limestone slabs that were placed on two arches and were similar to Cistern 300 in the western stoa.
Another row of rock-hewn similar cells (Fig. 7:1, 2) was partly exposed west of the row of shops at a higher level. The terraced cells reflect the natural topography on the northeastern slope of the Western Hill.
The eastern sidewalk (Fig. 7: D) along the southern part of the excavation was delimited by two rock-hewn walls in the east and west (W424, W457); the eastern stylobate in the north part of the excavation was founded on top of the broad wall (W804, above). The eastern sidewalk was also delineated by two narrower streets, perpendicular to the cardo and 28 m apart: a northern street (L8020; Fig. 7: E) and a southern one (L4108; Fig. 7: F), leading east from the cardo towards the Temple Mount. The partly exposed northern street (E) was paved with thick rectangular flagstones, similar to those of the cardo whose level it exceeded by c. 0.2 m . The general width of this street, restored on the basis of the southern street, is not definite. The southern street (F) was paved with large limestone flagstones, some of which were in secondary use. Its level was lower than the cardo and four wide stone steps descended to it. The flagstones in the two streets were set perpendicular to the direction of the roads and parallel to the north-south axis of the cardo, unlike the diagonal setting of the pavement in the cardo itself.

Incorporated in the corner of the cardo and the southern street was a large heart-shaped column base (Fig. 12), which appears to be part of a monumental entrance structure, possibly a gatehouse (propylaeum) of a large public building that may have stood to the east of the street. A white mosaic pavement, decorated with rhomboids and flowers, was preserved in the eastern sidewalk and a hoard of coins that dated to the Byzantine period (the time of Emperor Justinian) was discovered in the bedding of the mosaic. The pavement of the sidewalk from the Roman period was not preserved. The exposed remains bear witness to the monumental design of the colonnaded street in the second century CE and to its pavement of large flagstones that were arranged diagonally across the street in this period. Nevertheless, it is not certain whether the entire street with all its components, i.e., columns, sidewalks and the shops alongside it, were completed in only one phase. It is feasible that the completion of the street with its columns, as depicted in the Madaba Map, occurred in a later period.

## 6. The Early Islamic Period, Phase 1 (eighth century CE)

The street's pavement continued to be used at its original level, yet the width was reduced to just the eastern half (c. 4.7 m; Fig. 13: A). The stone steps, presumed to have been built along the eastern sidewalk, were dismantled and superseded with a tamped-earth floor that abutted the stone pavement at this level. A new wall (W210; Fig. 13) that was built across the southern part of the street blocked it for public use and it became an inner way, part of a large building complex.
The width of the street was reduced when a large building (length c. 30 m , width 18 m ; Fig. 13: B1, B2), whose area included the western half of the Roman cardo, the western sidewalk and the row of shops, was constructed. The eastern wall of this complex was founded on the pavement of the Roman cardo and crossed it lengthwise. The plan of the building consisted of rooms around a central courtyard in the northern part (Fig. 13: B1) and a square courtyard in the southern part (Fig. 13: B2). This building survived in a segmented state below the buildings of later periods. Its walls were built of neat courses of rectangular stones, arranged side by side as stretchers. A tremendous shock caused the courses of the wall to shift horizontally relative to each other and perpendicular to the direction of the walls. This movement was probably caused by an earthquake that struck the region. If so, this evidence may be ascribed to one of the earthquakes that struck Jerusalem in the eighth or beginning of the ninth centuries CE. It should be stressed that the building was not destroyed by the suggested earthquake and in the following periods, its walls were made thicker and strengthened. No changes to the area of the eastern sidewalk (Fig. 13: C) or the roads that faced the eastern cardo were done in this phase. A repair to the plaster of the Byzantine mosaic floor was discerned in the eastern sidewalk.

## 7. The Early Islamic Period, Phase 2 (eighth-ninth centuries CE)

This phase occurred shortly after the previous one. The level of the street (Fig. 14: A) rose by several centimeters, probably due to fill that had accumulated on the stone floors and not intentional rising. Wall 210 was abolished and the street was once again used as a public urban thoroughfare. Its width, however, was reduced to c. 4 m , due to a building that was constructed on its eastern side (Fig. 14: C, D).
The structure west of the street (Fig. 14: B) developed in this phase into a complex of elongated halls, each with a separate entrance from the street. Some of the halls (B1, B2) were divided into two rooms. The bedrock-hewn row of shops, incorporated in the western part of the building, was linked to the halls. The building was characterized by walls that survived from the earlier phase and had been made thicker, as well as by the addition of square pillars alongside them that reinforced the walls and supported the ceiling vaults. The function of the building is unclear; it may have been used as a public building, possibly a marketplace.
A structure built to the east of the cardo in this phase included a row of small square rooms that were probably shops (Fig. 14: C). It was founded directly above the mosaic floor of the eastern sidewalk and also rested and reused the original eastern wall of the sidewalk. The southern shop of this structure (Fig. 14: C4), was built on the street's paving stones (Fig. 14: E), which had been made narrower. The floor of the shops was composed of pale yellow marl, mixed with plaster, which was applied to the sidewalk's mosaic pavement or the flagstones in the street. A narrow corridor was installed west of the the building, extending into the previous eastern section of the street, thus narrowing it. Its plastered floor incorporated within it the eastern rock-hewn stylobate of the street and may have possibly been a sidewalk (width 4 m ; Fig. 14: D). A north-south oriented water channel (L472) was installed below the pavement of the corridor in this phase, or slightly afterward. To the west of street 4108, large flagstones were used as covering stones for the water conduit, similar to the stones of the steps in the street. Thus, an upper step was added and the street (L4108) now consisted of five steps. Channel 472 had cut and canceled W210 from the earlier phase.

## 8. The Early Islamic Period, Phase 3 (eighth-ninth centuries CE)

The level of the street was intentionally raised c. 1 m in this phase, although its width and general direction remained unchanged. The raising of the road's elevation was done with layers of tamped earth, placed one atop the other and sealed with a thick white layer, which apparently served as the street surface, but had only survived by segments (elevation 727.33 m above sea level). It was impossible to determine whether the soil fills above the Street 4108 (Fig. 14 E) indicated that it continued to be used as a narrow dirt road at a higher level or if the fills blocked and negated the road. The northern street(L8020; Fig. 14: F) was canceled when a partly exposed building was constructed. In keeping with the road's raised level, some of the entrance thresholds of the buildings on either side of the road were raised (e.g., Hall B1, C3), other entrances from the road to some of the halls were canceled (e.g., Hall B3) and the floors inside the buildings were raised. The buildings were also modified. A special pavement, composed of tesserae, pieces of marble slabs and large potsherds, was discovered in Hall B5 to the west of the street, as in Shop C3 to its east. These components probably originated in the remains of ancient buildings and in the heaps of debris that were presumably in the vicinity.

Circular plastered installations, which were shallow pools of sorts whose use is unknown, were built in Halls B2, B3 and in Shop C2. A small cistern (L4068) was installed next to the heart-shaped column base and its cross-vaulted ceiling was incorporated in the floor of the corridor (Fig. 14: D).

## 9. Destruction (Earthquake?)

At the end of Phase 8, the building to the east of the street was destroyed. Its remains were sealed beneath a thick layer of soil mixed with marl that was only partly preserved. A broken jug was found in this layer and dozens of faience beads that probably originated in Shop C2 were nearby. A similar layer that contained a collapse of dressed building stones was discovered in Hall B1, west of the street. Based on the pottery vessels and the coins in the destruction layer it seems that the buildings were destroyed, at the very latest, in the ninth century CE. Two severe earthquakes had shaken Jerusalem in the ninth century CE, in the years 808 and 859 CE; the buildings were probably destroyed in the second of these two earthquakes.
10. The Early Islamic Period, Phase 4 (tenth-eleventh centuries CE)

Soil fills that accumulated to a great height were ascribed to this phase. The fills were dated to the tenth-eleventh centuries CE and in all probability, they reflect a period of neglect during which a thick layer of earth amassed above the Abbasid, Early Islamic buildings. Remains of hearths (ovens) were discovered inside the soil layer and concentrations of broken vessels that are indicative of human activity were found near them. Judging by the nature of the human activity, it seems that during this phase the region was located on the outskirts of the city. The street apparently continued to be used during this period.

## 11. The Late Islamic Period, Phase 1 (thirteenth century CE)

Large buildings, which continued to be used with slight changes until the twentieth century CE, were constructed on both sides of the street during this phase. The level of the street, which became a dirt road (Fig. 16: A), was raised by c. $0.5-$ 1.0 m compared to the previous period and its width was increased to 4.8 m .

The building on the west side of the street (Fig. 16: B) maintained the outline of the Early Islamic structure, with slight modifications, despite the considerable amount of time between them. It consisted of a large two-story building in its northern part that incorporated the row of rock-hewn shops (Fig. 16: B1-3, B7-10). The walls of this building were usually based on the walls of the Early Islamic structure or on bedrock, and were made extremely thick (up to 2 m wide). Four elongated rooms were located on the ground floor; the two middle ones were relatively narrow (Fig. 16: B2a, B2b) and the outer ones were wider (Fig. 16: B1, B3). The main entrance to the building led to Room B2b in the middle of the structure's ground floor, which provided access to the side rooms. The floors were only partly preserved. All the rooms were covered with vaults that were partly preserved and bore an upper floor where the principal residential quarters were set. Floor sections of smooth white mosaic or a mosaic inlaid with fragments of marble slabs survived on the upper floor Clay-pipe gutters were incorporated in the walls of the building, conveying rainwater to the main drainage channel in the middle of the street. Room B9 was extraordinarily well-preserved. Low bench-like plastered installations were installed along three of its four walls and they, as well as the walls, were decorated with red and white frescoes. The painted patterns were very similar to the red, black and white guilloche stone decoration (ablaq), common to facades of Mamluk public buildings, such as madrasas (Fig. 17). This style of wall painting in Jerusalem was exposed here for the first time. A square inner courtyard surrounded by rooms extended south of the building and the street bordered it on the east (Fig. 16: B4, B5). Wall 70, which separated the building from the courtyard, had three large square engaged pilasters that protruded southward from its line into the courtyard. The wall and the center pilaster sealed within their core a monolithic column, which remained in situ and was part of the cardo's western stoa (above, Fig. 10). West of this pilasrer was an opening that linked the building with the courtyard to its south. Partly preserved sections of a plaster floor and a mosaic pavement were discerned in the courtyard. A series of crossed-vaults that bore an upper story (Fig. 16: B11, B12) was built west of the courtyard, between it and the bedrock cliff. Seven of the eight square pillars that supported the pointed vaults survived in this building. A small section of a mosaic floor was preserved next to one of the pillars. An elongated hall (Fig. 16: B6), partly exposed south of the inner courtyard, was probably part of another building and remains of a mosaic floor and a small section of an earthen floor were preserved in it. A passage led from this hall westward, to the hewn Hall B13.
A large public building was exposed to the east of the street. Only part of it was revealed within the limits of the excavation and it probably extended eastward (Fig. 16: C1-C8). The construction of the building's western wall (W400) corresponded to the hewn eastern stylobate of the street in the Roman period (above). The most important element in this building was a single cist grave (L4076; Fig. 16: C3), found sealed with stone slabs that were overlain with a built heap of stones, which protruded above surface. The burial cell contained the skeleton of an adult male, oriented eastwest in a supine position, whose head was in the west, facing south. The position of the deceased is characteristic of Muslim interments. The skeleton, not accompanied by funerary objects, was transferred for reburial. A plaster floor that abutted the grave's top was laid at the level of the street. The location of the tomb was preserved, as well as emphasized in later periods when the building continued to develop and its level was raised. The rectangular hall (C3), in whose center the grave was located, may have been opened to the street in this phase. Two entrances led from the street to the halls, situated north and south of Hall C3 (Fig. 16: C2, C4)
12. The Late Islamic Period, Phase 2 (fourteenth-fifteenth centuries CE)

The street continued to exist as a dirt road, without changes to its character or width. Its level rose slightly and the entrances to the buildings were raised accordingly. Large stone slabs that originated from the pavement of the Roman cardo were incorporated in some of the entrance façades to the halls of the building on the west of the street. The main alterations in this period occurred in the buildings that flanked the street.
A bakery, including a round oven for baking bread, was set up in the northern hall of the western building (Fig. 16: B1), which was accessed via an entrance from the street. A staircase that was incorporated in the eastern wall of the hal descended from the street level to the floor of the bakery hall, which was c. 1 m lower. The rooms of the ground floor were paved with partly preserved small square stone tiles. Throughout this phase, a variety of installations were integrated in thin plaster floors that abutted the edges of the stone pavements in the rooms. It seems that the installations and plaster floors were slightly later than the stone floors, although this cannot be determined with certainty.
Two elongated halls were built during this phase in the square courtyard south of the main building. The remains of a high barrel-vault roof were preserved in the northern hall (Fig. 16: B4). It was connected by a large arch (W82; Fig. 18) to a room of similar width on its west, inside the cavity of the cross-vaults (B11). Stones bearing engraved inscriptions in square Jewish script, most likely gravestones (Fig. 19), were incorporated in the walls of the hall, in secondary use. The main entrance to the hall was from the street. Two small square underground rooms were preserved in the corners of the hall on the inside of the main entrance. The northern room (L361; Fig. 16) was preserved in its entirety, including its vaulted ceiling, whereas only the floor had survived of the southern room (L363; Fig. 16). A hall of identical dimensions (Fig. 16: B5), whose entrance was incorporated in the eastern wall, was exposed south of Hall B4. Inside the entrance and below the floor level of Hall B5, a plastered, bedrock-hewn and subterranean installation that was covered with a built barrel vault, was preserved (L518; Fig. 16). A water conduit led to the installation from the northwest. A flagstone floor was partly preserved in the western part of the hall. As no evidence of a vaulted ceiling was found, it is assumed that the hall probably remained open and was used as a courtyard. A barrel vault was built in Room B12, west of Hall B5. The pillars of the barrel vault supported and thickened the pillars of the cross vault from the previous phase. Hall B6 was paved in this phase with stone tiles that were partly preserved.
The building to the east of the street continued to exist with certain changes (Fig. 16: C). Wall 400, which bordered the street, was repaired and made thicker in its southern part; it extended, uninterrupted in this phase, along the eastern side of the road. Hall C2 was paved with square stone tiles. One of the stones was engraved with a game board that consisted of two rows of shallow depressions. Remains of fragmented floor sections were preserved in the other rooms and Hall C3, where the grave is found, was surrounded by walls in this phase.
13. The Late Islamic Period, Phase 3 (fourteenth-fifteenth centuries CE)

Various installations were installed in this phase within the ground floor of the building to the west of the street. This sometimes resulted in damage to the floors and walls of the building and indicated that the ground floor of the main building was adapted for industrial use. Round plastered installations (inner diam. 0.5-1.0 m, depth c. 1 m ) were set in Rooms B11 and B12. Similar installations were built in the structure to the east of the street (Fig. 16: C4, C7) and at the following period, also in the open area north of the building (Fig. 20: B10, below). Due to their shape, resembling the soaking pools used in processing and dying animal skins, it has been suggested that these installations were related to the tanning industry. A large accumulation of crushed chalk (white lime), essential in the process of treating skins, was found on the floor in Room B11. This notwithstanding, it is still difficult to assume that a tanning industry existed inside the city, close to residential buildings or actually inside them. It is impossible at this point to identify the function of these installations, with certainty. It should however be mentioned that similar installations were built in this region during the Early Islamic period (above, Fig. 14: B2, B3).
Cisterns and underground installations from the earlier phase (Loci 363, 361, 518 and 3096) were converted in this phase into refuse pits, which were filled with soil that contained numerous fragments of pottery vessels. It seems that the upper stories of the buildings served as living quarters and the ground floors became industrial areas, as well as a location for discarding rubbish.

## 14. End of Late Islamic and Beginning of Ottoman Periods (fifteenth-sixteenth centuries CE)

The street level rose by c. 1 m and reached c. 729.9-730.0 m above sea level (Fig. 20: A). A row of small cells (Fig. 20: B1-B7) was built along the western side of the street; some were used as stepped entrance halls for the buildings on that side of the street and some may have been used as shops. The row of cells reduced the width of the street to just $2.5-$ 3.0 m and it is possible that the reduction process had actually begun in the previous phase. Many rooms on the ground floor of the Late Islamic buildings (Fig. 16: B, C), blocked with soil fill in either this phase or the previous one, were not in use now. The residential quarters in the buildings had apparently been on higher floors that were not preserved.
A new hall (Fig. 20: B10) was constructed north of the building on the west side of the street. The entrance threshold to this hall, composed of a flagstone in secondary use that was taken from the Roman cardo, was integrated in its eastern wall. The building's interior, in which modifications had taken place, was divided by partition walls into three broad rooms. Plaster installations and plaster floors atop pebble beddings were partly preserved in the rooms.
The bakery from the previous phase was no longer in use and a plastered water reservoir (Fig. 20: B11 west) was installed above the oven in the western part. Hall B13 was blocked with soil fills to a great height, atop the plaster floors and installations of the previous phase. The western opening that connected the hall with the rock-hewn cell to its west was closed with construction. A tower-like structure whose corners were carefully shaped protruded from the eastern wall of Hall B14. An L-shaped staircase (B5) that led from the street below into the hall was built around this tower. The floo level inside the hall was raised, negating the use of the underground rooms (Loci 361, 363; Fig. 16), which had been blocked with soil in the previous phase. A large heap of soil fill was piled up in Room B25, west of Hall B14, above the plastered installations from the previous phase. This was probably intentional and narrow retaining walls were built to prevent the earth from sliding south. To the south of these walls, a passage that led to a hewn subterranean chamber (L404; Fig. 20) remained open. Another subterranean chamber (L402; Fig. 20) was used as a rubbish pit. These subterranean chambers were probably meant to serve as storerooms; they were hewn at some point after the shops, which had been quarried in the bedrock cliff, although it is difficult to determine when it originally happened. Hall B15 yielded no finds and a small section of a flagstone floor was preserved at the foot of the bedrock cliff in Hall B16.
No floors from this phase were preserved in the building to the east of the street (Fig. 20: C).

## 15. Earthquake Destruction (?)

Evidence of severe damage to several buildings, which had occurred shortly after the beginning of the previous phase (No. 14), was discovered. The vaulted roof of Hall B14 collapsed and remained on the floor of the hall, sealed beneath soil fill that had accumulated above it. It was probably during this phase that the large pieces of rock separated from the upper part of the hewn bedrock cliff and fell onto the floor of the room at the bottom of the cliff (Hall B16). The bedrock ceiling of a room (L715), first hewn in the Roman period, had been damaged and cracked by earth tremors. Historical sources mention an earthquake that had struck Jerusalem and the Temple Mount in the year 1540 CE and the collapse was probably a result of this event.

## 16. The Late Ottoman Period (nineteenth-twentieth centuries CE)

During this period, the street maintained the same width ( $2.5-3.0 \mathrm{~m}$ ) and its elevation in the twentieth century was $730.35-730.50 \mathrm{~m}$ above sea level, that is, c. 4 m above the original Roman level (Fig. 20: A). On the west side of the street, the shop cells and the buildings from the previous phase continued to exist, although hardly any use was made of the buildings' ground floors. An exception was Hall B12 where four thin plaster floors were discovered one atop the other. Hall B15 was renovated and a bakery was installed inside. A paved alley (B6) led from the street into the hall that was paved with large square flagstones, some of which were flagstones from the Roman cardo in secondary use. A round oven for baking bread was installed west of the hall; it was preserved in its entirety, as was a staircase that led to the upper level above the oven (Fig. 21). Partition walls were built in Hall B16, to the south of the bakery and a new tile pavement was installed
The large structure on the eastern side of the street was renovated in this phase and pavements of square stone tiles (Fig. 20: C1-C3, C7) were preserved in many of the rooms, whereas in the in the entrance hall (C2) was a thick plaster floor. The rooms to the north and east of Hall C2 were paved with stone, in which a staircase that led to an upper story was incorporated. Hall C3, to the south of Hall C2, was paved with flagstones around Tomb 4076 (above), whose location was still preserved. Integrated in the southern wall of Hall C3 was a semicircular niche, paved with stones in secondary use that had been removed from the cardo. The niche was probably used as a mihrab and the hall served for prayer. Square plastered niches were incorporated in the eastern walls of Halls C4 and C5. They were as wide as the halls and c. 0.5 m higher than the floor level in the halls. A cistern (L4005) was possibly installed in this phase.

## 17. The Modern Era (1900-1967)

At the end of the nineteenth century or in the twentieth century the street was paved with small stones (Fig. 22: A); it was c. 2.5-3.0 m wide and its elevation was c. 730.5 m above sea level. A ceramic drainage pipe was discovered in the middle of the street, beneath its pavement. A new structure (Fig. 22: B2) that only partially survived was built above the ruins of Hall B14 on the western side of the street, in the first half of the twentieth century. The walls of this house were built of concrete and the rooms were paved with decorated tiles (Fig. 23).

## 18. 1967 to the Present

The Mughrabi neighborhood was demolished in 1967 to create the Western Wall plaza (Fig. 24). The current plaza (Fig. 22: C) is paved with flagstones and slopes gently from west to east. The elevation of the plaza's western side (c. 731.1 m above sea level) is c. 0.5 m higher than that of El-Wad Street (Fig. 22: A), as it was until 1967. The plaza is delimited on its western side by a low stone wall, whose top has steps in two levels and is used as a bench. West of the Western Wall plaza-between it and the bedrock cliff that separates it from the Jewish Quarter-a two-story building remained standing (Fig. 22: B1), parts of which were used by the Israel Police and the Western Wall Heritage Foundation. The upper stories of this structure, which were built above the earlier parts from the Early and Late Islamic periods (above), were dismantled within the development activities at the site. South of Building B1 and B2 remained an open area, where a paved plaza with a drinking fountain was created (Fig. 22: B3). This area, at the foot of the bedrock cliff, was no longer visible because of debris that covered it, resulting from the renewed construction of the Jewish Quarter. Prior to the excavation, it resembled an artificial slope that had slid down from the Jewish Quarter to the Western Wall plaza.


2. The excavation area, looking east.


4. Iron Age building, looking east.

5. Floors and walls of the Iron Age building, looking west.


7. The eastern colonnaded street (Cardo) in the Roman and Byzantine periods, plan.


8. A military bread stamp.

9. The cardo, looking southwest.

10. A monolithic column in the cardo, engaged in a later pilaster, looking southeast.

11. The arched cistern (L300) in the western stoa, looking south.

12. Heart-shaped column base in corner of cardo and southern street (L4108), looking north.


התקופה האסלאמית הקדומה, שלב 1
Early Islamic period, Phase 1
13. The Early Islamic period, Phase 1, plan.

14. The Early Islamic period, Phases 2, 3, plan.

15. A pavement of tesserae and marble fragments in secondary use, looking east.


16. The Late Islamic period, plan.

17. Frescoes in the Late Islamic building, looking north.

18. Arch 82 from the Late Islamic period, looking west.

19. A gravestone (?) in secondary use engraved with Hebrew script.

20. The Ottoman period, plan.

21. A bakery in Hall B15, looking west.

22. The twentieth century, plan.

23. Decorated floors in a modern building, looking southeast.

24. The excavation site at September 1967. The Western Wall Plaza following the destruction of the Mughrabi neighborhood, looking east. Photo: Amnon Weksler.

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1. Survey map.

2. Site 1 , retaining wall of farming terrace, looking southwest.

3. Site 3, farming terrace system, looking west.

Yehuda Dagan and Leticia Barda
During July 2005, an archaeological survey was conducted in the upper Nahal Soreq channel (Permit No. A-4536; map ref. NIG 2190-8/63614; OIG 1690-8/13614), along the planned route of the separation fence, northeast of the Ramot Alon neighborhood in Jerusalem. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by Y. Dagan and L. Barda (GPS).
A strip of ground (length 6 km , width 200 m ) was surveyed, alongside which six sites with ancient remains were identified and documented (Fig. 1). These included remains of a large site and an extensive system of farming terraces on both sides of the stream channel, which attest to intensive cultivation of these plots over the course of hundreds of years.
Site 1 (map ref. 21985/63619). A modern retaining wall of a farming terrace (height $1.6-2.3 \mathrm{~m}$; Fig. 2), built of small fieldstones.

Site 2 (map ref. 21980/63627). Remains of a circular watchman's hut (?; diam. 4.3 m ), built of medium-sized fieldstones (length 0.4-0.7 m).

Site 3 (map ref. 21975/63633). A system of farming terraces, planted with olive trees today. The terraces belong to a large agricultural complex that extended across both sides of the stream (Fig. 3). Ancient construction, particularly in the lower courses, was identified on some of the farming terraces.

Site 4 (map ref. 21918/63669). A farming terrace; continuation of Site 3.
Site 5 (map ref. 21913/63675). Remains of an elliptical animal pen ( $4 \times 6 \mathrm{~m}$ ), which was built next to the retaining wall of a farming terrace. The bottom courses of the pen's walls comprised ancient dressed stones.

Site 6 (map ref. 21903/63685). Settlement remains (c. 10 dunams) across both sides of the stream. Dressed building stones and fragments of pottery vessels, dating to Iron II B-C and the Persian, Roman and Byzantine periods, were scattered across surface. Structures that incorporated large ashlar stones ( $0.55 \times 0.95 \mathrm{~m}$ ) in their walls were built over the ancient settlement remains in later periods. Ancient walls were sometimes utilized in the construction of farming terraces (Fig. 4). This agricultural system, which extended across some 20 dunams around the ancient settlement, is used today for orchards and olive groves (Fig. 5).

4. Site 6 , retaining wall of farming terrace, built on ancient wall, looking north.

5. Site 6, general view, looking northwest.


1. Survey map.

2. Site 1 , retaining wall of farming terrace, looking southwest.

3. Site 3 , farming terrace system, looking west.

4. Site 6 , retaining wall of farming terrace, built on ancient wall, looking north.

5. Site 6, general view, looking northwest.

Zubair 'Adawi


1. Cistern, plan and sections.

2. Cistern, looking north.

3. The two openings in the cistern, looking northwest.

4. Installation alongside the cistern, looking southeast.

5. Pottery and stone finds.

During February-March 2007, a salvage excavation was conducted at Khirbat 'Addasa (West) in the Beit Hanina neighborhood of Jerusalem (Permit No. A-5059; map ref. NIG 22220/63720; OIG 17220/13720), following damage to a cistern. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Moriya Company, was directed by Z. 'Adawi, with the assistance of R. Abu Halaf (administration), V. Essman (surveying), A. Nagar (GPS), T. Sagiv (field photography), J. Bukengolts (pottery restoration) and I. Lidski-Reznikov (pottery drawing).
The excavation was carried out in a leveled area, c. 0.5 km west of Khirbat 'Addasa and c. 400 m northeast of Tell el-Ful (A. Kloner, Survey of Jerusalem: The Northeastern Sector, Sites 45, 79). An agricultural complex and an adjacent ancient road had been surveyed in the past (ibid, Sites 43,46 ) and a wall and a floor that dated to the end of the Hasmonean period were exposed in a previous excavation (HA-ESI 120).
A cicular cistern (L102; diam. c. 8.5 m , depth 3.6 m ; Figs. 1, 2) was discovered in the current excavation ( $7 \times 7 \mathrm{~m}$ ). It was hewn in a bedrock surface and part of its ceiling had been damaged by mechanical equipment prior to the excavation. Two openings were set in the cistern's ceiling (Fig. 3). The first was cut in its center and only its corner survived (L101; $0.50 \times 0.75 \mathrm{~m}$, depth 0.65 m ); originally, it seems to have been rectangular. The second opening, shaped as a rectangular shaft (L105; $0.8 \times 1.2 \mathrm{~m}$, depth 1.2 m ), was hewn in the southeastern part of the cistern. Three rock-hewn channels (Loci 110-112; width $0.10-0.15 \mathrm{~m}$, depth 5 cm ) to the west of the cistern were coated with a thin layer of gray plaster and conveyed water along a gentle incline to the cistern. Channel 110 was northwest of the cistern (length 2.2 m ) and Channel 111 was to its southwest (length 3 m ); both converged into Channel 112 (length 0.8 m ), which terminated at the opening above the center of the ceiling. The cistern's bedrock floor was very smooth and its sides were coated with gray plaster mixed with small inclusions, which survived only in the upper part of the cistern. Signs of stone cutting, discerned along the sides of the cistern and on the plaster remains, may be evidence of quarrying that intended to enlarge the cistern.

A hewn rectangular installation (L106; $0.7 \times 1.4 \mathrm{~m}$, depth 0.26 m ; Fig. 4) was cleaned northeast of the cistern. Although its function is unclear, it seems to have been related to the adjacent cistern. A probably natural channel (L104), which extended in the northeastern side of the cistern, at a level lower than its opening in the center, was cleaned.
The cistern was found filled with large fieldstones and dark brown alluvium that contained fragments of pottery vessels, dating to the end of the Hasmonean and the first half of the Herodian periods ( $90-30 / 20$ BCE). These included cooking pots (Fig. 5:4, 5), jars (Fig. 5:6-13) and a juglet (Fig. 5:14). A similar assemblage of potsherds mixed with fragments of holemouth jars from Iron II (Fig. 5:1-3) was found in the alluvium layer that covered the ceiling of the cistern and its side opening. A spherical limestone pounding stone (Fig. $5: 15$ ) was discovered on the surface. It seems that the cistern was part of the agricultural complex that existed around the nearby settlements of Tell el-Ful and Khirbat 'Addasa at the end of the Hellenistic and the beginning of the Roman periods.


1. Cistern, plan and sections

2. The two openings in the cistern, looking northwest.




3. Pottery and stone finds.

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1. Location map; the excavation in relation to remains documented by Schick in 1900.

2. Plan and sections.

3. Early Roman and

Byzantine periods, pottery.

4. Islamic and Crusader periods, pottery.

During July 2004, a trial excavation was conducted in the Muristan area of the Old City of Jerusalem (Permit No. A-4211; map ref. NIG 221885/631635; OIG 171885/131635), prior to renovating a shop. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by property owner A. El-'Azim Wazwaz was directed by Z. 'Adawi, with the assistance of V. Essman, V. Pirsky and T. Kornfeld (surveying), T. De'adle and B. Tori (field assistance), C. Amit (studio photography) and C. Hersch and I. Lidski (finds drawing).
The Muristan compound is located in the heart of the Old City, west of the Butchers' Market (the ancient cardo), south of the Church of the Holy Sepulcher, north of David Street and east of the Christian Quarter Road (Fig. 1). This is the location of Aelia Capitolina's forum from the Roman period and in the Byzantine period, the Church of Saint John the Baptist was built in its southwestern corner. Remains from the Byzantine and Early Islamic periods were exposed in Kenyon's excavations, Area C, which is owned by the Monastery of St. George. In the ninth century CE, Charlemagne built here a large Latin center for the Christian pilgrims that included a hospital, a library and a church. In the eleventh century CE, the Amalfi merchants had rebuilt and enlarged the center, which included a Latin monastery, a convent and a hospital. In the Crusader period, the compound was rebuilt once again or renovated; this time it included a hospital that consisted of several wings, which contained storerooms and residential quarters for the Hospitallers. The hospital extended into the western part of Muristan. The Church of Saint John the Baptist stood to the south and the Patriarch's bathhouse was between them. The area also included two monasteries and majestic Romanesque churches alongside them. The first monastery was a convent and next to it was the Church of Santa Maria Maggiore. The second was the Benedictine monastery, with the Church of Santa Maria Latina next to it. In addition, a market square that extended into the south and southeast of the Muristan was built. In the Ayyubid period, the El-'Omariya Mosque was built to the north of the Muristan, near the Church of the Holy Sepulcher. Charles Warren was the first scholar to study the Muristan in 1867. He excavated channels and a shaft and hoped to find remains from the time of Jesus. Conrad Schick surveyed the area in 1899-1900, prior to the construction of the Church of the Redeemer in the northeastern corner of the compound and the construction of the market and shops in its center. He mapped the building remains he discovered, most of which dated to the Crusader period (Fig. 1). During 1990-2000, archaeologists of the Israel Antiquities Authority documented remains from the Crusader period in the compound (A. Re'em, J. Seligman, Z. 'Adawi and R. Abu Raya, in preparation. Crusader's Remains in the Muristan Jerusalem, OldCity). An excavation conducted in 1999 (Permit No. A-3171) revealed the main apse of the Church of Santa Maria Maggiore.
The current excavation was carried out in the center part of the Muristan compound, in two separate squares (each $3 \times 8$ m ) along the southern side of the Church of Santa Maria Maggiore. Three construction phases that included two massive walls, three channels, a cistern and several floors were exposed (Fig. 2). The remains were dated from the Byzantine until the Ottoman periods.

The First Phase. A channel (T1; length 5 m ), oriented east-west, was ascribed to this earliest phase. It contained fill (Loci 107, 153; thickness 1 m ) that was devoid of any datable finds. The floor of the channel consisted of small plastered fieldstones, unlike its unplastered sides. It was covered with five large fieldstone slabs (average size 0.3-0.4 $\times 0.6-0.8$ m , thickness $0.15-0.35 \mathrm{~m}$ ). One of the slabs was cracked and small fieldstones were placed below it for support, possibly when the channel was no longer in use. Walls 1 and 10 formed the southern side of the channel and Wall 2, built of nine courses, was its northern side. Wall 10, aligned east-west, was built on an incline of ashlar stones and only three of its courses were exposed (length 2.7 m , height $0.6-0.8 \mathrm{~m}$, average width 1.5 m ). The layers of fill to the south of W1 (L204) contained pottery vessels; some dated to the Byzantine period and included a jar (Fig. 3:8), whereas most dated to the Early Roman period (first century BCE-first century CE) and included cooking pots (Fig. 3:1-6) and a jar (Fig. 3:7).
Wall 1 was built of two-three courses (width 1.4 m , height $0.7-0.8 \mathrm{~m}$ ) and deviated 0.1 m north of W 10 's line, which was below it and may have served as its foundation. If this was the case, then W1 probably belonged to the second phase. A tamped level of small white stones (L203) that was only discovered in the western part of the square abutted the base of W1.

The Second Phase. A floor (F2), two channels (T2, T3) and a wall (W3) were ascribed to this phase. The floor (F2) consisted of beige-colored limestone (thickness $2-5 \mathrm{~cm}$ ) on top of very small stones (average size $5 \times 10 \mathrm{~cm}$ ). Two openings were discerned in the floor; the first, in the northwestern corner of the square, belonged to a built cistern that was filled with silt and whose opening was blocked with a stone slab at floor level. The second opening ( $20 \times 30 \mathrm{~cm}$ ) was the top of Channel T2, which was built of small fieldstones and a small fieldstone blocked it. Although the function of the channel (length 3 m , width 0.3 m , depth 0.3 m ) is unclear, it was probably used to feed the cistern or convey overflow. Its northwest-southeast direction may have connected it to Channel T1.
Channel T3, aligned east-west (length 1.8 m , width 0.2 m , depth 0.3 m ), was discovered at a lower level than Channel T2; it may have been connected to the opening in the northwestern corner of the built cistern and it was probably used as a feeder channel or for overflow. The two channels (T2, T3) were coated with gray plaster that contained limestone/lime, fine gravel and charcoal.
Wall 3 (length 2.5 m , height 1 m ), built of roughly hewn fieldstones, was preserved three courses high; it crossed the middle of the square in an east-west direction and probably served as the southern wall of the cistern. The fill above the wall (L104) contained fragments of pottery vessels that included the base of a bowl (Fig. 4:7), with a double slip, a dark yellow monochrome glaze and sgraffito decoration, dating to the Fatimid and Crusader periods (beginning of eleventh to middle of the thirteenth centuries CE) and a plain bowl (Fig. 4:5) that dated to this time period. Hence, the cistern was dated to the Fatimid period or at the latest to the beginning of the Crusader period, which was consistent with the finds documented by Schick north of the excavation area and the historical sources that claim the building had existed in the Early Islamic period and was renovated in the Crusader period.
The fill along the sides of W3 (Loci 105, 106, 108) contained potsherds that dated to the Early Islamic period, including bowls (Fig. 4:1, 2), glazed bowls with a double slip on the interior and exterior of the rim (Fig. 4:4, 6), a glazed Fayumitype bowl (Fig. 4:3) and jars (Fig. 4:8-11).

The Third Phase. The upper floor of beige-colored limestone ( F 1 ; thickness $3-7 \mathrm{~cm}$ ) belonged to this phase. It abutted the foundations of the shops' walls in the west and was disturbed in the east by the setting of a modern concrete floor. Earthen fill (Loci 101, 202; thickness 10-15 cm) that contained a jar fragment (Fig. 4:12), dating to the Ottoman period, was exposed below the floor.
A lamp (Fig. 4:13) that dated to the Mamluk period was found in the fill on the surface.


1. Location map; the excavation in relation to remains documented by Schick in 1900.

2. Early Roman and Byzantine periods, pottery.

3. Islamic and Crusader periods, pottery.
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## Jerusalem, Tell el-Ful

Final Report
Zubair 'Adawi
 section.

3. The installation, looking south.

4. The lavers of plaster in the installation, looking
northeast.

During June 2005, a salvage excavation was conducted along the southern slope of Tell el-Ful (Permit No. A-4515; map ref. NIG 22187-91/63642-46; OIG 17187-91/13642-46; Fig. 1), prior to construction. The excavation, undertaken on behalf of the Israe Antiquities Authority and underwritten by the Jerusalem Municipality's Department of Construction, was directed by Z. 'Adawi, with the assistance of R. Abu Halaf (administration), T. Kornfeld (surveying), T. Sagiv (field photography) and B. Tori.
A circular installation (diam. 5.5-6.0 m, preserved depth $0.3-0.5 \mathrm{~m}$; Fig. 2), hewn in the chalk bedrock, was excavated in the middle of the slope. Its sides were coated with two layers of plaster (upper layer thickness 3-7 cm, bottom layer thickness $2-5 \mathrm{~cm}$; Figs. 3, 4). Similar installations were excavated on the southeastern slope of the tell (HA-ESI 111:62*64*; 114:72*-73*).
The northern bottom part of the installation (L105) was damaged by probe trenches that were dug prior to the excavation. A surface (L103; $1.7 \times 2.2 \mathrm{~m}$ ) of small fieldstones, some of which were coated with layers of plaster, identical to those on the sides of the installation, was discovered in the southern bottom part of the installation. An examination of the plaster revealed that it was not hydraulic and therefore, the installation was not used for liquids but probably to stockpile grain, like similar installations that had previously been excavated at Tell el-Ful (N. Lapp, 1992. Tell el-Ful. In E. Stern [ed.] The New Encyclopedia of Archeological Excavations in the Holy Land, 4, pp. 1307-1308, Jerusalem).
The installation was filled with potsherd that mostly dated to Middle Bronze II, with a few dating to Iron II. The potsherds were probably swept into it from the upper part of the hill where remains of these periods had been exposed in the past, such as the cave, excavated in 1996 by S. Gibson and Z. Greenhut (Permit No. A-2506). The later potsherds probably indicate the end of the installation's use.

3. The installation, looking south.

4. The layers of plaster in the installation, looking northeast.
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Jerusalem, Shikune Nusseiba
Final Report


1. Location map.

Zubair 'Adawi
During March 2005, a survey preceding development was conducted in the Beit Hanina neighborhood of Jerusalem (Permit No. A4413; map ref. NIG 22081-90/63765-785; OIG 17081-90/13765-785), prior to private construction. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by a private association of physicians, was directed by Z . 'Adawi, Y . Mizrahi and L. Barda (GPS).
The survey was carried out on a hill north of the approach road to Beit Hanina, northwest of Tell el-Ful and c. 1.5 km south of Khirbat 'Addasa (North). Many quarries are located on the hill, some of which had previously been excavated (HA-ESI 119; Permit Nos. A-4251, A-4458; Fig. 1).
Eighteen sites from unidentified periods were documented. Thirteen were quarries (Sites 1, 2, 7, 9-12, 14-19, Site 6 was canceled), two were stone heaps (Sites 5,8 ; diam. $8-10 \mathrm{~m}$ ) that consisted of small and medium fieldstones, one site was the remains of a farming terrace (Site 13; length 35 m ) and another was a rock-hewn cistern (Site 3; diam. c. 5 m ) whose sides were plastered and a single course of small fieldstones was built above its opening. A bedrock-hewn cupmark was also documented (Site 4; diam. 0.4 m).

A few non-diagnostic potsherds were found on the surface; however, excavations in adjacent quarries had apparently dated them to the Byzantine period. These quarries and those on the surveyed hill and on the hill to the south were probably used by the surrounding sites: Khirbat 'Addasa to the north, Khirbat el-Shumar and Khirbat el-Biyar to the west, Khirbat er-Ras to the south and Tell el-Ful to the east.


1. Location map.

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1. Location map.

2. The upper and middle stories, looking west.

3. The bottom story, looking south.

4. Pottery from the Mamluk period.

5. Fragment of a marble statue (protome).

## Yuval Baruch and Danny Weiss

 8/12/2009During June 1998, a small-scale salvage excavation was conducted along the bedrock cliff that rises west of the Temple Mount and the Western Wall plaza (Permit No. A-2883; map ref. NIG 22220/63150; OIG 17220/13150), prior to the construction of a staircase, linking the prayer plaza with the Jewish Quarter. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the East Jerusalem Development Company, was directed by Y. Baruch and D. Weiss, with the assistance of G. Kotovsky (area supervision), A. abu-Jarbiyya (administration), M. Kunin, E. Belashov, V. Essman and I. Watkin (surveying), S. Mandrea (field photography), T. Kornfeld (drawing of architectural elements), R. Elberger (conservation), E. Altmark (metallurgical laboratory), C. Hersch (drawing of pottery and small finds), Y. Gorin-Rosen (glass) and D.T. Ariel (numismatics).

A bedrock-hewn rectangular cavity was exposed in the southwestern corner of the Western Wall plaza. It was situated further along the row of rock-hewn rooms to its north, on the bedrock cliff that separates the Upper City of Jerusalem from the area west of the Temple Mount, where the Western Wall plaza is today (Fig. 1). The two rooms adjacent to it on the north are blocked by iron doors and used as storerooms today; at least three other poorly preserved rooms are located beneath the Esh Ha-Torah Yeshiva building slightly to their north. The row of rooms, to which the exposed cavity belongs, has been identified as the row of shops that extended along the western sidewalk of the Secondary (Eastern) Cardo, which is depicted in the Madaba Map; it is widely accepted today that the street was built in the Roman period. Other sections of the street and the shops alongside it were exposed north and south of the currently excavated cavity. A section of pavement ( 12 m long) and a limestone pedestal, which belonged to the street, were discerned in 1998 c .75 m north of the cavity, next to the police station in the northern part of the Western Wall plaza. Other rooms that were apparently part of the row of shops were identified north of the police station; however, it is difficult to comprehend their plan since later buildings were erected there. The southern continuation of the row of shops was discovered at the foot of the Porat Yosef Yeshiva, north of the Tanners' Gate, and also south of the Old City wall and west of the Tanner's Gate and the Ayyubid tower. Another section of the street and the shops alongside it was exposed in a recent extensive excavation along the cliff in the northwestern part of the Western Wall plaza (HA-ESI 121; see comprehensive references about the Secondary Cardo therein)
The remains of a water channel (length 0.9 m , width c. 0.2 m , depth 0.6 m ) could be discerned at the top of the cliff where the rock-hewn cavity is located. The channel was apparently connected to the Lower Aqueduct, which ran along the cliff and conveyed water to the Temple Mount. The rectangular cavity ( $3.35 \times 4.60 \mathrm{~m}$, min. height 8.40 m ; Fig. 2) was meticulously hewn and the rock sides were dressed diagonally by means of a serrated tool. Its western side was preserved to a considerably greater height than its other sides. An entrance corridor ( $1.2 \times 1.3 \mathrm{~m}$, min. height 3.2 m ) was hewn in the eastern side, which was only preserved to the elevation of c .732 .25 m above sea level. The fill in the cavity was only partially excavated due to safety precautions. It seems that the cavity was hewn as a single unit in the Roman period or at the latest, during the Byzantine period. It is possible that the rock-cutting was done together with the rockcutting on the cliff, or even simultaneously with the construction of the cardo that extended east of the cliff. The cavity consisted of at least three stories. The floor and the ceiling that separated the upper two stories did not survive. Part of a floor (L9), supported by a cross vault on the bottom story, was preserved between the two lower stories. The fill blocking the entire height of the cavity was homogenous and it seems to have accumulated at the end of the Mamluk period, after the cavity was no longer in use, or latest at the beginning of the Ottoman period-a very long time after the street, next to which the cavity was hewn, ceased to be used.

The Upper Story. Most of the eastern side of the upper room was missing and its southern side was damaged; the end of its floor that consisted of terra-cotta pavers had survived. A natural recess that had been hewn wider and deeper and sloped from north to south ( $732.3-732.0 \mathrm{~m}$ above sea level) was noted along the sides of the room. The gray plaster in the recess was embedded with well-fired, orange-colored terra-cotta slabs (thickness c. 2 cm ; Fig. 3)-probably remains of a floor, the likes of which are known from Byzantine buildings in Jerusalem.

The Middle Story. The ceiling of the second story room was installed almost directly below the floor level of the upper room and probably supported it. The ceiling probably consisted of wooden beams that were inserted into recesses hewn in the bedrock walls. Four shallow recesses (height $0.25-0.50 \mathrm{~m}$, max. width 0.25 m , max. depth 0.2 m ) that were hewn at irregular intervals were noted in the northern side, at an elevation of 731.5 m above sea level. A single recess survived opposite them, in the middle of the southern side, which was partially destroyed. A floor of crushed chalk (L9; thickness 0.25 m ; Fig. 4) atop a bedding of small fieldstones was preserved at an elevation of c .729 .5 m above sea level. This floor was probably constructed in the Mamluk period, when a cistern was installed in the bottom room (below). A trapezoidal entryway (height 1.9 m , width of threshold 0.85 m , width of lintel 0.75 m , max. depth 0.9 m ; Figs. 3,5) that was hewn in the northern side of this wall led to the adjacent room in the row of rock-hewn shops. It seems that this entry was breached in a later phase of the room's use, but it is impossible to determine when this occurred. The western doorjamb of the entry, like the threshold and the lintel, was partly destroyed.
The corridor opened in the eastern side of the room probably linked the cavity with the room built to its east in the second story of a building that was erected alongside the street. However, this corridor was apparently blocked at a later phase by a barely preserved barrel vault that was built inside a water cistern in the bottom room (below). An arched opening, whose upper part was only exposed (Fig. 6; see Fig. 2: Section 2-2), was installed the end of the vault that faced the hewn cavity. The opening, built of ashlar stones without mortar, was set inside a straight frame that consisted of a row of square stones above it and above them-a course of flat stones, only one stone of which survived on the southern side (thickness 0.1 m ). The vault narrowed and lowered the passage in the corridor (max. height 1.2 m ) so much that it is difficult to assume people could move through it from this room; hence, it seems that the arch was supposed to fulfill an engineering function, possibly that of a relief arch.

The Bottom Story. The excavation in the bottom room was suspended at an elevation of c. 727.5 m above sea level and did not reach its floor; therefore, it is unclear how deep the room was and whether the rock-cutting continued below this level. The floor level in the bottom room probably corresponded to that of the cardo (c. 726 m above sea level), which continued east of the cliff into which the cavity was hewn. At some point in time, pillars of roughly hewn stones were built in the corners of the room and bore a barrel vault that was aligned east-west. The upper parts of the northern and southern sides were hewn in the shape of an arch; a horizontal crack that appears to be natural (height 0.15 m ; Fig. 7 ) extended along the line where the sides started to curve toward the top of the vault. A rectangular niche ( $1.12 \times 1.50 \mathrm{~m}$ ) that tapered toward the top was hewn along each side above the crack. The pillars and ceiling vault were coated with a thick layer of coarse white plaster, applied to a foundation of small stones and a layer of dark gray plaster, which served as a sealant; patches of plaster survived on the hewn northern and southern sides of the room. This type of plaster indicates that a cistern was installed in the cavity. A shaft (width 0.3 m ) that was built along the western side of the hewn cavity, from its top until the vaulted room, probably led to the cistern. Two thin walls, the southern and northern, were preserved from the upper part of the shaft (see Fig. 4); the walls were carelessly built of roughly hewn stones bonded with light gray mortar. The shaft walls were preserved slightly above the floor level of the middle story. However, on the side of the bedrock and above the walls of the shaft, plaster remains were visible, indicating that the shaft continued upward for the full height of the side (see Fig. 3). The bottom part of the shaft inside the vaulted room was lined with a built casing of roughly hewn stones that were bonded with reddish mortar (Fig. 8). It seems that this shaft was connected
to the aqueduct at the top of the cliff. It is difficult to determine when the pillars, the vaulted ceiling and shaft were built in this room. The cistern was probably installed in the Ayyubid or Mamluk period, when the Mughrabi neighborhood was established in this part of the city. It seems probable that during this phase the barrel vault was set into the hewn corridor, which was possibly used as an opening to this room (see Fig. 6).

The Finds. A large assemblage of mixed pottery vessels that dated from the time of the Second Temple, the Byzantine, Early Islamic, Mamluk and the beginning of the Ottoman periods was found in the soil fill that covered the hewn cavity, which was found completely filled with debris whose color ranged from light gray to dark brown. The pottery assemblage recovered from the cavity was assorted and included vessels from the Byzantine, Early Islamic, and Mamluk periods. It therefore seems that the entire cavity was filled with this debris after it was no longer in use, probably at the end of the Mamluk or the beginning of the Ottoman periods. The potsherds from the Byzantine period included bowls (Fig. 9:1-5), among them Fine Byzantine Ware (No. 5), a cooking pot (Fig. 9:6) and jars (Fig. 9:7, 8). The vessels from the Early Islamic period included bowls (not drawn), deep ceramic basins (Fig. 9:9), goblets (Fig. 9:10), jars (Fig. 9:11) and severa fragments of clay lamps (Fig. 9:12). The vessels from the Mamluk period included glazed bowls adorned with geometric and floral patterns and Arabic inscriptions (Fig. 10:1-4), bowls decorated with red paint (Fig. 10:5,), bowls slipped bright brown (Fig. 10:6), 'chamber pot'-type jugs (Fig. 10:7-9) and jars (not drawn). Other artifacts included fragments of glass and stone vessels, bone and metallic objects, coins and marble slabs.
A fragment of a white Carrara marble statue (protome; height 0.39 m ; Fig. 11) was found in the debris; it is dated to the Late Roman period (third century CE), based on its style. The statue depicts a person standing on a round base with a name plate at its feet, which is decorated with a floral pattern or a knot-like decoration of a belt. A notch on the back of the statue was intended for an inserted rod to support it. The head and hands of the figure, except for the end of the right hand that rested on the chest, had been removed, perhaps before fitting the piece for some secondary use. The figure is dressed in a chiton and wrapped in a himation, the end of which can be seen at the bottom part of the statue. Based on the dress and how the curves of the body are accentuated, it seems that the image portrayed is that of a woman.



3. The upper and middle stories, looking west.

4. The floor on the middle level (L9), looking west.

5. Hewn entryway, looking north.

6. The arch in the eastern opening of the corridor, looking west.

7. The bottom story, looking south.

8. The bottom story, the wall of the shaft along the western side of the cavity, looking west.



## (Volume No. HA-ESI 121 (2009

## Jerusalem, Sur Bahir, Survey

Final Report
Yehuda Dagan, Leticia Barda and Zubair 'Adawi


1. Location map.

2. Site 10 , olive press and a rock-hewn surface nearby,
looking south.

3. Site 17, winepress. lookin south.

4. Site 20, winepress, lookin southeast.

5. Site 9 , farming terrace, looking northwest.

During February 2005, an archaeological survey was conducted in the Sur Bahir neighborhood of Jerusalem (Permit No. A-4390; map ref. NIG 22250-370/62560-640; OIG 17250-370/12560-640), prior to the preparation of a master plan for construction. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the residents of the neighborhood, was performed by Y. Dagan, L. Barda (GPS) and Z. 'Adawi.
An area of 250 dunams in the southeastern part of Sur Bahir, which extends across two spurs, descending from the hill country to the southeast, was surveyed (Fig. 1). Dwellings are scattered in part of the area and cultivation plots extend across the valley between the spurs. Most of the twenty-three documented survey sites are agricultural installations that were hewn in bedrock outcrops on the spurs (Fig. 2). This region had previously been surveyed by A. Kloner (Map of Talpiyot [106]. In Survey of Jerusalem: the Southern Sector, Sites 119, 122, 124-126, 137, 138, 141, 142; Fig. 2, marked in green). Following is a description of the sites.

Khirbat Dir el-‘Amud (No. 6; Map of Talpiyot [106], Site 141). Rock-cuttings and foundations of buildings are visible in a ruin that extends along the lower part of the eastern spur (Fig. 3).

Olive Presses (Nos. 1, 3, 10). Two olive presses and a crushing stone were documented on the eastern spur. The olive presses (Nos. 3, 10) were located at the top and the bottom of the spur and each consisted of a hewn rectangular surface ( $3.0-3.5 \times 5.0 \mathrm{~m}$ ) in whose sides were square hewn recesses $(0.35 \times 0.40 \mathrm{~m}$; Fig. 4), intended for securing beams. Next to the treading floor of Olive Press 10 were hewn channels and a rectangular surface that was smaller than the treading floor (remains of a winepress? Fig. 5). Some 300 m to the east was a round crushing stone (No. 1; diam. 1.1 m , thickness 0.35 m ; Fig. 6) with a square perforation $(0.1 \times 0.1 \mathrm{~m})$ in its center.

Winepresses (Nos. 17, 20). Two rock-hewn winepresses were documented along the southern part of the western spur. Winepress 17 (Fig. 7) included a square treading floor $(3 \times 3 \mathrm{~m})$ that had square recesses cut in its sides. Winepress 20 (Fig. 8), at the southern end of the spur, consisted of a rectangular treading floor ( $2.5 \times 4.0 \mathrm{~m}$ ) and a rectangular collecting vat $(1.0 \times 2.3 \mathrm{~m})$. Channels that led into the treading floor were cut from rectangular depressions that were hewn in the bedrock surface around the winepress; a round basin (diam. 0.7 m ) was cut nearby.

Rock-hewn Cisterns (Nos. 2, 13, 17, 18). One of the cisterns (No. 2) was not far from Olive Press 3 at the top of the eastern spur and next to a burial cave $(1.2 \times 1.8 \mathrm{~m})$ that was entered by way of a rectangular shaft, which terminated in a round opening. A circular capstone (diam. of cistern opening 1.3 m ) with a round hole in its center (diam. 0.35 m ) was placed above the cistern's opening. The burial cave was adapted for use as another opening to the cistern, near which hewn channels and troughs were noted. One of the troughs was large and rectangular ( $0.6 \times 1.2 \mathrm{~m}$ ) and one of the channels (No. 4; Fig. 9) led to the cistern. On the upper part of the western spur was a bell-shaped cistern (No. 13) whose ceiling had collapsed and rock-cut steps had led to it. Two other cisterns were located on the lower part of the western spur: a cistern with a square opening $(1.1 \times 1.1 \mathrm{~m})$ next to the treading floor of Winepress 17 and a cistern with a rectangular opening (No. 18; a collecting vat of a winepress?).

Caves (Nos. 5, 11, 14, 16). Four caves used as dwellings during the past several hundred years were documented; it was not possible to determine if the caves were natural or anthropogenic. Modern walls were identified in the openings of two caves (Nos. 5, 16). Twelve hewn niches ( $0.14 \times 0.20 \mathrm{~m}$ ), probably used for raising doves (columbaria?), were noted in Cave 16 (diam. 15 m ).

Basins and Cupmarks (Nos. 15, 21-23). A large conical cupmark (diam. 0.7 m ) and two small ones (diam. 0.15 m ) were hewn on bedrock outcrops in the middle of the western spur (No. 15). An elliptical basin (No. 21; $1.1 \times 1.6 \mathrm{~m}$ ), a cluster of cupmarks, a nearby round basin (No. 22) and another round basin (No. 23; diam. 1 m ) were hewn along the lower part of the western spur.

Farming Terraces (Nos. 7, 9, 19). Well-built farming terraces of roughly hewn stones were documented on the lower part of each of the spurs. A potsherd scattering and small and medium white tesserae were discerned next to Terrace 9 (Fig. 10).

Ashlar Wall (No. 8). A wall built of large ashlar stones ( $0.5 \times 0.7 \mathrm{~m}$ ) was located c. 18 m west of Terrace 9 and a potsherd scattering was documented nearby.

Limekiln (No. 12). A circular limekiln (diam. c. 4.5 m ; Fig. 11) was found on the high part of the western spur; it was lined with dressed stones, incorporated together with medium-sized fieldstones. Traces of plaster were discerned on the sides of the kiln.


1. Location map.

2. The survey map.

3. Site 6, Khirbat Dir el-Amud, looking north.

4. Site 3, treading floor of an olive press, looking north.

5. Site 10 , olive press and a rock-hewn surface nearby, looking south.

6. Site 1 , crushing stone from an olive press, looking northeast.

7. Site 17 , winepress, looking south.

8. Site 20 , winepress, looking southeast.

9. Site 4 , rock-cut channel, looking west.

10. Site 9 , farming terrace, looking northwest.

11. Site 12, limekiln, looking northeast.

## (Volume No. HA-ESI 121 (2009

## Jerusalem, Nabi ‘Akasha Preliminary Report

## Tawfik De'adle

21/12/2009


1. Plan and section.

2. The structure, photograph from the British Mandate era IAA Archive.

3. The structure, at the end of current excavation.

During May 2003, a salvage excavation was conducted within the precincts of the Nabi 'Akhasha mosque on Strauss Street in Jerusalem (Permit No. A-3923; map ref. NIG 2207-8/6325-6; OIG 1707-8/1325-6). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Jerusalem Municipality, was directed by T. De'adle, with the assistance of T. Kornfeld and A. Hajian (surveying) and C. Hersch (pottery drawing).

A grave monument $(1.9 \times 3.7 \mathrm{~m}$. height 1.2 m$)$, preserved three courses high, was revealed in an excavation alongside the entrance to the tomb of El-Qameriya (Figs. 1-3). The monument, built of ashlars, soil fill and fieldstones (L202) on a floor of crushed chalk (L203), was topped with a covering of stone slabs (W100). The pottery assemblage recovered from the fill dated its construction to the transition between the Ayyubid and Mamluk periods (twelfth-fourteenth centuries CE). A structure of fieldstones (W101, W102; $1.4 \times 1.8 \mathrm{~m}$ ) and soil fill (L204) founded on bedrock was exposed beneath the monument. Potsherds from the Umayyad period, the eighth-tenth centuries CE and the Ayyubid-Mamluk periods were found in the fill. The fill around the tomb and next to it (L201) yielded potsherds that dated to the Late Ottoman period (nineteenth century CE).
An ashlar stone, engraved with two funerary inscriptions and probably a later addition, was affixed to the monument. The first inscription was written in three lines:

$$
\text { هذا قبر الثيخ عبد الرحمن سعد كمال قشي لروحه الفاتحه سنة } 1310 \text { للهجرة. }
$$

"This is the tomb of Sheikh 'Abd al-Rahman Sa'ad Kamal, a gift for his soul the fatha will be read1310 AH (1892 CE)".
The second inscription was added to the first and was written at an angle to it:
"The tomb of "Akasha, friend of the Prophet"
It seems that the monument was built after the mausoleum was constructed in the sixth decade of the thirteenth century CE. The plaque, which bears the name of an interred individual and is probably from another tomb, was most likely affixed to the monumnet at the beginning of the twentieth century CE. The plaque was found attached to the corner with modern cement, which is different than the mortar used in the monument. Sometime after the 1930s the grave monument and its surroundings were covered with debris that included potsherds from the Ottoman period. Conservation and cleaning workds were conducted at the site in the 1970s (HA 6:17 [Hebrew])


2. The structure, photograph from the British Mandate era, IAA Archive.

3. The structure, at the end of current excavation.
(Volume No. HA-ESI 121 (2009
Jerusalem, Issawiya
Final Report
Zubair 'Adawi


1. Cave A, plan and section.

2. Pottery.

3. Cave B, plan and section.

During April 2003, two burial caves were documented within the Issawiya village in Jerusalem (Permit No. A-3940; Cave A—map ref. NIG 22383/63376, OIG 17383/13376; Cave B—map ref. NIG 22370/63387, OIG 17370/13387), during an antiquities inspection prior to construction. The documentation, on behalf of the Israel Antiquities Authority, was directed by Z. 'Adawi, with the assistance of G. Sulimany, B. Tori, T. De'adle (assistance in documenting and surveying), L. Barda (GPS), R. Vinitsky (metallurgical laboratory) and I. Lidski (pottery drawing).
The two caves, hewn in soft limestone bedrock, had been plundered in the past. Cave A was close to the foot of the northern slope of Mount Scopus and Cave B was c. 150 m to its northwest.

Cave A (Fig. 1) consisted of a forecourt and a burial chamber. The forecourt (average width 2.6 m ) was partly damaged by earthmoving activity and its opening was entirely destroyed. The burial chamber ( $2.5 \times 2.7 \mathrm{~m}$, height 1.2 m ) had an arched ceiling that was carelessly hewn; its floor was straight and six kokhim were cut in the sides-two in each, except for the side of the entrance. The kokhim had a flat ceiling and their bottom was 0.1 m higher than the floor of the cave. Two kokhim of almost identical dimensions (Loci 101, 102; length 2.75 m , width 0.4 m , height 0.7 m ) were hewn in the chamber's western side; two kokhim (L103—length 2.8 m , width 0.45 m , height 0.7 m ; L104—length 2.7 m , width 0.4 m , height 0.7 m ) were in the southern side and two kokhim of almost equal size (Loci 105, 106; length 2.5 m , width 0.5 m , height 0.7 m ) were cut in the eastern side. A recess (L108) that served as a bone repository was in the southwestern corner of the burial chamber. Bones were only found in the kokhim of the western and southern sides; none occurred in the kokhim of the eastern side because the ceiling and the walls on that side had collapsed onto the floor of the chamber. Covering slabs that matched the dimensions of the kokhim openings were found in the collapse nearby.
It can be concluded that a single individual was interred in a primary burial in each kokh, based on the manner of placing the bones. The standing pit was not exposed, although it was probably located in the center of the burial chamber. Ossuary fragments and an intact clay juglet (Fig. 2:1), dating to the first century BCE-first century CE, were discovered in the burial chamber (L107).
Based on the plan and the artifacts, the cave should be dated to the Early Roman period and attributed to the necropolis of Jerusalem during the Second Temple period (HA-ESI 111:64*-65*).

Cave B (Fig. 3) consisted of a burial chamber ( $3.2 \times 3.8 \mathrm{~m}$, height 1.7 m ), in three of whose sides various size arcosolia were hewn and in each arcosolium a burial trough was cut. The outer sides of the troughs (width $0.12,0.20,0.20 \mathrm{~m}$, respectively) that faced the chamber were built of fieldstones and coated with plaster together with the arcosolia.
The northern arcosolium spanned the entire width of the chamber and the trough inside it (L102; length 2.25 m , width 0.4 m , depth 0.6 m ) was sealed with four covering slabs $(0.3 \times 0.5 \mathrm{~m})$, between which remains of gray cement were found. The trough was probably covered originally with six or seven slabs. One side of the slabs was placed on the built side of the trough and the other side was inserted into a channel, hewn in the inner wall of the trough at a level that was 0.2 m higher than its top.
The western arcosolium was hewn along a section of the cave's western side. Only one of the covering slabs had survived on top of the trough (L103; length 1.8 m , width 0.4 m , depth 0.6 m ) that was cut inside it.
A trough (L104; length 2 m , width 0.4 m , depth 0.6 m ) was cut in the arcosolium along a section of the chamber's southern wall.
The eastern side of the cave was damaged by mechanical equipment and all that survived of it were the remains of a rectangular shaft ( $0.95 \times 1.10 \mathrm{~m}$, depth 1.1 m below surface) that led to an entrance whose northern side was preserved. A single step ( $0.3 \times 0.7 \mathrm{~m}, \mathrm{c} .0 .3 \mathrm{~m}$ above the bottom of the cave) led down from the entrance into the burial chamber, in whose three burial troughs poorly preserved human bones were found. With the exception of the ceiling, all the surfaces of the chamber and the arcosolia were coated with gray plaster (thickness 2 cm ) that contained coarse gravel and potsherds and acted as a protective layer against bedrock disintegration, as indicated by the cracks visible in those spots where the plaster had crumbled.
Only the burial chamber was excavated. Parts of iron nails that were used in wooden coffins, a metal object ( $3 \times 3 \mathrm{~cm}$ ) whose function is unclear and a ceramic lid (Fig. 2:2) that is dated to the sixth-eighth centuries CE were recovered from the fill on the bottom of the chamber. The plan of the cave and the artifacts it contained date it to the Byzantine period.


1. Cave A, plan and section.

2. Pottery.

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Jisr ez-Zarqa
Final Report
Kareem Sa'id
22/2/2009

3. Plan.

4. Pottery.

During December 2003, a salvage excavation was conducted at Jisr ez-Zarga (Permit No. A-4048; map ref. NIG 19215-20/715538; OIG 14215-20/21553-8). The excavation, on behalf of the Israel Antiquities Authority, was directed by K. Sa'id, with the assistance of V. Essman (surveying and drafting), P. Gendelman (pottery reading) and M. Shuiskaya (pottery drawing).
An excavation square (Fig. 1) was opened in hard clayey soil along the eastern fringes of the settlement. The excavation was located c. 5 m north of a shaft that accessed the High Aqueduct to Caesarea ('Atiqot $30: 23^{*}-43^{*}$ ). The remains of three walls (W101-W103) that formed a room were exposed in the excavation. The wall foundations, set on soil, were built of medium-sized fieldstones; the walls' upper courses consisted of ashlar stones, only a few of which had survived The soil fill excavated near the walls was mixed with a few potsherds that included jars from the first century CE (Fig. 2:1, 2) and amphorae that ranged in date from the fourth to the seventh centuries CE (Fig. 2:3, 4).

It seems that the remains were part of a single room that may have been connected to the activities in the High Aqueduct to Caesarea.


1. Plan.


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2. Pottery.

## Kafr Kanna

## Final Report



1. Plan and section.

2. The road, general view, looking east

3. Pottery.

Yardenna Alexandre
During August-September 2008, a salvage excavation was conducted in a private plot in the center of Kafr Kanna, c. 200 m northwest of the Kanna village spring (Permit No. 5478; map ref. NIG 231825/739073; OIG 181825/239073), in the wake of exposing a row of large stones (depth 2 m ) in mechanically dug trial trenches. The excavation, undertaken on behalf of the Israel Antiquities Authority and partially financed by the landowner A. Hamdan, was directed by Y. Alexandre (photography), with the assistance of Y. Lavan (administration), R. Mishayev (surveying), E. Belashov (drafting) and H. Tahan (pottery drawing).

Many archaeological excavations had been carried out since 1990 in Kafr Kanna.
A large village, occupied in the Early Bronze Age and in subsequent proto-historic periods, was excavated around the Kanna spring (Permit No. A-3534). The main settlements of the Iron Age and the Hellenistic and Roman periods were located on the low Karm er-Ras hill at the western edge of the present-day village (HA-ESI 120). From the Byzantine period onward the Kafr Kanna village grew up and developed into the ancient core of the present-day village that was surrounded by fruit and olive orchards and pasture lands, only vestiges of which are still visible today. The settlements were dependent on the perennial Kafr Kanna spring, which in historic times was located outside and to the south of the village and only in the last fifty years houses have been built up all around it.

Until the exposure of the row of large stones, no archaeological remains of any period had been exposed in this specific vicinity, which was a productive pomegranate orchard. The c. 50 sq m excavation area revealed that the row of large stones was in fact part of a paved road. The direction of the road suggests that it may have provided access to and from the spring to Karm er-Ras, located c. 300 m to the northwest.

The excavation reached a total depth of 3 m below surface, without attaining bedrock, although the packed nature of the earth indicated that it was close. Almost 2 m of soil were removed by a mechanical digger, once it was established that this was a thick layer of agricultural soil, entirely void of stones and archaeological finds. This soil may have been transported by the spring waters, although the complete absence of stones or pebbles is surprising. Two wide stone walls (W103, W104; width c. 1.2-1.5 m) were uncovered beneath the soil layer, running parallel at a distance of $2.0-2.5 \mathrm{~m}$ (Fig. 1). Both walls were built in a similar fashion of two faces with a core of small stones (Fig. 2). The outer face of each wall consisted of a single course of mostly vertical large stones (average dimensions $0.3 \times 0.4 \times 0.5 \mathrm{~m}$ ), placed directly on the soil layer. The inner face of both walls was built of about three courses of slightly smaller stones (average dimensions $0.3 \times 0.4 \mathrm{~m}$ ) that were placed horizontally, one on top of the other. Some of these stones seem to have fallen out of line over time. A section (depth 1 m ) was cut between W103 and W104, exposing several superimposed layers of small to miniature stones (c. $0.1 \times 0.1 \mathrm{~m}$ ), packed closely together with trodden earth to form a solid road or path. The two lowest surfaces (L110, L111) were only exposed over a small area, laying respectively 0.5 and 0.25 m below the base of the inner face of the walls. This suggests that these earliest road surfaces must have existed prior to the construction of the walls. The upper two surfaces (L102, L109) were clearly bordered by the walls. In effect, since the whole depth was filled with stones, it was not entirely clear whether there were four or more distinct road surfaces or if the stone layers had simply built up over time. These layers, however, were clearly trodden surfaces and not watertransported layers. The well-preserved upper surface (L102) was exposed for the whole length of the excavation ( 6.5 m ) and obviously extended beyond the limits of the excavation area in both directions.
The road surfaces incorporated fragmentary potsherds, predominantly fragments of jar handles that survived better than body sherds due to their thickness. It was difficult to identify the potsherds on the basis of their form because of their wear. Identifiable potsherds in the lowest layers included a Hellenistic jar (Fig. 3:1); Middle and Late Roman ceramics, including Kefar Hananya ware (Fig. 3:2, 3) and a Shikhin jar (Fig. 3:4). The potsherds in the upper road (L102) included bowl fragments dated to the Byzantine period (Fig. 3:5, 6), a bowl dating to the Crusader period (Fig. 3:7) and another bowl from the Mamluk period (Fig. 3:8); identifying the vases was based more on ware than on form. Occasional animal bone fragments were found in an extremely worn state.

It seems that a paved path was located here since at least the Roman period. At some stage, possibly in the Byzantine period, two low and wide parallel walls were apparently built as retaining walls to support the paved road. The outer vertically placed stone face of these walls must have been backfilled, while the inner face was originally free-standing (height c. 0.6 m ) and bordered on the road surface on either side. The road became higher over time, either by intentional depositions of additional small stone layers, or by the treading of accumulated small stones; at the latest use, the stone walls were simply wide curbs, c. 0.2 m above the stone road.

Although only a short 6.5 m section of the stone paved road was uncovered in the excavation, its location in a non-builtup area near the Kafr Kanna spring and the northwest-southeast direction of the road, point to its interpretation as a local road that led to and from the spring to the Hellenistic-Roman-Byzantine village of Karm er-Ras. The wadi carrying the waters off from the spring in the direction of the Bet Netofa valley was adjacent to the south of this road, whose careful construction may have been to protect it from flooding, which indeed, was not evident in the accumulated fill layers of the road. As evidenced by the worn potsherds in the lowest layers of the fill, this road must have been in use during the Roman period, when the village of Kana was located at Karm er-Ras, and subsequently in the Middle Ages, when an isolated building may have stood here.


1. Plan and section.

2. The road, general view, looking east

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## Kafr Kanna

## Final Report



1. Plan and section

2. Wall 1 above the Roman remains, W4 and L514. looking north.

3. Yellow-beaten floor (L508) abutting W1, looking west.

4. Stratum II, courtyard pavement, looking east

5. Strata III-I, Mamluk pottery.

Nurit Feig
During April 2007, a salvage excavation was conducted at Kafr Kanna (Permit No. A-5089; map ref. NIG 23216-20/73890-92; OIG 18216-20/23890-92), in the wake of discovering ancient remains during private construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by N. Feig, with the assistance of Y. Lavan (administration), V. Pirsky (surveying), H. Smithline (photography), E.J. Stern (pottery reading), L. Porat (pottery restoration), H. Tahan (drawing) and IAA workers from Umm-el-Fahm.
The excavated site is located in the oldest part of Kafr Kanna, near the Greek Melkite Catholic Church and 150 m northeast of the spring in the village center. Previous excavations in Kafr Kanna around the spring area exposed Mamluk and Ottoman remains in the Street of the Churches (Permit No. A-3549). Some other building remains from the Mamluk period were recently excavated in the vicinity of the site (Permit No. A-5083). Near the spring, an important site from the Pre Pottery Neolithic-Early Bronze IA was excavated (Permit No. A-3534).

The excavation area ( $5 \times 6 \mathrm{~m}$; Fig. 1) revealed architectural remains from the Roman (Stratum IV) and Mamluk (Strata III-I) periods.

Stratum IV (Roman period). A fieldstone-built wall (W4) and a tamped chalk layer (L514; Fig. 2) were exposed. The wall was survived by its bottom course and the chalk layer was probably a floor that abutted W4 from the north. The upper layer of the floor was damaged by the Stratum III structure. Only a few bowl fragments that dated to the last phase of the Roman period were found.

Stratum III (Mamluk period). A long wide wall (W1; length 7.1 m , width 1.1 m ), oriented east-west and built of fieldstones, was preserved a single course high. A light yellow, beaten-earth floor (L508) that abutted the wall from the north, as well as from the south (L503, L512; Fig. 3), was noted throughout the entire excavation area. This floor was overlaid with a large amount of pottery vessels, mainly glazed ware. Since W1 extended east and west, beyond the limits of the excavation, the two spaces to its north and south must have been large rooms. The structure was built above the Roman remains of Stratum IV.

Stratum II (Mamluk period). A layer of small stones, deposited directly above Floor 508 of Stratum III, was probably used as a foundation for a paved open courtyard (L511; $3 \times 4 \mathrm{~m}$; Fig. 4). The single course of W1 was incorporated, in a secondary use, within this courtyard's pavement. Pavement 511 was preserved well north of W1 and seems to be on a higher level than the top of the wall. The outline of the courtyard could not be detected due to modern disturbances and the limited excavated area. However, the potsherds found on the courtyard floor dated to the Mamluk period.

Stratum I (Mamluk period). A badly preserved wall of three large stones (W3; length 1 m ), oriented northwest-southeast, was uncovered within the surface layer in the northeast corner of the excavation. Its foundations were set on a fill (thickness 0.3 m ) that covered the Stratum II courtyard. The potsherds found above it dated to the fourteenth-fifteenth centuries CE .

The pottery finds retrieved from the excavation reflect the ceramic profile of the three Mamluk strata at the site. The assemblage, typical of the fourteenth-fifteenth centuries CE, included a handmade bowl (Fig. 5:1); unglazed pottery, including a bowl (Fig. 5:2), a krater (Fig. 5:3), a jar (Fig. 5:4) and a jug (Fig. 5:5); cooking vessels, including a glazed carinated cooking bowl (Fig. 5:6) and a handmade cooking pot (Fig. 5:7); a slip-painted bowl (Fig. 5:8), green-glazed bowls of the monochrome class (Fig. 5:9, 10), which are considered as the two main bowl types of the Mamluk period; soft-paste ware (Fig. 5:11) and glazed cups (Fig. 5:12, 13).

The remains of a Roman floor with a few bowl fragments that were exposed in a very limited area do not provide enough evidence to suggest a Roman settlement at the site.
The function of the fourteenth-fifteenth century CE occupation cannot be precisely understood, due to the poorly preserved walls and floors. The architectural remains in Stratum III seem to belong to a large residential building.
However, it is noteworthy that the pottery finds include all types of vessels, namely storage, cooking and table wares, as well as a small fragment of a grinding stone that was probably used for the crushing of food. These features point to a domestic occupation. The structure of Stratum III was destroyed and replaced with a stone-paved open courtyard (Stratum II). The fragmentary remains of W3 in the northeast section represent yet another phase and testify to an intensive settlement at the site during the Mamluk period. The site was then abandoned, as happened to the other two Mamluk sites in the village, and covered with fill.
This limited excavation adds little to our present knowledge of the history of Kafr Kanna during the Mamluk period.


1. Plan and section

2. Wall 1 above the Roman remains, W4 and L514, looking north.

3. Yellow-beaten floor (L508) abutting W1, looking west.

4. Stratum II, courtyard pavement, looking east


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5. Strata III-I, Mamluk pottery
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Kafr Kanna (East)
Final Report


1. Burial cave, plan and sections.

2. Western wall of burial cave, looking west.

3. Clay iuglet.

During January 2002, a burial cave was documented at Jebel Hawaha (East), in Kafr Qanna (map ref. NIG 23335/73900; OIG $18335 / 23900$ ), in the wake of looting antiquities. The documentation, on behalf of the Israel Antiquities Authority, was conducted by inspectors of the Unit for the Prevention of Antiquities Robbery, with the assistance of Y. Moshe, C. Amit (photography), O. Shorr (glass restoration) and C. Hersch (drawing).
The burial cave $(4.8 \times 6.4 \mathrm{~m}$; Fig. 1) was hewn in soft chalk rock on the northern slope of a hill. Several burial caves had previously been exposed in this area (ESI 7-8:107-108). The entrance to the cave had been damaged by mechanical equipment. The cave consisted of a burial chamber in which seven kokhim (average size $0.7 \times 2.0 \mathrm{~m}$, height c. 1.0 m ) were installed, five of which were in the western wall (Fig. 2). One of the five was hewn 0.4 m higher than the other four and a bone repository ( $1 \times 1 \mathrm{~m}$ ) was located in its rear part. Two kokhim were cut in the southern wall. The artifacts from the cave were plundered, but rediscovered, with a search order, in the house of the looters. The finds comprised an intact clay juglet (Fig. 3), a bronze knife (Fig. 4) and several glass vessels, including two intact bottles that have indented decoration, which resembles a quarto-petaled flower and a long cylindrical neck with a folded-in rim (Fig. 5:1, 2), a small and intact lentoid flask (Fig. 5:3), two bottles, one has a cylindrical body and the other-globular (Fig. 5:4,5) and the rim of another bottle (Fig. $5: 6$ ). This glass assemblage is similar to vessels found in a burial cave at Kafer Kama ('Atiqot 56:113-118 [Hebrew]), which were dated to the third century CE and thought to have been of local production. The clay juglet and the glass vessels date the cave to the second-third centuries CE.




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3. Clay juglet.




4. Bronze knife.


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## Kafr Nafah

Final Report
Fadi Abu Zidan

3. Sections.

4. Stratum 1, looking east.
 west.

9. Tabun, looking northwest.

11. Stratum 3, pottery.

During December 2005, a salvage excavation was conducted at Kafr Nafah (Permit No. A-4643; map ref. NIG 26937/77425; OIG $21937 / 27425$ ), in the wake of installing an electric cable. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel Electric Corporation, was directed by F. Abu Zidan, with the assistance of Y. Ya'aqobi (administration), A. Hajian (surveying), E.J. Stern (pottery reading), L. Porath (pottery restoration), H. Tahan (pottery drawing), D.T. Ariel (numismatics) and M. Sadeh (archaeozoology), as well as workers from Maghar and Hazor.
Kafr Nafah is situated c. 500 m southwest of the Armored Corps Junction, on the northern bank of a tributary that flows into Nahal Gilbon in the northern Golan Heights.

Surveys conducted in the area indicate that the abandoned Syrian village was built on top of ancient buildings remains from the Roman and Byzantine periods, which followed the Haurani construction style (Schumacher G. 1888. The Jaulan. London; Hartal M. 1989. The Northern Golan, Site 3.62). Architectural elements from these periods, incorporated in the buildings of the village, were documented (HA 56:3-4 [Hebrew]). The potsherds collected in the surveys suggest that the village was first established in the Roman period, expanded in the Byzantine period (IEJ 33, 1983:189-206), was reoccupied in the Mamluk period, when the settlements in the Golan had flourished and was settled by Turkmens during the Ottoman period.
Two squares were opened next to a building on the southwestern side of the village (Fig. 1). Remains of buildings and courtyards with ovens were exposed in three settlement strata: the twentieth century CE (1), the thirteenth-fourteenth centuries CE (2) and the twelfth-thirteenth centuries CE (3).

## Stratum 1

A two-room building was uncovered (Figs. 2, 3).
The eastern room was preserved almost in its entirety. Its rectangular plan ( $5.0 \times 8.5 \mathrm{~m}$ )
was partitioned widthwise by two arches. The walls were built of dry construction, utilizing coarsely dressed basalt ashlars and the ceiling consisted of basalt slabs that rested on basalt cornices in the wall on one side and on the two arches that spanned the room, on the other (Figs. 4, 5). A doorway in the western wall evidently connected this room with the one to its west.
The western room was mostly destroyed and its walls (W507, W509, W510, W519) were preserved two to three courses high. Only the foundation of W507 had survived and it seems that initially, it delineated the room from the west. Wall 507 was later dismantled and the room was expanded with the construction of W510 and the laying of a new cement floor that abutted its walls. At the western end of the excavation, a wall (W515), built on a surface of flat stones (L536) from Stratum 2, was exposed.
The ceramic finds included krater fragments (Fig. 6:6, 7) and a jar spout (Fig. 6:8) of Rashaya al-Fukhar ware, dating to the Ottoman period, as well as bowls (Fig. 6:1-5) from the thirteenth-fourteenth centuries CE, which apparently belonged to Stratum 2.
Based on the stone dressing (M. Hartal, pers. comm.) and the Rashaya al-Fukhar pottery, which was still in use in the Golan at the time of Syrian rule, it can be assumed that Stratum 1 belonged to the abandoned Syrian village.

## Stratum 2

A room and a courtyard with a tabun to its east were exposed (Figs. 7, 8).
The room, enclosed by walls (W523, W541, W542) built of medium, undressed stones, had a floor of flat fieldstones (L543). A wall (W557), in which two fragments of a threshold stone were incorporated, partitioned the room. A flat stone work surface (L536) abutted W523 from the west.
The courtyard was located to the north of the room. Wall 508 enclosed it on the north and its eastern wall seems to be a continuation of W542. A tabun (L526; Fig. 9) was set on the courtyard's tamped earthen floor (L530).
The ceramic assemblage included bowls (Fig. 10:1-4), kraters (Fig. 10:5, 6), cooking pot (Fig. 10:7), jars (Fig. 10:8, 9), jugs (Fig. 10:10, 11) and bases of glazed vessels (Fig. 10:12, 13), dating to the thirteenth-fifteenth centuries CE. While dismantling Floor 530, a silver dirham of Sultan Beybers I, struck at the Cairo mint (1261 CE; IAA 102298) was found, as well as an antoninianus of Emperor Provos (Antioch mint, 276 CE; IAA 102300).

## Stratum 3

A corner of a building and a courtyard with a tabun to its east were exposed.
The building corner (W554, W555) was located at the western end of the excavation area. The walls, built of large and coarsely dressed basalt stones, were different from the construction of the upper strata. The walls extended into the western balk of the excavation.
The courtyard, to the east of the building corner and below the floor of Stratum 2, had a tamped-earth floor (L547), with a tabun (L551) placed on top of it. A floor of an identical elevation (L560) was discerned below W557.
A stone collapse (L545) that probably stemmed from the adjacent building (W554, W555) was found in the southwestern corner of the area. While pulling the collapse apart,
a fals of AI-Salah Ismail of the Zanji dynasty (the Damascus mint, 1173-1181 CE; IAA 102299), was found.
The potsherds on top of the floor included bowls (Fig. 11:1-4), a cooking pot found above Floor 547 (Fig. 11:5), jars (Fig. $11: 6-9)$ and bases of glazed vessels (Fig. 11:10, 11), dating to the twelfth-thirteenth centuries CE.

Bedrock exposed directly beneath the floors of Stratum 3 was overlain with a few fragments of pottery vessels from the Roman and Byzantine periods. These apparently represented the initial settlement at the site, which according to surveys was mostly located north of the excavation area.

Two coins, one of Salah al-Din Yusufll (1236-1242 CE; IAA 102297) and the other of Sha'aban II (1368 CE; IAA 102296), were discovered on the surface.

Analysis of the archaeozoological finds from the courtyards of the houses shows that the predominant species of raised livestock were cattle, sheep and goat.


1. Excavation area, looking east.




2. Stratum 1, pottery

3. Excavation area, looking west.

4. Stratum 2, courtyard, looking south.

5. Tabun, looking northwest.

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11. Stratum 3, pottery.

Kefar Hittim (north)
Final Report
Edna Amos


1. Plan and section.

2. Excavation area, looking south.

3. The steps and the settling pit, looking south.

During December 2005, a salvage excavation was conducted within the precincts of the Tiberias-Hittim waste-water purification plant (Permit No. A-4654; map ref. NIG 2474-6/7458-60; OIG 1974-6/2458-60), in the wake of damage caused to antiquities. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Water Commission, was directed by E. Amos (surveying), with the assistance of H. Tahan (pottery drawing) and N. Getzov.
A hewn and plastered collecting vat (depth $1.8-2.0 \mathrm{~m}$ ) of a Byzantine-period winepress was exposed (Figs. 1, 2). The vat had survived by its eastern wall (length 1.8 m ) and the eastern face of its southern wall (length c. 1.7 m ). Its floor sloped northward and a circular settling pit (diam. c. 0.6 m , depth c. $0.4-0.5 \mathrm{~m}$ ) was cut in its northeastern corner. Five steps descended to the vat's floor (tread width $0.45-0.50 \mathrm{~m}$, height 0.3 mp ; Fig. 3); the four upper steps were hewn alongside the eastern wall and the fifth lower step was in the southeastern corner, next to the southern wall. The walls, the floor, the steps and the settling pit were all coated with two layers of white hydraulic plaster mixed with gray inclusions. The lower plaster layer (thickness c. 1.5 cm ) was revetted with large potsherds, while the upper layer was smoothed. Additional remains of plaster were visible in the balk to the north of the collecting vat (Fig. 4); these may have belonged to the treading floor of the winepress, which was not preserved. Potsherds from the Byzantine period, including a cooking pot (Fig. 5:1) and a jar (Fig. 5:2), were discovered on the floor of the vat.


1. Plan and section.

2. Excavation area, looking south.

3. The steps and the settling pit, looking south.


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5. Pottery.


1. Site $20-25 / 46 / 1$ looking west.

2. Site 20-25/46/1, Dolmen 2 looking southwest.
 looking west

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Kefar Nahum, Map Survey
Preliminary Report
Yosef Stepansky
8/7/2009
During July 2004, a survey was conducted within the precincts of the Map of Kefar Nahum (Map 36; Permit No. A-4111; central map ref. NIG 2549/7568; OIG 2049/2568; ESI 10:87-90; HA-ESI 112:9*-11*; 115:7*-9*), following a plan to collect basalt stones for construction. The survey, on behalf of the Israel Antiquities Authority, was directed by Y. Stepansky, with the assistance of A. Shapiro (GPS).
A limited area (c. 250 dunams) was surveyed east of Moshav Amnun and northeast of Triangulation Point J1351. Six dolmens, documented and measured by means of GPS, were found.
(1) Type 1B dolmen ('Atiqot 17:20-58 [Hebrew]) with a stone heap and well preserved (Site 20-25/46/1, Dolmen 1; map ref. NIG 25911/756721; diam. 5 m; Fig. 1).
(2) Type 1B dolmen with a stone heap and well preserved (Site 20-25/46/1, Dolmen 2; map ref. NIG 254991/756998; diam. 7 m ; Fig. 2).
(3) Sealed dolmen with a relatively large stone heap (Site 20-25/56/1, Dolmen 1; map ref. NIG 255048/756790; diam. 10 m; Fig. 3).
(4) Ruined dolmen with a stone heap (Site 20-25/56/1, Dolmen 2; map ref. NIG 255047/756833; diam. 7 m; Fig. 4).
(5) Type 1B dolmen with two burial cells and a large stone heap, well preserved (Site 20-25/56/1, Dolman 3; map ref. NIG 255045/756878; diam. 10 m; Figs. 5-7).
(6) Type 1A small dolmen without a stone heap and well preserved (Site 20-25/56/1, Dolmen 4; map ref. NIG $255050 / 756962$; length of cell 1 m ; Fig. 8). A stone heap (diam. 5 m ) is located 5 m west of the dolmen. A rock-hewn game board that consisted of two rows, each of seven semicircular depressions (Fig. 9), was located on a stone surface east of the dolmen.

These dolmens were part of the large dolmen field at Ramat Korazim, which is ascribed to the end of the third millennium and the beginning of the second millennium BCE.


1. Site 20-25/46/1, Dolmen 1, looking west.

2. Site 20-25/46/1, Dolmen 2, looking southwest.

3. Site 20-25/56/1, Dolmen 1, looking northwest.

4. Site 20-25/56/1, Dolmen 2, looking south.

5. Site 20-25/56/1, Dolmen 3, looking east.

6. Site 20-25/56/1, Dolmen 3, looking east.

7. Site 20-25/56/1, Dolmen 3, looking west.

8. Site 20-25/56/1, Dolmen 4, looking west.

9. Game board, looking east.

# (Volume No. HA-ESI 121 (2009 <br> Kefar Shemaryahu, Survey along a section of Highway 2 <br> Final Report 



1. Survey map.

Yehuda Dagan, Leticia Barda and Diego Barkan
During August 2005, a survey was conducted along the railroad track and a section of Highway 2, between Gelilot and $\underline{H}$ of Ha-Sharon Interchange (Permit No.; map ref. NIG 18250-420/67385-8100; OIG 13250-420/17385-8100), prior to changes in the course of the railroad track and widening the road. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel Railways Authority and the Department of Public Works, was directed by Y. Dagan, L. Barda (GPS) and D. Barkan.
A strip of land (length 5.2 km , width c. 200 m ), which mostly runs along the railroad track, a little between the railroad and Highway 2 and along the road close to Shefayyim, was surveyed (Fig. 1). This is an alluvial region where a marsh develops or winter puddles accumulate. Most of the area is intensively cultivated and has been through much development activity.
This area had been surveyed in the past within the Archaeological Survey of Israel (R. Gophna and E. Ayalon, 1998, Map of Herzliyya [69], Sites 1, 7, 24, 32-34). Six survey sites located near the planned route of the railroad track were re-examined and four new sites with ancient remains, previously unknown, were identified and documented:

1) Map ref. 18447/67869 - meager scattering of non-diagnostic potsherds ( 1.5 dunams).
2) Map ref. 18483/67772 - settlement remains (c. 1.3 dunams). Numerous potsherds that mostly dated to the Byzantine period were scattered along surface.
3) Map ref. 18483/67775 - small heaps of kurkar building stones along the fringes of the settlement (Site 2). Modern building debris piled up nearby.
4) Map ref. 18411/68008 - meager scattering of flint, including three implements that could not be dated and worn potsherds (c. 750 sq m ).


# (Volume No. HA-ESI 121 (2009 <br> Kefar Veradim, Survey Final Report 

Yoav Lerer


1. Survey map.

During April-June 2004, a survey preceding development was conducted at Kefar Veradim (Permit No. A-4139; map ref. NIG 22250-430/76685-840; OIG 17250-430/26685-840), prior to enlarging the settlement. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Kefar Veradim Economic Company, was directed by Y. Lerer, with the assistance of E. Stern, R. Abu Raya and R. Kalir (survey) and A. Shapiro (GPS).

The survey was conducted north of the Nahal Yehi'am shopping mall, in an area that rises to an elevation of 531 m above sea level. In the western part of the surveyed area the ground is rocky and covered with dense vegetation, whereas the area's eastern part is exposed and partly planted with olive groves and pastureland. The survey area was divided into five secondary areas (A-E) where 69 sites with antiquities were located (Fig. 1).

Area A, Sites 1-45: A tumuli field with 17 burial units; the field is surrounded by 11 fieldstone-built walls. The base of a tower and a rectangular building, both built of fieldstones, were found.

Area B, Sites 46-57: A large rectangular building $(15 \times 30 \mathrm{~m})$ is located in the middle of the hill's eastern slope. It is divided into rooms and its limestone-built walls are preserved three-four courses high. Hewn installation and cistern are located south of the building, which was lacking pottery finds and therefore, could not be dated.

Area C, Sites 58-62: A complex that consists of an enclosure wall (length 27 m ) with rectangular rooms alongside it. Two circular buildings (diam. 5 m ) in the middle of the complex, built of large fieldstones and preserved five courses high, have a narrow entrance in the northeast. The enclosure yielded no pottery finds and its construction can not be dated at this time.

Area D, Sites 64-66: Remains of two watch towers and a hewn shaft tomb nearby.
Area E, Site 67: A watch tower located on a hilltop; a hewn cistern (Site 69) and a farming terrace (Site 68) are southwest of the tower.


1. Survey map.

## (Volume No. HA-ESI 121 (2009

## Kerem Maharal

Final Report
Eliran Oren


1. Plan and sections.

2. Cistern, looking north.

3. Rock-hewn cave, looking northeast.

4. Burial niche in the cave. looking north.

During May-June 2006, a trial excavation was conducted at Kerem Maharal (Permit No. A-4807; map ref. NIG 19932-7/72756-9; OIG 14932-7/22756-9), prior to construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by E. Oren (photography), with the assistance of S. Ya'aqov-Jam (administration) and A. Hajian (surveying and drafting).
Two excavation squares were opened along the southern of two hills where in the past ancient remains had been discovered in the southern part of Moshav Kerem Maharal (HA-ES/ 118, HA-ESI 119, HA-ESI 120). A rockhewn cistern and a burial cave (Fig. 1) were exposed. An Arab village whose remains are visible on surface was situated at the site until 1948.

An elliptical cistern, hewn in soft chalk bedrock (L204; diam. 1.05 m , depth 1.20 m ; Fig. 2), was exposed in the northern part of the excavation area. Traces of plaster were discerned in the cistern, which was filled with soil that contained nondiagnostic potsherds mixed with modern refuse.
Southeast of the cistern, a rock-hewn burial cave (L206; $1.7 \times 3.2 \mathrm{~m}$, height 1.6 m ; Fig. 3) was discovered. The cave had been severely damaged in the past and its ceiling was destroyed. The northern part of the cave was not excavated as it lay beyond the bounds of the excavation area. Building stones and metal debris were discovered in the cave, which appears to have been used as a refuse pit during the time of the British Mandate. A small niche (L207; $0.70 \times$ 0.85 m , depth 0.55 m ; Fig. 4) was hewn in the cave's western side and several human bones and jar fragments, probably from the Roman period, were discovered in it. Following the exposure of the bones, the niche was covered over by the instruction of the representative of the Ministry of Religious Affairs who was present at the excavation and the jar fragments were not documented. The entrance to the cave was not discovered, yet it seems to have been set in the southern side.


2. Cistern, looking north.

3. Rock-hewn cave, looking northeast.

4. Burial niche in the cave, looking north.

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## Kerem Maharal

## Final Report

Aviram Oshri
8/5/2009


1. Plan.

2. The excavation, looking west.

3. Foundation of Wall 6 and Walls 5 and 4, looking south

4. Pottery.

During October 2004, a trial excavation was conducted at Kerem Maharal (Permit No. A-4273; map ref. NIG 19940/72790; OIG $14940 / 22790$ ), in an area slated for construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by Y. Levkowitz, was directed by A. Oshri, with the assistance of S. Ya'aqov-Jam (administration), A. Hajian (surveying) and M. Shuiskaya (pottery drawing).
Kerem Maharal is located in the southwestern part of the Maharal Valley. The largest Arab settlement of the region, Ajazam, was located here until 1948. The settlement's source of water was 'Ein el-Maqura, c. 500 m southeast of the site.

Previous excavations at the site had been carried out by A. and K. Sa'id within the precincts of the settlement, along its agricultural periphery (winepress) and in a burial field (HA-ESI 118, HA-ESI 119, HA-ESI 120).

An excavation area (M; Fig. 1) was opened and two squares were excavated; four strata that dated to the Byzantine, Early Islamic, Mamluk and Late Ottoman periods were exposed.
The area, within the new expansion of the Moshav, was located on a natural slope where mechanical equipment had operated in the past and the architectural remains are therefore, poorly preserved.
Stratum IV: Walls 3b, 5 and 6 and a plaster floor (III), which rested on a bedding of small stones that was placed on bedrock, were exposed (Figs. 2, 3). The pottery assemblage dated to the Byzantine period and included bowls (Fig. 4:14, 6, 8), jars (Fig. 4:10, 11) and a krater lid (Fig. 4:9).

Stratum III, the Early Islamic period (Umayyad; eighth century CE). Remains of a pavement were discovered. The plan of the building from Stratum IV continued to be used in this period and the floor levels were raised. The pottery vessels on the pavement included a fragment of a handmade, black burnished vessel (Fig. 4:13), a jug decorated with white wash (Fig. 4:12) and lamps of buff-colored clay (Fig. 4:14, 15).

Stratum II (Mamluk period; thirteenth century CE). Walls 2, 3a, and 4, which formed an unclear plan, were ascribed to this layer. Wall 3a was built on the foundation of an earlier wall from Stratum IV (3b). Only scant remains were exposed of the building's floor, which probably consisted of flagstones. Painted body fragments and a decorated bowl (Fig. 4:5, 7) were discovered.

Stratum I (Late Ottoman period; nineteenth century CE). Wall 1 and ovens (Loci 7, 9) were uncovered, as well as an Ottoman pipe fragment (Fig. 4:16).
Remains of poorly preserved residential buildings were exposed in the four strata; however, their dates and designations are rather clear. The results of the excavation are important mainly in determining the northern boundary of the settlement during these periods.


1. Plan.

2. The excavation, looking west.

3. Foundation of Wall 6 and Walls 5 and 4, looking south.

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## (Volume No. HA-ESI 121 (2009

## Kerem Maharal

Final Report
Amit Shadman
8/7/2009
During May 2005, an excavation was conducted in Lot 289 in Kerem Maharal (Permit No. A-4475; map ref. NIG 19933-35/72750-55; OIG 14933-35/22750-55), prior to construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Shadman

The excavation was carried out along the southeastern fringes of the Kerem Maharal site, on the remains of the Arab village of ljzim, where settlement remains from the Roman and Byzantine periods are found.
A quarry ( $3.0 \times 4.5$, depth $0.2-0.3 \mathrm{~m}$ ) was exposed between two natural pits on the surface. A stone that was still attached to bedrock was visible in the quarry. Another larger quarry ( $3 \times 10 \mathrm{~m}$ ), in which five undetached stones (each 0.3-0.4 m) were noted, was exposed in the northern part of the area. A few pottery fragments that dated to the Byzantine period were found near the stones. It seems that this ancient quarry had probably operated in the Byzantine period.

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## Khirbat Abu Khaff

 Final ReportAmir Ganor, Ron Kahati and Sa'ar Ganor


1. Section.

2. Middle Bronze II pottery from the robbers' soil dumps.

3. Middle Bronze II pottery.

4. Scarabs.

5. Early Bronze pottery.

During September 2003, a salvage excavation was conducted at Khirbat Abu Khaff (Baikat Abu Hadba; Permit No. A-4000; map ref. NIG 18435/58755; OIG 13435/08755), in the wake of antiquities' robbery. The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Ganor, R. Kehati and S. Ganor, with the assistance of Y. Abadi-Reiss and A. Hofesh, inspectors of the Unit for the Prevention of Antiquities Robbery, A. Cohen, G. Toktaly, Z. Ganor, A. Pagis and Y. Pagis as volunteers, C. Amit (studio photography), R. Vinitsky (metallurgical laboratory), Y. Bukgenholtz (pottery restoration), C. Hersch (find drawing) and D. Ben-Tor (scarab identification).
Remains from the Byzantine period and cave dwellings from the Chalcolithic period had previously been excavated at the site (ESI 13:110-111; 16:126-128; 18:103-104). A burial cave was identified in the current excavation. It was recently plundered and the dumped soil from the illicit dig contained fragments of pottery vessels that dated to Middle Bronze IIB. Two levels of burials and mortuary offerings from MB IIB and remains from Early Bronze II were discovered (Fig. 1).

The burial cave whose ceiling had collapsed was discovered on the western hill of the site, on the upper part of the northern slope, along the edge of the forest. Cemeteries of the ancient settlement are known to be located in this region. The antiquities' robbers dug a pit in the cave, thereby causing extensive damage to the levels and context of the artifacts. Dozens of fragments of MB IIB pottery vessels were recovered from the soil dumps, including bowls (Fig. 2:1-5), jars (Fig. 2:6-10), juglets (Fig. 2:11, 12), a dipper juglet (Fig. 2:13), a lamp (Fig. 2:14) and a potsherd decorated with a painted branch (Fig. 2:15).

An excavation square $(4 \times 4 \mathrm{~m})$ was opened around the pit that had been cut by the antiquities robbers (diam. 1.5 m , depth 1.2 m ). Initially, the soil fill around the robbers' pit was excavated to reach a uniform, undisturbed level and subsequently, the excavation continued throughout the entire cave area.
A level of large stones, 1.5 m below surface, was probably the collapsed ceiling of the cave.
Below it were dozens of smashed pottery vessels that had most likely been broken by the caved-in ceiling. Another level, c. 0.3 m below the upper one, included a beaten-earth floor that was overlain with pottery vessels and numerous human bones. At the same level in the northern corner of the excavation area, two intact pottery vessels, a jug (Fig. 3:2) and a cylindrical juglet (Fig. 3:3) were found; no remains of the collapsed ceiling were discerned in this area, which was probably the front courtyard of the cave.
Most of the artifacts included small and medium-sized pottery vessels, such as carinated bowls (Fig. 3:1), juglets with a two-strand handle (Fig. 3:4) and juglets with a button base, as well as scarabs and human bones. This assemblage is characteristic of MB IIB burial caves.
The scarabs are made of steatite and still bear traces of their original glaze. The raw material was probably imported from Egypt, while the scarabs themselves were crafted in Canaan, using Egyptian motifs. Three scarabs were found at the bottom of the robbers' pit. Scarab 1001 (Fig. 4:1) is decorated with a head of Hathor, a winged sun disc and papyrus plants. Scarab 1002 (Fig. 4:2) has an image of an Egyptianized man with a falcon's head, holding a flower in his hand; this decoration is common to Canaanite scarabs of MB IIB date. On Scarab 1003 (Fig. 4:3) two ankhs and a spiral are depicted, which imitate an Egyptian design. Another scarab (1014; Fig. 4:4), which bears an image of a lion that is also popular among Canaanite scarabs of the period, was discovered during the excavation around the robbers' pit.
A probe ( $1.0 \times 1.5 \mathrm{~m}$, depth 0.7 m ) was excavated in the southern corner of the square where the top of a fieldstone-built wall was exposed c. 1.95 m below surface. The fill alongside the wall contained fragments of pottery vessels that dated to Early Bronze II, including a krater with rope decoration and white lime (Fig. 5:1), a holemouth jar (Fig. 5:2), jars (Fig. 5:36) and an amphoriskos (Fig. 5:7), as well as an irregular shaped bronze fragment.

The excavation was suspended before the entire assemblage could be exposed (c. 2.5 m below surface). During 2005, antiquities' robbers returned to the cave and breached the southern part of the excavation square into the rest of the cave. The soil from this illicit dig filled the original excavation square and was not examined.
Our conclusions are essentially incomplete due to the limited excavation and the disturbances caused by the antiquities' robbers to the cave. It seems that the cave was hewn into the side of the slope during Early Bronze II; however, it is not possible to determine its use in this phase. During MB IIB, the cave was used for burial and funerary offerings were placed in it. Two levels were discerned, separated by a soil accumulation that could indicate a gap or an intentional covering, which may point to two separate burial phases in this period. At a later unknown point in time, the ceiling of the cave collapsed.



3. Middle Bronze Il pottery.

4. Scarabs.

5. Early Bronze pottery.
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## Khirbat Birkat Umm el-Idham

Final Report
Durar Masarwa


1. Plan.

2. Wall 111, looking southeast.

3. The walls of the building. looking east.

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6. Pottery.

7. Jar

During July 2006, a trial excavation was conducted along the eastern fringes of the Khirbat Birkat Umm el-'Idham antiquities site (Permit No. A-4850; map ref. NIG 19465-75/69178-80; OIG 14465-75/19178-80), prior to the construction of a fence south of Highway 57. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Department of Public Works, was directed by D. Masarwa, with the assistance of E. Bachar (administration), V. Essman and V. Pirsky (surveying), T. Sagiv (field photography), T. Kornfeld (drafting), M. Shuiskaya (pottery drawing) and Y. Gorin-Rosen (glass finds).
Dressed building stones and potsherds from the Hellenistic, Roman and Byzantine periods had previously been discovered on the site, which is located on a hamra hill and in whose vicinity tombs were recorded (J. Porath, S. Dar and S. Appelbaum, eds, Qadmoniot 'Emeq Hefer, Tel Aviv 1985: Site 58). Architectural remains and part of a collecting vat from a Byzantine winepress were excavated c. 100 m north of the current excavation area (HAESI 119).
The current excavation area was damaged by a sewer line that crosses it and an electric pole in its southwestern corner. Three squares were opened and remains of an olive-press complex, severely damaged in the modern era, were exposed (Fig. 1). The recovered ceramic and glass artifacts indicate that the installation was used primarily in the Byzantine period, at its end and at the beginning of the Umayyad period, until the Abbasid period.
The negative of a crushing basin (L121) was discovered in a pavement of worn stones at the southern part of the area (L106; Fig. 2). A collecting vat (L113), in whose rim perforations were cut to access the oil draining from the crushing basin, was set to the north of the negative.
A section of a fieldstone-built wall with mortar and white plaster as bonding materials was exposed in the northern part of the area (W111; Fig. 3). The wall's eastern face was plastered and its western face was cast. It seems that this was part of a crushing installation that was associated with the remains in the southern part of the area.
A room (L107; Fig. 4), whose wall foundations (W104, W109, W116; Fig. 5) were preserved a single course high atop brown soil, was exposed west of W111. Wall 104 was built of ashlar stones, whereas Walls 109 and 116 were constructed from fieldstones.
The ceramic finds from the layers of fill, relating to the olive press, included a jar (Fig. 6:1), the base of a juglet (Fig. 6:2 and a sprinkler (Fig. 6:3), which dated to the Byzantine period; a deep bowl (Fig. 6:4), jars (Fig. 6:5-10) and a jug rim with handle (Fig. 6:11) that dated to the end of the Byzantine period-beginning of the Umayyad period; and jars (Fig. $6: 12-15$ ) that dated to the Abbasid period. A jar without neck and rim (Fig. 7) that dated to the end of the Byzantine period was discovered on Floor 106.
The meager glass artifacts included fragments of bowls, bottles, a base of a small goblet with a beaded pedestal that dated to the Byzantine period and a broad funnel-rim with a wide wavy trail decoration that dated to the end of the Byzantine period-beginning of the Umayyad period.


1. Plan

2. Locus 106, looking east.

3. Wall 111, looking southeast.

4. The walls of the building, looking east.


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Khirbat Dalhamiya
Preliminary Report
Walid Atrash

5. Plan and section.

6. Stratum II, Square A, Floor 111 and Wall 107, looking west.

7. Stratum II, Square B, Floor 103 and Wall 106, looking west.

8. Stratum II, Square B, Floo 110, looking north.

During May-June 2007, a trial excavation was conducted at Kh. Dalhamiya in the Jordan Valley (Permit No. A-5115; map ref. NIG 253473/728713; OIG 203473/228713), following damage to antiquities during the construction of a fence. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by Meqorot, was directed by W. Atrash, with the assistance of Y. Lavan and Y. Ya'aqobi (administration), A. Shapiro (GPS), T. Meltsen (surveying and drafting), D. Sandhouse-Re'em (ceramics) and H. Khalaily (lithic tools and vases).
Two excavation squares (A, B; Fig. 1) were opened along the southern fringes of the ruin, which descend to the south and east toward the Jordan River. Two strata were discovered. The lower stratum (II) included building remains from the Chalcolithic period and the upper one (I) comprised three layers of soil and collapse, in which potsherds from the Chalcolithic, Roman, Byzantine, Early Islamic and Mamluk periods were mixed.
Stratum II. A floor, built of fieldstones, wadi pebbles and black soil (L111; thickness 0.5 m ) and founded on sterile soil (L112), was exposed in Square A $(4.0 \times 6.3 \mathrm{~m})$. Finds from the Chalcolithic period in the black soil and between the stones included numerous flint artifacts, mostly fan scrapers and sickle knives, many fragments of stone tools, such as flat pebbles, pounding and grinding stones and basalt and limestone bowls, as well as a few potsherds. The floor was overlain with a layer of alluvium (Loci 104, 108) that contained potsherds dating to the Chalcolithic and Roman periods. A wall (W107; length c. 2.5 m , width c. 0.75 m ; Fig. 2) on the northern side of the floor was built of basalt and wadi pebbles along an east-west direction. The eastern part of W107 was destroyed during the digging of a modern trench (L102), whereas its western part extended beyond the limits of the excavation.
A floor of fieldstones, wadi pebbles and black soil (L103; thickness 0.5 m ) was exposed in Square B. This floor was a continuation of Floor 111 in Square A. Finds from the Chalcolithic period were discovered in the black soil and between the stones, similar to those found in Floor 111. Floor 103 was overlain with a layer of silt that contained potsherds from the Chalcolithic and Roman periods. The southern side of Floor 103 was delimited by Wall 106, oriented east-west and built of basalt fieldstones and wadi pebbles (length c. 1.5 m , width c. 0.95 m ; Fig. 3). The eastern part of W106 was destroyed during the digging of a modern trench and its western part extended beyond the excavation area. South of W106 and c. 0.5 m below it, a floor of fieldstones and wadi pebbles (L110; thickness 0.4 m ; Fig. 4) that was founded on sterile soil (L109), was exposed. It seems that this floor was part of a built path that led to a spring, located southwest of the excavation area. Floor 110 was overlain with a layer of alluvium (L105) that contained potsherds from the Chalcolithic and Roman periods. The water table was revealed at a depth of c .1 m beneath Floor 110.

Stratum I (thickness 4 m ). A layer of alluvium (L100; thickness 1 m ) that contained potsherds from the Chalcolithic, Roman and Byzantine periods was exposed above the building remains of Stratum II. This layer was overlain with the collapse of basalt stones (thickness is 0.5 m ) mixed with potsherds from the Byzantine and Early Islamic periods. A layer of soil fill and modern debris (thickness 2.5 m ), which contained potsherds from the Byzantine, Early Islamic and Mamluk periods, was discovered above the stone collapse.

It seems that the site was first occupied during the Chalcolithic period and continued to exist until the beginning of Early Bronze I. Following a long hiatus, settlement activity was resumed at the site in the Roman period and continued until the Mamluk period.



2. Stratum II, Square A, Floor 111 and Wall 107, looking west.

3. Stratum II, Square B, Floor 103 and Wall 106, looking west.

4. Stratum II, Square B, Floor 110, looking north.


1. Location map.

2. Building 12, looking south.

3. Wall 8, looking south.

4. Two collecting vats in Winepress 6, looking north.

5. Terrace Wall 4, looking north.

During February 2006, an archaeological survey was conducted in the southern part of Qibbuz Kefar Szold, near Khirbat 'Ein Zagha (Permit No. A-4717; map ref. NIG 26130-85/78810-60; OIG 21130-85/28810-60), prior to the construction of a tourism project. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Upper Galilee Economic Company, was conducted by H. Bron, assisted by A. Shapiro (GPS).
An area (c. 90 dunams), delineated by the built-up part of the qibbuz in the north, the qibbuz' cemetery and Nahal Shunit in the east, a forest in the south and a dirt road that leads to the qibbuz' fish ponds in the west, was surveyed (Fig. 1).
The tell of Khirbat 'Ein Zagha (diam. c. 90 m; Fig. 1:1) where settlement remains from the Roman until the Ottoman periods are visible, is located in the middle of the surveyed area. Two rectangular buildings, generally oriented east-west and built of basalt fieldstones, were inspected: No. $1(4 \times 5 \mathrm{~m}$; Figs. 2:1; 3), preserved two courses high, and No. 12 ( $5 \times$ 10 m , preserved height c. 0.5 m ; Figs. $2: 12 ; 4$ ). Remains of three walls were also identified: a wall in the north of the tell (length 5 m ; Fig. 2:2), which is oriented east-west and built of large fieldstones and two walls, oriented northwestsoutheast, in the southern part of the tell, one (length c. 4.5 m ; Figs. $2: 8 ; 5$ ) was built of large dressed basalt stones, possibly ashlars (length 0.9 m ) and the second (length 6 m ; Fig. 2:9) was built of boulders. Two plastered collecting vats of a winepress, partially hewn and built (each $2.1 \times 4.0 \mathrm{~m}$, depth 1.3 m ; Figs. $2: 6 ; 6$ ) and an elliptical enclosure ( $7 \times 12 \mathrm{~m}$; animal pen?; Fig. 2:7), built of a single fieldstone course, were surveyed on the southwestern part of the tell. A large quantity of roughly hewn building stones was noted throughout the entire area of the tell.

Evidence of agricultural activity, probably connected to the settlement on the tell, was found north of the tell, on a rocky exposed slope that descends gently to the west (see Fig. 1:2). It included remains of terrace walls (Fig. 2:4, 5, 14), one of which (No. 4; Fig. 7) was c. 20 m long; a wall (length 1.5 m ; Fig. 2:3), aligned north-south, which survived by a single course of medium fieldstones and three stone clearance heaps (diam. 2.5-5.0 m; Fig. 2:15-17). A scattering of potsherds that dated to Early Bronze II (diam. c. 25 m; Fig. 2:13) was discerned.

A flat area that had been cleared of stones in the past and is currently used for grazing, extends south and west of the tell (see Fig. 1:3). A few archaeological finds were identified in this area, including a building corner ( $6 \times 8 \mathrm{~m}$; Fig. 2:11) whose walls, preserved two courses high ( 0.6 m ), were built of limestone fieldstones and a heap of stones (dolmen?; $4 \times$ 5 m ; Fig. 2:10) situated alongside it. Due to the trees growing in the midst of the stone pile, it was difficult to discern the lines of walls; no potsherds were found.
A spring, surrounded by paths and enclosure walls, was discerned in the eastern and northeastern sectors of the surveyed area (see Fig. 1:4), which is delimited by the qibbuz perimeter road and located along the fringes of the built-up area; this area was devoid of any finds.


1. Location map.


2. Building 1, looking west.

3. Building 12, looking south.

4. Wall 8, looking south.

5. Two collecting vats in Winepress 6 , looking north.

6. Terrace Wall 4, looking north.

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## Khirbat el-Keikh

## Final Report



1. Areas 1 and 2. plan and
sections.

2. Wall 10, looking south.

3. Walls 2. 3, looking north

4. Area 3, plan.

5. Area 3, pottery.

Elena Kogan-Zehavi
During May, July and August 2003, trial and salvage excavations were conducted at Khirbat el-Keikh (Permit No. A-3902; map ref. NIG 19953-54/62429-30; OIG 149453-54/12329-30), prior to construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by E. Kogan-Zehavi, with the assistance of A. Hajian (surveying), T. Sagiv (field photography), A. Pikovsky (drawing), G. Bijovsky (numismatics) and A. Nagorsky.
The excavation was carried out along the southern fringes of a hill where the ruin of Khirbat el-Keikh is situated. The northern fringes of the hill were excavated in 1994-1995 (ESI 17:114-116), revealing remains of buildings and installations, including winepresses, a burial cave, a cistern and a limekiln. Based on the ceramic finds, the buildings and some of the installations were dated to Iron II and some of the installations-to the Byzantine period.
Nine squares, aligned east-west, were opened in three areas. Two probe trenches were dug by backhoe north of Area 3 and another east-west probe trench was cut at the southern end of the area. The uncovered remains dated to three main periods: a terrace wall and meager building remains from Iron II-III and the Hellenistic period and terrace walls from the Byzantine period.

Area 1 (Fig. 1)
A wall (W11; length 5 m ; Fig. 2), aligned northwest-southeast, was exposed at the top of the hill in the north of the excavation. It was built of large, coarsely dressed stones and preserved three courses high. Only the southern side of the wall was uncovered within collapse and it seems that W11 was used as a terrace wall that retained soil and prevented its sliding down from the top of the hill. The wall was abutted by brown soil (L202, L205) that had accumulated during the course of its use, until it collapsed. The soil contained fragments of pottery vessels from various periods, including jar rims from the Hasmonean period (Fig. 3:4, 5), a jug rim from the Roman period (Fig. 3:7), bowls from the end of the Roman-Byzantine period (Fig. 3:1, 2), a holemouth rim from the Byzantine period (Fig. 3:3) and a jar from the end of the Byzantine period (Fig. 3:6). It seems that W11 was not used prior to the Byzantine period and was erected after Wall 10, located to its south, was no longer in use.
Wall 10, oriented east-west, was on the slope of the hill, 4 m south of W11. It was built of coarsely dressed rocks, reinforced with small and large stones and was preserved two courses high (exposed length c. 10 m ; Fig. 4). The wall was exposed in Areas 1 and 2 and extended beyond the limits of the excavation. It was founded on a thin layer of gray soil fill that had accumulated on soft chalk bedrock (L125, L203), which had been leveled prior to the construction of the walls (L209). The wall was covered with brown soil that also abutted W11 to the north. An inclined layer of fill that consisted of small and medium-sized stones abutted the northern side of W10 (L137). The destroyed western end of the wall was covered with a stone clearance heap (L206) that was gathered after the wall was no longer in use. The artifacts recovered from the stone clearance heap included jar rims (Fig. 3:9-15) and a lamp nozzle (Fig. 3:21) that dated to the Hasmonean period and a holemouth jar (Fig. 3:8), jars (Fig. 3:16, 17), a krater (Fig. 3:18), a jug (Fig. 3:19) and a juglet (Fig. 3:20) from the Early Roman period.
Wall 10 functioned as a terrace wall that delimited the southern slopes of the hill. The stone clearance heap at the western end of the wall indicates that the terrace ceased to be used probably in the Roman period.

## Area 2

South of the W10 collapse in the western part of the area, part of a building was discovered. Two of its walls (W2, W3), which formed a corner (Fig. 1: Section 2-2; Fig. 5), had survived. The northern end of W3 was inside the northern balk, below the stone collapse of W10 and the stone clearance heap above it (L206).
Wall 12 was mostly located in collapse. Its original line of construction, aligned east-west, was preserved in a cluster of stones to its south. The walls, preserved a single course high, were abutted by a leveled bedrock floor (L210), which was overlain with meager finds that included jar rims (Fig. 6:1-6) and the base of a spindle bottle (Fig. 6:7), dating to the Hellenistic period.
On the natural bedrock and south of the building remains was a cluster of small stones and red soil-probably the remains of construction (L122). The cluster contained potsherds from the Iron Age, including a krater (Fig. 6:8), cooking pots (Fig. 6:9,10), a jar (Fig. 6:11) and a lamp (Fig. 6:12), and from the Hellenistic period, including a krater (Fig. 6:13) and a jar (Fig. 6:14).

Area 3 (Fig. 7)
A terrace wall, aligned east-west (W13; Fig. 8), was discovered in the area at the foot of the hill and at the southern end of the site. Its eastern end was destroyed and its western end extended beyond the limits of the excavation area. The western part of the wall was founded on bedrock and its eastern part rested on brown soil fill (L215). The wall, built of fieldstones and small stones in dry construction, was preserved two courses high.
Another wall (W14) was exposed north of W13; it was oriented north-south and only a very small section of it survived.
The fill that accumulated beneath the walls and above bedrock (Loci 148, 211, 213, 215) contained fragments of pottery vessels, including a jar (Fig. 9:4) from the Hasmonean period; a jar (Fig. 9:5) and a lamp fragment (Fig. 9:7) from the Early Roman period; and red-slipped bowls (Fig. 9:1, 2), a Late Roman C-type bowl (Fig. 9:3) and a jar (Fig. 9:6) from the Byzantine period. A bronze coin (IAA 80560), minted in Jerusalem and dating to the Herodian period, was also found.

The ceramic finds show that the terraces were probably constructed in the Byzantine period and the region was cultivated at this time. The building foundations on bedrock in Areas 1 and 2 were probably from the Iron Age and the Hellenistic period. The fragments of pottery vessels from the Early Roman period, found in the stone clearance heap in Area 2 and in the fill of the terraces in Area 3, may point to an ancient settlement in the region.




1. Areas 1 and 2, plan and sections.

2. Walls 10, 11, looking north.

3. Wall 10, looking south.

4. Walls 2,3 , looking north.

5. Area 2, pottery.

6. Area 3, plan.

7. Wall 13, looking east.


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## Khirbat en-Nusrani

Final Report


1. Terrace 102, plan and section.

2. Cave 301, looking from inside out.

3. Cave 301, the interior.

4. Winepress 401, looking west.

5. Stone Clearance Heap 408, looking east.

Mordechai Haiman
During October 2004, an excavation was conducted next to Khirbat en-Nusrani (Permit No. A-4256; map ref. NIG 19120-378/59652-900; OIG 14120-378/09652-900), along the route slated for the construction of the separation fence. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by M. Haiman (photography), with the assistance of N.S. Paran, S. Talis and I. Peretz (area supervision) and A. Hajian (surveying).
The excavation was carried out in three areas, spread over c. 400 m in the wadi and on the slope to its north. Winepresses, agricultural installations, terrace walls, stone clearance heaps and a rock-hewn cave were discovered. It seems that the sites excavated along the course of the road did not constitute a single agricultural system on the edge of a particular settlement, but were rather a random collection of installations located on the fringes of adjacent ruins, such as Khirbat en-Nusrani, Giv'at Mirsham and Horbat Benaya. The potsherds collected along the surface and from the excavation dated to the Iron Age and the Byzantine period.

Area A was located in the wadi channel and a number of terrace walls were identified in it. Two segments of one of the walls (length c. 80 m , width $0.80-1.15 \mathrm{~m}$, height 2.4 m ) were excavated. The first segment (W102; length 8.0 m , height 0.4 m ; Figs. 1, 2) was in the middle of the wadi, where the terrace wall was breached. It became clear that the wall was built of a row of large stones (up to 0.8 m long) on the down-hill side of the terrace and a second row of smaller stones on the terrace side facing uphill. The space between the two rows was filled with small stones and soil. Overlying the original wall was a fill (height c. 0.5 m ) of various size stones that was meant to dam the breach and prevent the erosion of soil. A layer of loess (thickness c. 1 m ) was beneath the base of the terrace. The second segment (W105; Fig. 3) was excavated at the point where the terrace wall met another wall (W106) that was built along the bank of the wadi. Wall 105 was also built of two rows of stones similar to those in W102. Wall 106 had an early phase (height c .0 .5 m ) on which other stones were heaped in a later period. Non-diagnostic pottery fragments were found in the excavation.

Area B was located c. 400 m north of Area A. A rock-hewn cave, a winepress and two stone clearance heaps were discovered. The bedrock-hewn cave (L301; $4 \times 6 \mathrm{~m}$, depth c. 1.7 m ; Figs. 4-6), whose ceiling had partly collapsed, had no building remains or steps in its entrance (width c. 0.5 m ). Alluvium and modern debris had accumulated above bedrock in the vicinity of the entrance (thickness c. 0.4 m ) and inside the cave (L304; thickness c. 0.7 m ). During the excavation, the area above the caved-in ceiling (L302) was also cleaned. Non-diagnostic potsherds that had been swept into the cave were found, as well as potsherds from the Iron Age and the Byzantine period. Caves of this kind are common to the region and have been used as dwellings until about 60 years ago; thereafter, they were utilized as sheepfolds.
The bedrock-hewn winepress included a treading floor (L401; $2.4 \times 2.4 \mathrm{~m}$, depth c. 0.2 m ; Figs. 7, 8) and two hewn channels (length c. 0.3 m , width c. 8 cm ) that led to a collecting vat (L409; $1.0 \times 1.4 \mathrm{~m}$, depth c. 1.3 m ). An opening in the bedrock floor of the collecting vat accessed a hewn, underground cavity ( L 411 ; $1.8 \times 2.6 \mathrm{~m}$, depth 1.4 m ) that may possibly be a cistern. Above L411 and next to the collecting vat was a hewn cupmark (diam. 0.7 m , depth 0.2 m ). A stone clearance heap $(3 \times 7$, height c. 0.5 m ) was discovered next to Winepress 401 and a square (c. $2 \times 2 \mathrm{~m}$ ) was excavated in its midst. The heap was built of fieldstones (max. dimensions c. $0.2 \times 0.2 \mathrm{~m}$ ), placed the bedrock.
A square (c. $2 \times 2 \mathrm{~m}$ ) in the center of another stone clearance heap ( $3 \times 9 \mathrm{~m}$, height c. 0.5 m ; Fig. 9) was excavated down to bedrock level.

Area C was located between Area A and Area B, c. 200 m north of W102 and halfway up the slope. A rock-hewn winepress and trough were exposed. The winepress consisted of a treading floor (L202; c. $4 \times 4 \mathrm{~m}$, depth c. 0.5 m ; Figs. 10-12) that was paved with mosaic. The bedrock south and east of the treading floor was leveled into a smooth surface (L201; c. $3 \times 4 \mathrm{~m}$ ) that sloped gently in the direction of the treading floor. A channel (length 0.5 m , width 0.1 m ) cut into the eastern wall of the treading floor led to a filtration pit (L207; c. $0.5 \times 0.5 \times 0.5 \mathrm{~m}$ ) at whose bottom was a rock-hewn sump (diam. 0.1 m , depth 8 cm ). A hewn channel (length 0.3 m , width 8 cm ) led from the filtration pit into a collecting vat (L203; c. $1 \times 1 \mathrm{~m}$, depth c. 1.5 m ), which was paved with mosaic and had a sump in the corner (diam. 0.15 m , depth 0.1 m). Two sections of a stone column (diam. 0.3 m ; Fig. 13) were found in the collecting vat, one of which was embedded in the mosaic floor. It seems that this was a piece of a roller stone that was discarded in the collecting vat after the winepress was no longer in use. Winepresses equipped with a roller stone are dated mainly to the Byzantine period however, they probably appeared as early as the Roman period (D. Amit and Y. Baruch, 2007, Winepresses with Roller Stones in the Southern Hebron Hill Country, Judea and Samaria Research Studies 16:299-322).
A rock-hewn trough (L205; length 1.3 m , width 0.3 m , depth c. 0.1 m ; Figs. 14, 15), which was incorporated in a curved terrace wall (length 5.0 m , width 0.5 m ), was found near the winepress. Potsherds were not recovered from the excavation, but a scattering of potsherds that dated to the Byzantine period was discerned in the vicinity of the winepress and the trough.


1. Terrace 102, plan and section.

2. Terrace 102 in the wadi channel, looking north.



1-1
4. Cave 301, plan and section.

5. Cave 301, looking from inside out

6. Cave 301, the interior.


1-1
7. Winepress 401, plan and section.

8. Winepress 401, looking west.

9. Stone Clearance Heap 408, looking east.

11. Winepress 202, looking east.

12. Winepress 202, the treading floor.


14. Installation 205, plan.

15. Installation 205, looking northeast.

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## Khirbat esh-Shubeika

Final Report
Yoav Lerer


1. Location map.

2. Square 2, plan.

3. Middle Bronze II and Byzantine pottery.

4. Early Islamic pottery and glass.

5. Bronze ornament in the image of a bird.

During July-August 2005 and March-April 2006, salvage excavations were conducted at Khirbat esh-Shubeika (Permit Nos. A4550, A-4764; map ref. NIG 216487/769051; OIG 166487/269051), prior to setting a communications antenna. The excavations, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Cellcom and Pelephone Companies, were directed by Y. Lerer, with the assistance of Y. Ya'aqobi (administration), H. Tahan (surveying and pottery drawing), A. Shapiro (GPS), H. Smithline (field photography), D. Syon (metal detection), N. Zak (drafting), C. Amit (studio photography), L. Kupershmidt (metallurgical laboratory), N. Getzov (pottery reading), Y. Gorin-Rosen (glass) and D.T. Ariel (numismatics).
Previous excavations at the site (Eretz Zafon: 219-349; HA-ESI 117; Fig. 1) revealed a settlement that was first established in Middle Bronze II, continued in the Hellenistic period and flourished in the Late Roman, Byzantine and Early Islamic periods.
Two squares were opened east of the site in the 2005 season; a third square was opened in the 2006 season. Three settlement strata were exposed.

Stratum 3. Fragments of pottery vessels from Middle Bronze II, such as a jar's rim (Fig. 3:1) were found in Square 2 (L112) and in another square, in a layer of terra rossa soil that overlay the dolomite bedrock. Two walls, exposed in Square 2, were built of medium and large fieldstones and founded on bedrock. Wall 1 was oriented north-south and Wall 2 was perpendicular to it (Fig. 2). A coin (IAA 100242), which dated to the Late Roman period (364-375 CE) and had no stratigraphic context as it penetrated into the stratum, was also found.

Stratum 2. A layer of gray soil was exposed in all three squares. It had no architectural remains, yet pottery vessels that dated to the Byzantine period were found, including a bowl (Fig. 3:2), a krater (Fig. 3:3), a plate (Fig. 3:4), jars (Fig. 3:510) and an amphora (Fig. 3:11). Fragments of glass vessels were found (below), as well as two coins: one from the reign of Justin II (573-574 CE; IAA 100244) and the other, dating to the years 591-592 CE (IAA 100249). In addition, metallic artifacts were uncovered and noteworthy among them was a bronze ornament in the image of a bird (Fig. 5).

Stratum 1. A layer of dark soil that had numerous burnt spots, pottery vessels, including a krater (Fig. 4:1) and a glazed plate fragment (Fig. 4:2), lumps of raw glass and two coins from the Umayyad period: one from the Damascus mint (IAA 100241) and the other from the Tiberias mint (IAA 100243). No architectural remains were found, other than a tomb without a grave marker.

## Glass

Yael Gorin-Rosen
The glass vessels consisted of two hundred and thirty-one fragments, c. 100 of which were identified and dated, in spite of the poor preservation and the very small size. Two fragments, a rim of a molded bowl in deep blue hue, decorated with engraving on the inside below the rim and a base fragment of a blown vessel were dated to the Early Roman period. Most of the finds, however, dated to the end of the Byzantine and the Umayyad periods and included wine goblets with hollow base rings; bottles with a folded-in rim and a neck that is decorated with thin, horizontal trails; bottles whose necks are decorated with a thick undulating trail, which are characteristic to the end of the Byzantine and Umayyad periods. Many fragments of folded-in and rounded rims of bottles, cups, wine goblets or saucer lamps were found. Noteworthy is a rim fragment of a small pale blue glass vessel that was covered with silvery, sandy weathering. The rim is upright and folded-in. A disc of a glass trail that was twisted round and flattened was fused to the outside end of the rim (Fig. 4:3). Except for the marks of the glass trail around it, no other marks could be identified on the surface of the disc. The rim seems to belong to a group of bottles, decorated with a sealed disc that was affixed to the rim of the vessel. Bottles of this type were found at Bet She'an in assemblages that dated to the Umayyad period. Many of the seals bear a Kufic inscription blessing Allah; some are decorated with a star or crescents and some are undecorated. Several similar bottles that bear seals were found at Hammat Gader and Tiberias, but based on the large number found in Bet She'an, they were probably produced there (Hadad S. 2005. Islamic Glass Vessels from the Hebrew University Excavations at Bet Shean. Excavations at Bet Shean Vol. 2. [Qedem Reports 8]. Jerusalem. Pp. 25-27, Pls. 15:288-307, 16:308-316). A large quantity of industrial waste was found. Of the 100 identified fragments, 43 were glass industrial waste, including small chunks and flakes of raw glass and waste from the bottom of the furnace, which bore lime deposits from the furnace's foundation. Similar industrial waste was discovered in previous excavations, with fragments of vessels that dated to the end of the Byzantine and the Umayyad periods.

The excavations attest to a settlement layer from Middle Bronze II east of Esh-Shubeika. They also corroborate evidence derived from the previous excavations that during the Byzantine and Early Islamic periods, this region was situated along the fringes of the settlement and was probably used as a refuse site.


1. Location map.




2. Middle Bronze II and Byzantine pottery,


3
4. Early Islamic pottery and glass.

5. Bronze ornament in the image of a bird.
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## Khirbat et-Tira

Final Report
Gili Hillel
4/5/2009


1. Winepress, plan and sections.

During September 2003, a trial excavation was conducted at Khirbat et-Tira, within the precincts of Moshav Bareqet (Permit No. A4007; map ref. NIG 194730/658699; OIG 144730/158699), prior to the construction of an industrial zone. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by Moshav Bareqet, was directed by G. Hillel, with the assistance of Y. Dangor (administration), V. Essman and V. Pirsky (surveying), T. Sagiv (field photography) and Y. Porath (plaster identification).

The excavation area was located in the ruins of the Arab village et-Tira, on a rocky slope north of Moshav Bareqet. A plastered pool was identified at the site during the survey of Lod (Map of Lod [80], Site No. 18). The excavation exposed a winepress, hewn in limestone bedrock, which included a treading floor, a settling pit and a collecting vat (Fig. 1).
All that remained of the treading floor (L204) was its northern side that connected to a settling pit via a channel on the east. The settling pit (L207; $1 \times 1 \times 1 \mathrm{~m}$ ) was entirely coated with gray plaster; to its west was a collecting vat (L203; 2.20 $\times 2.34 \times 2.30 \mathrm{~m}$ ), coated with two layers of plaster, in an excellent state of preservation. The bottom plaster layer was gray and contained charcoal inclusions and very fine gravel (thickness 4 cm ) and the upper layer consisted of pink plaster that was common to the Late Roman period until the beginning of the Byzantine period. A rock-hewn step ( $0.75 \times$ $0.56 \times 1.07 \mathrm{~m}$ ) was in the southeastern corner of the collecting vat and a hewn round sump (L205; diam. 0.55 m , depth 0.35 m ) coated with a thick layer of plaster was in its northwestern corner. Based on the dimensions of the collecting vat it is estimated that the winepress had a liquid capacity of up to 8 cu m and it was probably used by more than one family. A wall ( W 1 ; height 0.73 m ) was built along the western side of the collecting vat to evenly level this side with the level of the eastern side. The wall consisted of roughly hewn fieldstones and white bonding material.


1. Winepress, plan and sections.
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## Khirbat Fardisya

## Final Report



1. Area A, plan.

2. Pottery.

3. Tomb 401 and Winepress 402, plan and section.

4. Winepress 402, looking south.

Abdallah Masarwa
7/6/2009
During September 2005, a salvage excavation was conducted at Khirbat Fardisya, northeast of et-Taiyibe (Permit No. A-4589; map ref. NIG 20118-30/68723-31; OIG 15118-30/18723-31; HA 120), prior to the construction of a senior citizen's day-care center. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by Bar Agam Ltd., was directed by A. Masarwa, with the assistance of V. Pirsky (surveying and drafting), S. Mahajna (photography), M. Shuiskaya (pottery drawing), and E. Yannai and M. Peilstöcker (pottery reading).
The excavation was carried out along the northeastern fringes of Khirbat Fardisya, at the top of a steep slope. Two excavation areas (A, B) were opened, 40 m apart. Three squares were opened in the eastern Area A, revealing a wall. A cist tomb, a winepress, a quarry and 3 shafts, all hewn in limestone bedrock, were exposed in Area B ( 75 sq m ). The ceramic artifacts recovered from the excavation dated to the Iron Age. A sarcophagus from the Roman period was discovered nearby in 1993, during antiquities inspection.

Area A (Fig. 1). Remains of a fieldstone wall (W10) of dry construction, oriented east-west and preserved a single course high, were exposed. The fill between the stones in the wall contained several potsherds from the Iron Age (c. tenth century BCE), including jars (Fig. 2:8). It seems that the wall was part of a building that mostly extended beyond the limits of the excavation.

Area B. The cist tomb (L401; $0.8 \times 1.0 \mathrm{~m}$; Fig. 3) was plundered in antiquity. The small winepress (L402; Figs. 3, 4), exposed 1 m south of the tomb, included a round treading floor (diam. 0.9 m ) and a round collecting vat (diam. 0.4 m ). The quarry (L 405; $1 \times 3 \mathrm{~m}$; Fig. 5) was 4 m west of the winepress. Severance channels that separated the stones from bedrock were discerned in it. The excavation of the three round shafts was suspended due to safety precautions. One of the shaft (L406; Figs. 5, 6) was hewn next to the quarry. The soil fill in the shaft contained fragments of bowls (Fig. 2:13), kraters (Fig. 2:4, 5), cooking pots (Fig. 2:6, 7) and jars (Fig. 2:9-12) that dated to Iron II.

## Area A שט



1. Area A, plan.


2. Tomb 401 and Winepress 402, plan and section.

3. Winepress 402 , looking south.

4. Quarry and Shaft 406, plan and section.

5. Shaft 406, looking south.
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## Khirbat Ibreika

## Final Report

Durar Masarwa


1. The winepress, plan and
section.

2. The winepress, looking west.

3. The working surface and collecting vats, looking southeast.

During March-April 2006, a salvage excavation was conducted west of Khirbat Ibreika, along the route of a sewer (Permit No. A5123; map ref. NIG 19617-8/67874-5; OIG 14617-8/17874-5), in the wake of damage to antiquities. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by South Sharon Regional Council, was directed by D. Masarwa, with the assistance of S. Ya'aqov-Jam (administration), A. Hajian (surveying and drafting), T. Sagiv (field photography), R. Vinitsky (metallurgical laboratory) and R. Kool (numismatics).
Remains of buildings whose date ranged from the Roman to the Ottoman periods had been uncovered in excavations conducted in and around Khirbat Ibreika ('Atiqot 53:37*-43*, HA-ESI 118; HA-ESI 118; License Nos. B-30/1996-01, G-89/1997).
Two squares were opened and part of a winepress, with two treading floors and a working surface, was exposed (Figs. 1, 2).

Treading Floors. The floors were composed of small tesserae set in a bedding of tamped hamra. An earlier mosaic floor of larger tesserae was discerned below them (L117). The eastern treading floor (L104; width 4 m) was enclosed on the east by a fieldstone wall (W109), preserved a single course high. The treading floors were separated by a row of fieldstones and mortar to which a layer of white plaster was applied (W110); both were delineated on the south by a fieldstone wall, coated on the inside and outside with white plaster and preserved a single course high (W102).
Working Surface. The surface (L105) was adjacent to the south of W102. It was built of small fieldstones, set on a bedding of fine mortar and severed by a modern trench. Two circular collecting vats were incorporated in the surface (L100, L101). Their sides, built of medium-sized fieldstones, were coated with a layer of mud plaster in which potsherds were embedded. The eastern Vat 100 (diam. 1.8 m , depth 1.6 m ; Fig. 3) had a coarse white mosaic floor and a plastered sump in its southeastern corner (L108); the sides of the vat were coated with a layer of hydraulic plaster. A plastered channel (L106) drained the liquid from the eastern treading floor into the vat. The western Vat 101 was smaller (diam. 1.1 m , depth 1.6 m ). A partly preserved distribution vat (L107), its floor and sides coated with white plaster, that probably linked to the collecting vats by pipes was also exposed.

A few worn and non-diagnostic potsherds were recovered from the excavation. A coin of Agrippa I (Jerusalem mint; 41/42 CE; IAA 112119) was discovered between the stones of W109 at the northern end.

This winepress joins the large complex winepress that had previously been exposed to the east of the site and it testifies to the importance of the wine industry in the region during the Roman and Byzantine periods.


1-1

1. The winepress, plan and section.


2. The working surface and collecting vats, looking southeast.
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## Khirbat Lubiya

## Final Report



1. Rock-cutting in bedrock
(L104), plan.

2. Rock-cutting in bedrock (L105), plan.

3. Rock-cutting in bedrock (L113), plan.

4. Pottery.

5. Building remains, plan and section.

During February 2006, an excavation was conducted along the northern fringes of Khirbat Lubiya (Permit No. A-4727; map ref. NIG 24035-60/74289-90; OIG 19035-60/24289-90), prior to widening Highway 77. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the National Road Safety Company, was directed by B. Hanna, with the assistance of A. Najar (area supervision), Y. Lavan (administration), A. Hajian (surveying and drafting), H. Smithline (photography) and H. Tahan (pottery drawing).
Khirbat Lubiya lies on a forested hill, c. 1 km southeast of the Golany Junction. Three squares and four halfsquares (125 sq m) were excavated. Remains of a quarry (Stratum III), a rock-hewn tomb and quarried pit (Stratum II) and remains of buildings that were part of the Lubiya village (Stratum I) were discovered. Lubiya had been located at this spot from the end of the Ottoman period until the founding of the state and was the largest settlement in the Tiberias district. A previous excavation at the site (Permit No. A-4405) revealed settlement remains that dated from the second century BCE until the fifth century CE.

Stratum III. Hewn vertical bedrock walls were exposed throughout the entire excavation area, having different lengths and depths (Loci 104, 105, 107, 109, 113; length 1-3 m, depth 0.2-1.2 m; Figs. 1-4). Some of the rock-cuttings were barren and some were covered with alluvium, which contained a few potsherds from the Roman period, such as a jar (Fig. 5:1). These rock-cuttings were part of a quarry for masonry stones, which operated in the region.

Stratum II (Fig. 4). A bedrock-hewn cist tomb that was aligned north-south (L106; 0.30-0.45 $\times 1.80 \mathrm{~m}$, depth 0.5 m ) was discovered in the vicinity of Rock-cuttings 107 and 109. A circular rock-hewn pit, which became wider toward the bottom (L115; upper diam. 0.73 m , lower diam. 0.85 m , depth 0.35 m ), was exposed 3 m west of the tomb. The tomb and the pit were hewn in the area of the quarry and therefore postdated it.

Stratuml. Remains of a building, founded on the remains of the quarry, were exposed 13 m east of Rock-Cutting 104. The building comprised an eastern (L110) and western (L112; Fig. 6) rooms. The walls of the structure (width 0.65-0.75 m , preserved height $0.4-1.3 \mathrm{~m}$ ) were built of dry construction utilizing roughly hewn, small and medium-sized soft limestone. The white plaster that coated the interior face of the walls was applied to a gray foundation layer of ash, lime and some straw; in several places two layers of plaster were discerned, the earlier one was dark blue and the laterwhite. The floor of the building was well-preserved and consisted of a thin layer of smoothed concrete set on a bedding of concrete mixed with small stones (thickness 7 cm ). An opening (width 0.88 m ) with a threshold of smoothed concrete was set in the wall that separated the two rooms (W11/W18). It seems that in the eastern wall (W15) of Room 110 was another opening that led to a room, which was not preserved. A square installation (L124; $1.90 \times 1.95 \mathrm{~m}$, depth 0.5 m ) that was built of small and medium, roughly hewn limestone was discovered below the floor in the northwestern corner of Room 110. The interior surface of the installation was coated with white plaster. Travertine had accumulated above a layer of sand at the bottom of the installation and a channel (width 0.45 m ) led to it from the west. It seems that the installation was used as a septic pit. A large quantity of ash, which probably stemmed from the burning of wooden roof beams, was discovered above the floor of Room 112, as well as various artifacts that dated to the end of the Ottoman period and included the top of an oven, a lock, a sickle, an iron rod used for locking the door and fragments of a decorated plate. A niche ( $0.30 \times 0.65 \mathrm{~m}$, height above floor 0.8 m ) was installed in the eastern part of W10 in Room 112. Another niche ( $0.38 \times 2.00 \mathrm{~m}$, height above floor 0.65 m ) was built in the room's southern wall ( W 18 ); in a later phase the niche was made narrower by half a meter. An opening (width 1 m ) that led to a courtyard was set in the middle of W17 in Room 112. A small section of a floor (L121; $1.0 \times 3.5 \mathrm{~m}$ ) that was set in a manner similar to the floor of the building was preserved in the courtyard. An installation $(0.65 \times 0.80 \mathrm{~m})$ above the floor in the western corner of the courtyard was built of small and medium-sized limestone and preserved to a maximum of two courses high. A fragment of a ceramic bread seal was discovered in the upper part of the installation (Fig. 5:2). It is possible that the two rooms were part of a complex of rooms surrounding an inner courtyard.
The corner of another building, founded on bedrock, was exposed c. 200 m west of the building remains (Fig. 7). The continuation of this building was destroyed when the road was paved. The walls (W20-width 0.75 m ; W21-width 0.65 m ) were built of an inner row of small and medium, roughly hewn limestone and an outer row of medium-sized, dressed hard limestone. The inner face of the walls was coated with white lime-based plaster. The walls were preserved 0.6 m high. The concrete floor of the building (L119), which abutted Walls 20 and 21, was similar to the eastern building.


1. Rock-cutting in bedrock (L104), plan.

2. Rock-cutting in bedrock (L105), plan.

3. Rock-cutting in bedrock (L113), plan.


4. Pottery.

5. Building remains, plan and section.

6. Corner of a building, plan.

7. Plan and section.

8. The collecting vat, looking north.

9. Pottery.
(Volume No. HA-ESI 121 (2009
Khirbat Sha'ira (South)
Final Report
Elena Kogan-Zehavi
16/2/2009
During December 2007-January 2008, a salvage excavation was conducted at Khirbat Sha'ira (Permit No. A-5332; map ref. NIG 19087-8/66396-8; OIG 14087-8/16396-8), prior to construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by E. Kogan-Zehavi (surveying), with the assistance of E. Bachar (administration), T. Sagiv (field photography) and C. Hersch (pottery drawing).
A single square was opened on Micah Street in Petah Tiqwa and the remains of a winepress from the Byzantine period and a cluster of stones from the Early Islamic period were excavated (Fig. 1). Previous excavation in the area exposed building remains from the Byzantine and Ottoman periods and a well of unknown date to the south of the site (HA-ES/116) and settlement remains from the Middle Bronze Age were discovered north of the site ('Atiqot 48:63-81).

Byzantine period. A square, built collecting vat of a winepress was exposed (L 110; $1.3 \times 1.3 \mathrm{~m}$; Fig. 2). The treading floor of the winepress was not preserved as a result of modern damage to the winepress and possibly also damage caused during the Early Islamic period. The fieldstone-built walls of the collecting vat (W102, W107-W109; max. preserved height 0.5 m ) were coated with pale gray-brown plaster in which potsherds were embedded. Walls 107 and 109 were not preserved, except for a layer of plaster below them. The mosaic floor of the collecting vat consisted of white tesserae (average size $2 \times 2 \mathrm{~cm}$ ) and a round settling pit was installed in its northern corner. A few potsherds that dated to the Byzantine period were discovered in the winepress, including two jar rims (Fig. 3:1, 2). Based on the size of the collecting vat it is assumed that this installation was a public winepress. According to residents living nearby, dressed masonry stones were discovered when the building east of the winepress was constructed; these stones may have been connected to the winepress.

Early Islamic period. East of the collecting vat was a round cluster of small and medium-sized fieldstones (L112). A few ceramic finds from the Early Islamic period were discovered among the stones, including rims of a bowl (Fig. 3:3), a frying pan (Fig. 3:4) and a jar (Fig. 3:5).



## Khirbat Umm el-'Umdan

## Final Report

During March-April 2006, a salvage excavation was conducted at Khirbat Umm el-Umdan (Permit No. A-4750; map ref. NIG 200427-54/643251-60; OIG 150427-54/143251-60), prior to construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by G. Bronovsky and the Ne'ot Gefanim Association, was directed by D. Masarwa, with the assistance of Y. Ohayon (administration), A. Hajian (surveying and drafting) and T. Sagiv (field photography).
Buildings and installations that ranged in date from the Persian until the Umayyad periods had been exposed in previous excavations at the site (HA-ESI 114:64*-68*; HA-ESI 118). The current excavation was carried out on a hill, along the southeastern fringes of the site, where a winepress, a field tower (watchman's hut) and other building remains were revealed. These remains should probably be ascribed to the Byzantine period, similar to other remains uncovered nearby.

2. Area A, winepress, looking southeast.

3. Area A. Cupmark 101. looking west.

Two excavation areas were opened, Area A in the northwest and Area B in the southeast.
Area A. A hewn winepress that consisted of a square treading floor (L105; $2.4 \times 2.4 \mathrm{~m}$, depth 0.5 m ; Figs. 1, 2), a channel (L106) and a collecting vat (L107) was discovered. Two cupmarks (L101-diam. 0.85 m , L102-diam. 0.5 m ; Figs. 3, 4) were exposed east of the winepress.
Area B. A rounded structure built of large fieldstones was exposed on the hillside. It was founded on bedrock (L110; diam. 6.2 m ; Figs. 5,6 ) and was probably the base of a field tower, possibly a watchman's hut. The structure was enclosed on its southern and eastern sides by a wall (W112; length 17 m , width $0.5-0.6 \mathrm{~m}$; Fig. 7), built of various size fieldstones and preserved a single course high. The space created between W112 and the base of the tower (L113; width c. 1.5 m ) was filled with small stones mixed with brown earth that possibly meant to support the tower.
The foundations of a building were exposed southeast of W112; it was only partially excavated due to safety precautions. The building was constructed from fieldstones and consisted of a northern (L128) and southern (L129) cells; it seems to have been used as a field tower or a shelter for shepherds.
A few worn potsherds that could not be dated were recovered from the excavation.


1. Area A, plan and section.

2. Area A, winepress, looking southeast.

3. Area A, Cupmark 101, looking west.

4. Area A, Cupmark 102, looking west.


5. Area B, base of tower, looking west.

6. Area B, Wall 112, looking west.

# (Volume No. HA-ESI 121 (2009 <br> <br> Khirbat Umm el-‘Umdan, Horbat Hammim <br> <br> Khirbat Umm el-‘Umdan, Horbat Hammim Final report 



1. Map of the sites.

2. Pottery (24, 131, 130).

3. Cave 131, looking north

4. Building 165, looking south.

5. Watchman Booth 18, plan and section.

## Elena Kogan-Zehavi

 9/9/2009During May-June 2002, a salvage excavation was conducted in Modi'in, within the precincts of the Khirbat Umm el-'Umdan and Horbat Hammim sites (Permit No. A-3633; map ref. NIG 1976-98/6433-49; OIG 1476-98/1433-49), prior to the paving of Highway 200. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Construction and Housing, was directed by E. Kogan-Zahavi, with the assistance of S. Ayyub, R. Avner and E. Aladjem (area supervision), R. Abu Khalaf (administration), A. Hajian and T. Kornfeld (surveying), T. Sagiv (field photography) and I. Lidski (pottery drawing).
The route of the road extends from southeast to northwest (length c. 2 km , width c. 10 m ; Figs. 1, 2) and passes within the site of Kh. Umm el-'Umdan, where a settlement from the Second Temple and the Byzantine periods had been excavated (HA-ESI 114:64*-68*; Qadmoniot 130:57-59 [Hebrew]). Agricultural terraces, pens and sections of an ancient road that led to Kh. Umm el-'Umdan were surveyed and documented and numerous agricultural installations, quarries and burial caves were exposed. The ceramic finds indicate that the agricultural and burial activities at the site should be dated from the time of the Second Temple to the Byzantine period.

## Burial Caves

Cave 24, located at the western side of the area, had a rounded shape and a rock-hewn staircase led to its entrance that faced north (Fig. 3). A probe was excavated alongside the entrance and the few potsherds on the floor included a lamp fragment from the Byzantine periods (L104; Fig. 4:1). As the entrance to the cave was wide, it may have been used for dwelling.
Four caves, identified as burial caves (131, 171-173), were concentrated at the southeastern side of the area, on a hill that overlooked Kh. Umm el-Umdan to the east and in whose direction the cave entrances faced. Of these, the impressive Cave 131 (Figs. 5, 6), in whose construction both hewing and building were combined, was partially excavated. Three phases of use were discerned in the cave, which was dated to the Second Temple period.
The first phase: The tomb, including a vestibule and a burial chamber, was hewn.
The vestibule was square (L311; $3.9 \times 3.9 \mathrm{~m}$ ) and its floor and walls were meticulously dressed and coated with a thick white plaster layer. An entrance (width 1.5 m ), as well as built and plastered steps (L319), were incorporated in the eastern facade wall (W409; length 5 m , width 1 m ), which was built of ashlar stones and preserved a single course high. The tops of the northern, western and southern sides were leveled as a foundation that was meant to accommodate additional walls, which did not survive (width 0.5 m ). The opening to the burial chamber, hewn in the southern side of the vestibule, was found partly sealed with a rolling stone. The burial chamber was not excavated, yet at least five kokhim could be discerned, pointing to a date in the Second Temple period.
The second phase. The entrance to the vestibule was blocked with gray bonding material that contained wadi pebbles. The fill in the vestibule contained potsherds, including jars (Fig. 4:2-7) and a jug (Fig. 4:8) from the Early Roman period. The third phase. A terrace was built on the western side of the tomb, which was covered with fill soil that contained fragments of bowls (Fig. 4:9, 10) from the Byzantine period.

## Columbarium

A columbarium, to the east of the burial caves, was partly excavated (130; Fig. 7). An elliptical shaft led to a rounded rock-hewn chamber, in whose sides small round niches were hewn. The southern part of the columbarium had collapsed and hence, only a section of its northern side, which was filled with alluvium, was excavated (L300). The recovered potsherds included a jar rim (Fig. 4:11) from the Hasmonean period, a bowl rim (Fig. 4:12) from the Early Islamic period and body fragments of vessels that could not be dated.

## Building

A poorly preserved building was exposed west of the columbarium (165; Figs. 8, 9).
The fieldstone-built foundation courses, set on bedrock, had survived. A segment of the eastern wall (W306) and remains of partition walls (W307, W308) that separated among three rooms (A-C) were discerned in the foundations. Bedding of small stones set on bedrock had survived of the building's floor (Loci 308-310, 316). The potsherds recovered from the bedding consisted of bowls (Fig. 10:1-4), including a Late Roman C bowl (Fig. 10:2) from the end of the sixth-beginning of the seventh centuries CE and jars (Fig. 10:5,6) from the late Byzantine period. At a later phase, when a terrace that crossed the area from north to south was built (W313), the walls of the building were dismantled and it was covered with soil and pebbles.

## Watchman Booths and Towers

Watchman Booth 18, in the western side of the area, was survived by the foundation of its northeastern corner (W1, W2; $5 \times 7 \mathrm{~m}$; Fig. 11), which was carelessly built of fieldstones and dressed stones. A leveled bedding of small stones (L203), without any datable finds, was preserved of the floor.
Watchman Booth 40, in the center of the area, was built of large boulders and carelessly dressed stones; it was preserved a single course high ( $4.5 \times 6.0 \mathrm{~m}$; Fig. 12). The entrance to the booth was on the northeastern side. The watchman booth had two rooms, separated by a partition wall (W6), which was preserved two courses high. A bowl fragment (Fig. 10:7) from the Second Temple period and a jar (Fig. 10:8) from the late Islamic period were discovered on the bedrock floor of the interior room (L312).
A square building ( $46 ; 4 \times 4 \mathrm{~m}$; Fig. 13) was exposed on the hillside, in the center of the area, overlooking an ancient road that led to Kh. Umm el-'Umdan. The building, founded on a leveled bedrock surface, was preserved three courses high. The bottom course was built of well-dressed stones and the upper courses consisted of large and carelessly dressed stones. The floor bedding (L107), set on bedrock, consisted of soil, stones and pebbles and contained a few ceramic body fragments. It appears that initially, the massive building was a guard tower alongside the road. After its collapse, it was renovated as a watchman booth at a later stage. In the absence of datable finds from the floor bedding, the first phase of this structure was dated to the Roman period, based on its construction style and the second phase was attributed to the Byzantine period, based on its use.
The opening of a cave, alongside the southern wall of the tower, was sealed with stones. Five rock-hewn steps (Fig. 14), the top two-broad and the lower three-narrower, led to the cave, whose shape and dimensions are unknown as it was not excavated. The fill in the cave's entrance (L108) contained worn potsherds and the rim of a jar from the Early Roman period (Fig. 10:9). It seems that the cave was in use together with the first phase of the building and it was blocked during the building's second phase.
A square building ( $59 ; 4.7 \times 4.7 \mathrm{~m}$; Fig. 15), constructed from large, carelessly dressed stones, was exposed in the southern end of the area. The accumulated alluvium inside the structure (L225) contained worn potsherds from the Early Roman and Byzantine periods. The building, surrounded on all sides by terraces, was probably used as a field tower.

## Agricultural Installations

At the bottom of the hill's slope in the eastern part of the area, a rock-hewn winepress (110; Fig. 16) was exposed. It had a rectangular treading floor ( $\mathrm{L} 219 ; 1.7 \times 2.0 \mathrm{~m}$ ), which was connected to a square collecting vat (L218; $0.9 \times 0.9$, depth 0.8 m ) by way of two hewn channels. A few worn body sherds and a bowl rim from the Byzantine period (Fig. 17:1) were found in the winepress.
A hewn pressing installation, which included an elliptical surface ( $0.18 \times 0.20 \mathrm{~m}$; Fig. 18) and a circular pit (diam. 8 cm , depth 10 cm ), was discovered near the winepress.

A rock-hewn basin (109; diam. c. 0.8 m , depth c. 0.1 m ) was recorded south of the winepress and a cupmark (132; diam. 0.3 m , depth 0.2 m ) was discerned to its west.

## Ancient Road

Sections of the ancient road, which began at Khirbat Umm el-'Umdan and extended in an east-west direction to a point where it changed its course northward near Tower 46, was documented with the aid of GPS. Two road segments were investigated in the east of the area; one was in the east (63; Fig. 19) and the second, somewhat to its west (62; Fig. 20). The width of the road in the two segments was c. 2 m and it was bound by curbs that consisted of large, carelessly dressed stones (Fig. 21). The road pavement was composed of limestone fragments and small stones (Loci 251, 252), overlaying a leveled bedding of stones and soil (Loci 248, 259).
A rock-hewn cistern (128), exposed along the southern side of the Road 62, was surrounded by leveled bedrock. The cistern's opening (diam. 0.78 m ) was built of dressed stones that were placed above a hewn shaft (L100; depth 1.8 m ), leading into a bell-shaped cistern. The road's southern curb was incorporated in the wall that was constructed around the cistern's opening; hence, it seems that the cistern predated the road.
The pavement of the eastern segment (L252) contained fragments of bowls from the Byzantine period, including a Late Roman $C$ type bowl (Fig. 17:2) from the middle of the sixth century CE and a base of such a bowl that bore a stamp (Fig. $17: 3$ ), for which no comparisons were found. Within the road bedding and above bedrock were potsherds from the Early Roman period, including a krater (Fig. 17:4), a cooking pot (Fig. 17:5) and jars (Fig. 17:6-8).
Potsherds in the foundation of the curb around the cistern's opening included a krater (Fig. 17:9), a cooking pot (Fig. 17:10), a jar (Fig. 17:11) and a jug (Fig. 17:12), dating to the Early Roman period.

## Quarry

A quarry (127; $8 \times 10 \mathrm{~m}$; Loci 220,228 , 232; Figs. 22,23 ) was exposed north of the road in the east part of the area. A terrace wall (W21) was built over part of it. The potsherds on the floor of the quarry included bowls (Fig. 24:1, 2) and jars (Fig. 24:3-5) from the Early Roman period.

## Terraces

Sections of a massive wall (108; W21; length over 50 m , width $1.0-1.8 \mathrm{~m}$; Fig. 25) that was oriented east-west extended along the lower slopes of the hill. The wall whose exterior face was built of large, dressed stones and its interior face consisted of fieldstones, was preserved three courses high. Its eastern side was founded on leveled bedrock, whereas its western side was set on Quarry 127. The fill abutting W21 on the north (Loci 243, 244) contained various potsherds, including three Late Roman C bowls, Fig. 24:6 dated to the latter sixth-beginning of seventh centuries CE and Fig. 24:7, 8 dated to the second quarter of the sixth century CE, as well as another bowl (Fig. 24:9) and jar fragments (Fig. 24:10, 11), dating to the Byzantine period. It seems that W21 was intended to delimit the cultivation plot to its south and prevent its flooding by the wadi to its north. The wall, which was partially built over Quarry 127, postdated it and apparently, was not constructed prior to the Byzantine period.
Two terrace walls, oriented north-south were exposed c. 0.5 m below surface in an area (135; Fig. 26) that was cleaned by a backhoe at the eastern end of the excavation, c. 20 m north of the projected highway and c. 100 m west of Umm el'Umdan, where a wadi runs through. The potsherds in fill adjacent to the walls included a cooking pot (Fig. 24:12) and a jar (Fig. 24:13), dating to the Second Temple period.
Many other terrace walls, some visible and others covered with alluvium, were dispersed in the area.

## Animal Pens

Enclosures $(10,11)$ surrounded by a circle of boulders and devoid of any datable finds were identified in the western part of the area. These were apparently animal pens.
The sites excavated along the route of the road evince that the region, located near Kh. Umm el-'Umdan and linked to it by the road, functioned as the economic hinterland of the settlement during the Second Temple period and later, during the Byzantine period.
It is apparent from the construction of the installations that they were adapted to the various landscape units. Thus, rocky slopes were used for installing a columbarium, winepresses, quarries, watchman booths, animal pens and tombs, whereas on the hilltops near the wadi, farming terraces were discovered.

It is feasible to partially reconstruct the area's function during the two periods of use, in spite of its close proximity to surface, the scarcity of datable finds and their mixed nature that made it difficult to date the installations. The tombs, which were in all likelihood part of the settlement's cemetery, as well as the road that linked the two, the quarry, the cistern and the columbarium, can be ascribed to the Second Temple period. The winepress could not be dated, although this type of installation is known in the region during the Second Temple period. Part of the road continued to be used during the Byzantine period and the agricultural area was enlarged with the construction of numerous farming terraces, fences and watchman booths, some of which negated the quarry and the columbarium, a segment of the road and even part of the cemetery.


1. Map of the sites.



1-1
3. Cave 24, plan and section.

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4. Pottery (24, 131, 130).

5. Burial Cave 131, plan and section.

6. Cave 131, looking north.


2-2
7. Columbarium 130, plan and sections.

8. Building 165, plan.

10. Pottery (165, 40, 46).


1-1
11. Watchman Booth 18, plan and section.

12. Watchman Booth 40, plan and section.


1-1
13. Field Tower 46, plan and section.



1-1
15. Field Tower 59, plan and section.

16. Winepress 110, plan and section

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17. Pottery (110, 62, 63).

18. Pressing installation, looking south.

19. Road 63, plan and section.

20. Road 62 and Cistern 128, plan and section.

21. Ancient road, general view to the west.



25. Terrace wall 108, plan and section.

26. Terraces in Area 135, looking west.
(Volume No. HA-ESI 121 (2009
Khirbat Um Kalkha, Survey of Highway 3
Preliminary Report
Yehuda Dagan, Leticia Barda and Sigal Golan
During January 2005, a survey was conducted along Highway 3, from Nahshon to Re'em Junctions (Permit No. A-4360; map ref. NIG 179810-92166/629870-35828; OIG 129810-72166/129870-35828), prior to widening the road. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Department of Public Works, was directed by Y. Dagan, L. Barda (GPS) and S. Golan.
Both sides of the highway were examined along the surveyed strip of land (length 23 km , width 200 m ). Seven survey sites were discovered (Fig. 1).

1) Map ref. 19189/63570 - concentrations of potsherds and several flint artifacts.
2) Map ref. 19142/63557 - a scattering of flint artifacts.
3) Map ref. 18735/63531 - Khirbat Um Kalkha: The site extends along both sides of the highway; an excavation in its northern part, revealing remains that dated to the end of Middle Bronze IIA, was conducted (HA-ESI 116); potsherds from the Chalcolithic period were collected in its southern part.
4) Map ref. 18630/63522 - the fringes of Khirbat Um Kalkha, where the highway crosses the spur that descends to Nahal Soreq. Fragments of pottery vessels from Iron II and the Late Byzantine period were found on surface.
5) Map ref. 18281/63263 - a scattering of potsherds from the Byzantine and Early Islamic periods.
6) Map ref. 18232/63171 - a scattering of flint fragments.
7) Map ref. 18304/63287 - a scattering of non-diagnostic potsherds and flint fragments.

1. Survey map.
(Volume No. HA-ESI 121 (2009
Khirbat Yarda, Survey
Final Report
Achia Kohn-Tavor

2. Survey map.

3. Rock-hewn pressing installation.

4. Rectangular installation.

5. Hewn cist tomb.

During January 2007, a survey prior to development was conducted near Khirbat Yarda (Permit No. A-4996; map ref. NIG 1937/6406; OIG 1437/1406), in preparation of the ground for planting trees. The survey, undertaken on behalf of the Israel Antiquities Authority and financed by the Jewish National Fund, was directed by A. Kohn-Tavor, with the assistance of R. Lupu (area surveying), L. Yihye and A. Dagot (GPS) and A. Golani and E. Eisenberg (ceramics).

Two northwestern spurs that descend to Nahal Gezer were surveyed and 83 antiquities sites were recorded (Fig. 1). A hilltop is located on the northern side of the western spur, whereas the eastern spur is flat and wide. Cultivation plots that extend between the spurs were not surveyed. The soft chalk bedrock on the two spurs is covered by a layer of nari and the vegetation is herbaceous undergrowth, dominated by the spiny burnet. Large parts of the western spur were damaged during the preparation of the area, which was plowed and cleared of stones and part of its bedrock was removed to a depth of $3-4 \mathrm{~m}$, causing damage to ancient installations. Nevertheless, the majority of finds concentrated on this spur, where a fairly homogeneous scattering of potsherds, partly dating to the Chalcolithic period or Early Bronze Age and partly to the Roman or Byzantine periods, was found. A few eroded potsherds were discovered on the eastern spur.
Numerous flint flakes and potsherds, fragments of basalt, flint and red granite grindstones, as well as animal bones were discerned at the southern end of the western spur, on surface and around modern pits (No. 8; map ref. NIG 19375/64050). The potsherds were dated to the Chalcolithic period or Early Bronze Age (?), Early Bronze I, Middle Bronze I (?) and Iron II. The finds visible in the sides of the pits concentrated in a light gray soil layer, 0.5 m below surface. Part of the surveyed cupmarks and installations could be ascribed to a settlement that was apparently related to the nearby Tel Gezer.
A concentration of installations, tombs, rock-cuttings, winepresses, glass artifacts, tesserae and potsherds (No. 15), including a fragment of Late Roman ware from the Roman or Byzantine periods, were documented on the hilltop of the western spur (map ref. NIG 1937/6406). It seems that these remains were related to Khirbat Yarda, located in the wadi channel and on the slope of the adjacent hill (map ref. NIG 19380/64075), where potsherds that ranged in date from the Byzantine until the Mamluk periods were collected. A heap of ashlar stones that were apparently cleared from Khirbat Yarda was documented along the northeastern fringes of the western spur and a concentration of cupmarks was discerned on the middle of the hilltop.
Other sites, outside the domain of the main sites on the two spurs, were documented:
(1) About ten oil presses, most of which were bodedot and one was a complex press with a crushing installation (Fig. 2); based on their characteristics they were dated to the Roman or Byzantine period. A rock-hewn pressing installation was also noted (Fig. 3).
(2) Several elliptical and rectangular rock-cuttings (Fig. 4) that were most likely installations.
(3) Six tombs, some on the fringes of the spurs and some on the hilltop of the western spur. Most were hewn cist tombs (Fig. 5) and a few were hewn burial caves that probably related to Khirbat Yarda or one of the nearby settlement sites. Some of the tombs utilized previous rock-cuttings.
(4) Several dozen cupmarks (diam. $30-50 \mathrm{~cm}$ ) whose use and date is unclear; Noteworthy was a multitude of small cupmarks (diam. up to 15 cm ) that appeared in groups of two or three.
(5) Several dozen flattened rock-cuttings for which the technique of severance channels to remove ashlar stones was used.

Agricultural installations, tombs and quarries from different periods were recorded in the survey. These are characteristic of the Shephelah hills and were used by the nearby settlements, one of which was identified within the limits of the surveyed area.


1. Survey map.
2. Complex oil press with crushing installation in center.


3. Rectangular installation.


# (Volume No. HA-ESI 121 (2009 

## Lavi (East)

Final Report
Abdalla Mokary

plan and section.

2. Pottery.

During September 2003, a salvage excavation was conducted in Lavi (East, Permit No. A-4004; map ref. NIG 24265-95/74355-75, OIG 19265-95/24355-75), following earthmoving work for laying a water pipe. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Meqorot Water Company, was directed by A. Mokary (photography), with the assistance of Y. Ya'aqobi (administration), V. Essman (surveying), H. Tahan (pottery drawing) and laborers from Nazareth.
An ancient winepress and quarries were exposed.
The winepress, hewn in limestone bedrock, consisted of a square treading floor (L11; $3.6 \times 3.6 \mathrm{~m}$, depth 0.2 m ), in whose middle was a hewn rectangular recess for a stone press bed that was found upside down over the recess. At the eastern end of the treading floor was a rectangular rock-hewn collecting vat (L12; $0.9 \times 2.0 \mathrm{~m}$, depth 1.35 m ) with the remains of plaster applied to its sides. A secondary treading floor was hewn at the southern end of the primary floor and both were linked by way of a small channel. The base of a pressing installation, hewn out of round basalt stone (diam. c. 0.8 m ), was found over the treading floor. A square perforation (length 0.25 m ) for holding a wooden beam was cut in the centre of the stone and an attempt was made to cut a recess in the other side of the stone, but it did not materialize. A fragment of a lamp decorated with a herringbone pattern in relief (Fig. 2:1) and a fragment of a black jar (Fig. 2:2), dating to the seventh century CE, were found above the treading floor.

Three ancient quarries (size of quarried stones $0.5-0.8 \mathrm{~m}$, thickness of stone 0.3 m ) were located at the eastern end of the winepress.


1. Winepress and quarry, plan and section.


2



1. Plan and sections (presumed absolute elevation).


3 . Pottery.

4. Pillar 13 and Floors 101 and 112 above it, looking west.

5. Glazed potsherds.

6. Floor 112, looking north.

## Uzi 'Ad

During March 2007, an excavation was conducted in the western courtyard of the Anglican Church compound in Lod (Permit No. A5080; map ref. NIG 19056/65115; OIG 14056/15115), in the wake of damage to ancient remains caused by a pit dug by mechanical equipment. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Arfad Association, was directed by U. 'Ad, with the assistance of S. Ya'aqov-Jam (administration), D. Porotsky and E. Belashov (surveying and drafting), T. Sagiv (field photography), C. Amit (studio photography), L. Kupershmidt (metallurgical laboratory), K. Cytryn-Silverman (pottery reading), M. Shuiskaya (pottery drawing), Y. Gorin-Rosen (glass), D.T. Ariel (numismatics) and laborers provided by the Brick Manpower Company.
Most of the compound, which includes a hospital and a church, was built at the end of the nineteenth century CE, atop the foundations of ancient buildings. St. George's Church that includes a monastery and a church from the Crusader period, which were restored in 1870-1873, is located to the east of the Anglican compound. The Crusader church is built on the remains of a Byzantine church that appears on the Madaba Map. According to historical sources, large parts of the church were destroyed during the Mamluk conquest in the thirteenth century CE and during Baybars' reign, the al-Omar Mosque was built in their place. The site had never been excavated before.

An excavation area ( $6 \times 8 \mathrm{~m}$; Fig. 1) was opened inside and around the pit that penetrated the earlier layers, in the western side of the church compound, southwest of the building that currently hosts a nursery school. Four strata that included remains of walls, pillars and floors were exposed and are described hereafter from the earliest to the latest.

Most of the exposed architectural remains were in the sides of the pit. Due to its considerable depth (in excess of 4.5 m below surface) and fearing collapse of its sides, the pit was slightly deepened by manual excavation. The dating of the architectural remains is problematic and relies only on a few sealed loci.

## Stratum IV

The southern side of a short wall section was discovered in the southwestern corner of the square. It was built of partly dressed fieldstones that were bonded with gray mortar (W14; Fig. 2). A coating of white mortar with ribbed potsherds and whitish pink plaster was traced on the wall. A cluster of stones (L111) was exposed the same elevation east of W14. The meager finds from the vicinity of the wall (L110) included a bowl (Fig. 3:1) that dated to the Early Islamic period.
Based on the type of plaster, the potsherds mixed in the mortar and the plaster on the wall and the scant ceramic finds, it is assumed that the wall was used from the end of the Byzantine until the Early Islamic periods (eighth-ninth centuries CE ).

## Stratum III

A rectangular pillar (W13; $1.5 \times 1.9 \mathrm{~m}$; Fig. 4) that was built on top of W14 and L111 of Stratum IV was exposed in the western part of the square. The pillar had straight sides and was built of medium-sized fieldstones with light colored mortar.
Ceramic and glass artifacts, including bowls (Fig. 3:2, 3) that dated to the Middle Ages (fourteenth-fifteenth centuries CE) were discovered in the fill south of the pillar (L108). Potsherds from the same period, among them a bowl (Fig. 3:4) and glazed fragments (Fig. 5:1, 2) were discovered at a similar elevation in the fill at the eastern part of the square (L103). Although no level or floor that abutted the pillar were found, thus making it impossible to determine its construction date, the pillar's stratigraphic location between Strata IV and II and the ceramic finds discovered alongside it allow us to suggest that it was built in the Middle Ages.

## Stratum II

Two pillars or massive walls that resembled each other in their construction and the depth of their foundations were discovered; one was in the northwest (W12; thickness more than 1 m ) and the other in the southeast (W15). The foundation of Pillar 12 destroyed the upper part of Pillar 13 from Stratum III; hence it was built after the Stratum III structure was no longer in use. Pillar 12 was abutted from the north by a floor (L112; length c. 3 m ) that continued to the east along the northern side of the pit. The floor consisted of two layers of gray mortar, covered with finely smoothed plaster (thickness per layer 3.5 cm ; Fig. 6), which probably represent two phases of use. The same kind of plaster was used to coat Pillar 12.
The finds in the fill below Floor 112 and between the stones of Pillar 15 (L102) contained a bowl (Fig. 3:5) and a glazed potsherd (Fig. 5:3) that dated to the Ottoman period (eighteenth-nineteenth centuries CE).

## Stratum I

A room ( min . dimensions $5.0 \times 5.5 \mathrm{~m}$ ) delimited by massive stone walls on the east (W10) and south (W11) was discovered. The walls were oriented differently than the walls in Stratum II and therefore the northeastern corner of Pillar 12 from Stratum II was destroyed. An entrance was identified in the eastern wall where the southern doorjamb and bottom hinge of the door were exposed. The room had a plaster floor (L101) whose remains were observed along all sides of the square, apart from the southwestern side. Floor 101 was similar to Floor 112 of Stratum II and the plaster that coated the walls of the room was also of the same components. Based on the finds recovered above and below Floor 101, the room was built and used at the end of the Ottoman period (beginning of the twentieth century CE).
The limited excavation area and the difficult conditions in the field made it difficult to draw any comprehensive conclusions. The finds indicate that buildings stood at the site possibly as early as the Byzantine period, which is likely to underline the opinion that the area was included in the compound of the church that appears on the Madaba Map. Archbearing pillars were preserved in the cellars of the building east of the excavation area, where the nursery school is currently located and where the church used to be situated. Pillar 13 of Stratum III probably served as part of this building and therefore, it is earlier than the nineteenth century CE and may have been built in the Middle Ages.


2-2

1. Plan and sections (presumed absolute elevation)

2. Pillar 13 and Wall 14 below it, looking west.


3. Pillar 13 and Floors 101 and 112 above it, looking west.

4. Floor 112, looking north.

# (Volume No. HA-ESI 121 (2009 

Lod
Final Report

Yossi Elisha

17/12/2009


1. Location map.

2. Pottery.

During June 2004, an excavation was conducted at the Rashadiya School in the Newe Yaraq neighborhood of Lod, (Permit No. A4186; map ref. NIG 19110-15/651575-625; OIG 14110-15/151575-625; Fig. 1). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Rolan Company, was directed by Y. Elisha, with the assistance of E. Bachar (administration), A. Hajian (surveying), T. Sagiv (field photography) and M. Shuiskaya (find drawing). Additional assistance was rendered by the administration of the Rashadiya School.
The excavation was located c. 500 m east of the Yannai and Badhi excavation (Permit No. A-2409) and north of Avissar's excavation (ESI 17:169-172).
Remains of a floor (L9; Fig. 2) that consisted of small stones and potsherds bedding, were exposed. Potsherds dating to the Byzantine period were recovered from the stone layer and the potsherds above it included a krater (Fig. 4:2), jars (Fig. 5:3, 6) and lamps (Fig. 5:11, 12). Below the floor level were bowls (Figs. 3:1-7, 4:3-5), jars (Fig. 5:1-9), a cooking pot (Fig. $4: 6$ ) and a flask (Fig. $5: 10$ ). A fragment of a Late Bronze milk bowl (Fig. $4: 1$ ) was also found.


1. Location map





3


5


9



2


6


10


12 1:1

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Lohamē Ha-Geta'ot
Final Report
Leea Porat
26/11/2009
During April 2007, a trial excavation was conducted at Qibbuz Lohamē Ha-Geta'ot (Permit No. A-5097; map ref. NIG 20982-4/76331-4; OIG 15982-4/26331-4), in the wake of exposing aqueduct remains during an antiquities inspection, prior to construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by L. Porat, with the assistance of $Y$. Ya'aqoby (administration), A. Hajian (surveying and drafting), A. Shapiro (GPS), H. Smithline (field photography), D. Syon (metal detection), H. Tahan (pottery drawing) and R. Frankel, E. Stern and Y. Lerer (consultation).
The excavation was conducted in the eastern part of the qibbuz, in a flat area of heavy brown soil where orchards had been planted in the past. Two squares ( $5 \times 6 \mathrm{~m}, 5 \times 7 \mathrm{~m}$; excavated depth 1.7 m ) were opened, 35 m apart. Parts of a northeast-southwest oriented aqueduct, which probably dates to the Hellenistic period, were discovered. Changes to the aqueduct were made in the Roman period.
Three aqueducts had previously been documented in the region (Fig. 1). The first was built by Suleyman Pasha in 1815. It began in the region of Kabri, near the 'En Shayyara, 'En Zuf, 'En Giah and 'En Shefa' springs and continued toward 'Akko (length c. 13 km ). Most of this aqueduct is above ground. The second, erected by Jazar Pasha in the eighteenth century CE, was mostly built of pipes. This aqueduct was destroyed by Napoleon's army in 1799. The third aqueduct is located between the first two and it was built in the Hellenistic period. To date, three underground sections of this aqueduct are known and a fourth section has been exposed in the current excavation. The first section is a built vaulted tunnel that was discovered in 1972 when foundations for a bomb shelter had been dug in Qibbuz Lohamē Ha-Geta'ot; it was not excavated. The second section is a tunnel that was discovered c .200 m southwest of the first section, when the foundations for another bomb shelter had been dug in the qibbuz in 1977. The tunnel, documented by R. Frankel, was built of ashlar stones to a height of 1.6 m and was covered with a vault. The third section (length 120 m ) was hewn within the precincts of Qibbuz Lohamē Ha-Geta'ot's quarry, near Nes 'Amim; it was excavated by R. Frankel in 1976-1977 ('Atiqot XVII, 1985:134-138). This section is c. 2.9 km northeast of the tunnels discovered in the qibbuz. The current excavation is located between the hewn aqueduct and the tunnels.

Two construction phases were discerned in the aqueduct. The foundation was built in the early phase (width 1.1-1.2 m, height $0.5-0.6 \mathrm{~m}$ ) of large kurkar ashlar stones (average dimensions $0.24 \times 0.50 \times 0.60 \mathrm{~m}$ ). Whereas the eastern side of the foundation consisted of 'headers and stretchers', its western side was only built of 'headers' with fill of sand and medium and large stones in-between (Fig. 2). A layer of sand deposited above the large stones in the middle of the foundation was overlain with the floor of the channel (width 0.4 m ; Fig. 3), which consisted of hydraulic plaster ( $2-3 \mathrm{~cm}$ ) that contained small potsherds, charcoal and small round wadi pebbles. The walls of the channel were not preserved. The width of the foundation and the manner of its construction resemble the tunnels that were discovered in Qibbuz Lohamē Ha-Geta'ot
All the sides of the foundation were reinforced in the late phase with small and medium stones (width 0.5 m , height $0.3-$ 0.5 m ; Figs. 4, 5), as well as debesh, potsherds, ash and pieces of charcoal in-between. Accordingly, the width of the foundation had increased to $\mathrm{c} .2 .0-2.2 \mathrm{~m}$. The reason for these changes to the aqueduct is unclear.
A few of the potsherds that were recovered from the foundation stones dated to the Hellenistic period and included a bowl (Fig. 6:1) and a frying pan (?; Fig. 6:2). Most of the ceramics dated to the Early Roman period and included Kefar Hananya-type bowls (Fig. 6:3), kraters (Fig. 6:4), 'Sikhin'-type jars(Fig. 6:5) and lamps (Fig. 6:6).
'Akko was a large commercial city during the Hellenistic period. The vast amount of water that the city consumed resulted in the construction of an aqueduct that may have conveyed water from the springs located near Kabri. It is unclear whether the continuation of the aqueduct southward, in the direction of 'Akko, passed beneath the aqueduct of the Ottoman period. A survey conducted by R. Frankel in the area yielded no evidence with regard to the aqueducts of the Ottoman period, being constructed on top of the foundations of an ancient aqueduct.


[^3]
2. Area A, the early phase of the aqueduct, looking south.

3. Area B, the later phase of the aqueduct, looking south.


5. Area A, the later phase of the aqueduct, looking south.


## Melilot

## Preliminary Report



1. Location map.

2. General view of excavation, looking northeast.

3. The bottom of Pit 116. looking south.

Pirhiya Nahshoni
During May-June 2007, a trial excavation was conducted at the Melilot site (Permit No. A-5135; map ref. NIG 1615/5878; OIG $1115 / 0878$ ), following the discovery of archaeological remains in probe trenches that were dug along the planned route of the Be'er Sheva'-Netivot railroad track. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel Railway Authority, was directed by P. Nahshoni, with the assistance of Y. Lender (administration), M. Kunin (surveying), the Sky View Company (aerial photography), Y. Nagar (physical anthropology) and laborers from Rahat.
The site is situated northwest of Nahal Gerar (Fig. 1), c. 1.5 km southwest of Tel Haror and c. 3 km southwest of the Gerar site. Pits and underground cavities are easily dug in the indigenous loess soil and the proximity of water in Nahal Gerar, as well as an annual rainfall of c. 300 mm , enables subsistence on agriculture of growing grains and raising livestock.
Four squares were opened, revealing settlement remains that were attributed to the Besor culture, which is dated to the pre-Ghassulian Chalcolithic period (Fig. 2). Due to the limited excavation area it was impossible to determine the boundaries of the site; however, it seems to extend south and east of the investigated area. Three phases of activity were identified at the site.

The remains from the earliest phase consisted of at least two pits that were dug and lined with mud bricks: a large elliptical pit (L116/L136; diam. 4 m , thickness of mud-brick lining $0.25-0.30 \mathrm{~m}$, preserved height 0.9 m ) in the center of the excavation and a pit that was probably elliptical (L139; min. thickness of mud-brick lining 0.4 m , preserved height c . 0.6 m ) in the northwestern part of the excavation area. Pottery and stone vessels, as well as flint implements (Fig. 3), were found on the bottom of the pits; the artifacts in Pit 139 included a concentration of grinding stones. A section of a mud-brick wall (W3; length c. 4 m , width c. 0.3 m , preserved height 0.3 m ) was exposed southeast of the pits. Since no evidence of the pits' roofing was found it seems that perishable materials, such as branches of bushes or trees, were used for this purpose.

The lined pits were sealed with a rich habitation level (Loci 106-108, L122), which was overlain with a concentration of stones that could be the remains of installations, as well as fragments of pottery and stone vessels and flint tools. The habitation level reflected continuous and prolonged activity that transpired in an open area. A secondary burial of a child, five to ten years of age (L135; Fig. 4), was interred in this level (L106) and ascribed to the latest phase at the site.


1. Location map.

2. General view of excavation, looking northeast.

3. The bottom of Pit 116, looking south.

4. Secondary burial, looking west.

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Metulla
Final Report
Yardenna Alexandre


1. Plan and section.

2. Vat 101 in the section, looking northwest, treading floor is visible above plaster; three rows of stones at bottom of photo are modern.

3. Aerial view of mosaic floor in Vat 101, looking east.

4. The incense altar.

During October 2002, a small excavation was conducted in the garden behind a private house in Metulla (Permit No. A-3754; map ref. NIG 25441/79759; OIG 20441/29759), in the wake of damage to antiquities caused by a backhoe. The excavation, on behalf of the Israel Antiquities Authority, was directed by Y. Alexandre (surveying, photography), with the assistance of E. Belashov (drafting), H. Tahan (drawing) and Y. Stepansky (archaeological inspector of the Eastern Galilee district).

Previous small-scale excavations in Metulla exposed two rock-cut burial caves dating to the Roman-Byzantine periods ('Atiqot 8:26-30 [Hebrew]). Rock-hewn installations, possibly winepresses, are still visible in the vicinity. This area of limestone rock seems to have been exploited for agricultural processing and as a cemetery in the Roman and Byzantine periods. It was probably located adjacent to a contemporary settlement that had not yet been uncovered. To the northwest of Metulla, at Kh. Aryaq on Har Zefiya (map ref. NIG 2537/7979), a monumental Greek inscription on a marble fragment was observed (HA 51-52:1 [Hebrew]). This fragment may once have been part of a lintel stone from a Roman-period temple or an administrative building.
The excavation focused on cleaning out the part of the damaged winepress that was visible in the section. At the time of the original earthworks a small limestone incense altar was discovered in one of the winepress' collecting vats.
The winepress consisted of a treading floor and two collecting vats (Fig. 1). The damaged treading floor, paved with white mosaic and visible in the section, was not excavated as it extended into the neighboring plot. The two collecting vats were adjacent to each other and seem to have had similar dimensions (L101-1.0 $\times 1.5 \times 1.6 \mathrm{~m}$; L102- $0.8 \times 1.4 \times 1.6$ $\mathrm{m})$. Only the area of the vats visible in the section was exposed and cleaned. The walls of Vat 101 may have been partially rock-hewn, but they were lined with small stones set in mortar and covered with a layer of plaster (Fig. 2). The rock-cut floor sloped down on the west to form a depression at the bottom, c. 0.12 m lower than the rest of the floor, for the settling of the residue. The floor was paved with large white tesserae (Fig. 3). The base of the walls at the joint with the floor was rounded with plaster. Only a small area of Vat 102 was excavated, exposing a wall built of small stones in mortar, but no plaster was extant. Sporadic and non-diagnostic potsherds were collected in the excavation, datable to the Byzantine period.

The small incense altar was found in the fill of Vat 101 when the earthworks were carried out. The house owners exhibited the altar in the vat until the IAA took it for examination. The altar $(0.21 \times 0.15 \mathrm{~m}$, height 0.3 m ; Fig. 4) was of soft white limestone and had a stepped decoration in relief. A circular depression (diam. 0.1 m ) on the altar surface was used for the burning of incense. This small incense altar was obviously not in situ in the fill of the collecting vat and may have been thrown in once the winepress went out of use. It is possible that the altar originated in the pagan temple at Kh. Aryaq, on the nearby Har Zefiya. Unfortunately, the site was subject to extensive earthworks that left no remains of the once thriving temple.
A large (height 0.7 m ) altar with a similar stepped relief was found at Megiddo, within the Roman military camp of Legio (Permit No. A-3417).

The excavation exposed part of a small mosaic-paved winepress, which was one of several agricultural processing installations visible in this vicinity. It seems that this area was the margins of a contemporary Roman-Byzantine settlement that had not yet been uncovered. The incense altar may be a stray find of a pagan temple that once stood on Har Zefiya.


1. Plan and section.

2. Vat 101 in the section, looking northwest, treading floor is visible above plaster; three rows of stones at bottom of photo are modern.

3. Aerial view of mosaic floor in Vat 101, looking east

4. The incense altar.

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## Mezad Tamar Quarry, Survey

## Final Report



1. Survey map.

2. Mezad Tamar, looking north.

3. Site A1, looking north.

4. Site E3, elliptical buildings looking north.

5. Site H, road, looking north

Oren Shmueli and Emil Aladjem
During January 2007, a survey was conducted at the Mezad Tamar quarry in the northern Negev hill country (Permit No. A-5007; map ref. NIG 2220-45/5480-500; OIG 1720-45/0480-500), prior to expanding the quarry. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel Lands Administration, was directed by O. Shmueli and E. Aladjem, with the assistance of S. Gal (GPS). Additional assistance was rendered by the Yahel Engineers Company and the Gat Geology Company.

The survey area ( 2.5 sq km ) extends north and east of Mezad Tamar and Highway 25 (Dimona-Ha-'Arava junction), between the tributaries of Nahal Peres and Nahal Tahmas. It includes two modern quarries-an abandoned quarry in the southern part of the area and a working quarry in its northwestern part. Seventeen sites that had not been previously known were documented in the survey; most of the sites were located in clusters (Fig. 1).

Mezad Tamar, which was built in the Roman period (The New Encyclopedia of Archaeological Excavations in the Holy Land, 4, Jerusalem, pp. 1437-1440; Fig. 2), is located in the southwestern corner of the survey area. The stronghold overlooks the road that led from Moab and Kikar Ha-Yarden to Mamshit and onward to Gaza during the Roman and Byzantine periods.

Cluster A. Two sites were located in a wadi channel, 2 km northwest of Mezad Tamar

1. Two walls that formed a corner, which probably enclosed an open courtyard ( $10 \times 12 \mathrm{~m} ;$ Fig. 3). The walls (width 0.7 m ) were built of medium-sized fieldstones $(0.3 \times 0.4 \mathrm{~m})$.
2. Several small stone heaps and a wall that delimited a small horseshoe-shaped enclosure (length 1.5 m ) were preserved southeast of the walls.

Cluster B. Two sites were located c. 1 km north of Mezad Tamar:

1. A row of stone heaps (diam. 1.5 m ) arranged c. 10 m apart, along a north-south axis.
2. Several stone heaps (diam. 1 m ) and three buildings that extend across an area of c .0 .5 dunam in a wadi channel. One of the buildings was round (diam. 2 m ) and its wall was made of medium size fieldstones $(0.3 \times 0.3 \mathrm{~m})$. The other two structures were built rectangular ( $0.5-1.0 \times 2.0 \mathrm{~m} ; 0.5 \times 4.0 \mathrm{~m}$ ) and one of them was missing the long wall that faced north. Cooking pot sherds that dated to the Roman and Byzantine periods and potsherds from the Ottoman period were gathered at the site. The rectangular buildings may have been erected in the Ottoman period and were used as open air mosques.

Cluster C. Two sites of low stone heaps scattered over an area of 150 sq m were documented c. 250 m northwest of Mezad Tamar. Six heaps were surveyed in the northwestern cluster (C1) and eight heaps in the southeastern one (C2). The heaps consisted of a single layer of medium-sized fieldstones $(0.4 \times 0.4 \mathrm{~m})$.

Cluster D. Two sites were found c. 500 m northeast of Mezad Tamar.

1. Low heaps of medium-sized stones arranged in an elliptical shape (tombs?; $1 \times 2 \mathrm{~m}$, height 0.3 m ). Several cooking vessels from the Roman and Byzantine periods were scattered among the heaps. A concentration of flint items that dated to the Neolithic period was located close to the stone heaps.
2. Seven elliptical buildings ( $1 \times 2 \mathrm{~m}$ ) arranged in a circle. Their walls (preserved height 0.4 m ) were built of medium-sized fieldstones ( $0.3 \times 0.4 \mathrm{~m}$ ).

Site E. A concentration of four sites was identified c. 1 km . northeast of Mezad Tamar.

1. Terraces (length 3 m , height 1 m ) that consisted of stone heaps were built across a wadi channel. It seems that they were used until the modern era.
2. Two natural caves in the southern cliff of the wadi channel were adapted for storage use (granaries?); the opening to the western cave was blocked with fieldstones. It seems that the caves were used until recently. A courtyard surrounded by a fieldstone-built wall (length c. 3 m , height c. 0.5 m ) was located close to the opening of the eastern cave.
3, 4. Three elliptical buildings (max. diam. c. 6 m; Fig. 4) were located c. 100 m east
of Site E1 and two similar elliptical buildings were situated c .100 m west of it. The walls
of the buildings (width 0.7 m ) consisted of medium-sized fieldstones $(0.3 \times 0.4 \mathrm{~m})$ and survived 0.4 m high. A terrace complex was located near the two groups of
buildings. The potsherds scattered between the building remains in the
two groups included fragments of cooking pots from the Roman and Byzantine periods.
Site F. Twelve heaps of small fieldstones (diam. c. 2 m , height c. 0.3 m ; size of fieldstones $0.2 \times 0.2 \mathrm{~m}$ ), arranged in a circle, extended across an area of c. 1 dunam, c. 1 km northeast of Mezad Tamar.

Cluster G. Two sites were located in a wadi channel, c. 1.2 km northeast of Mezad Tamar.

1. A building that consisted of a central elliptical unit $(6 \times 10 \mathrm{~m})$ with two elliptical rooms $(3 \times 5 \mathrm{~m})$ attached to its southern side. The walls (width 0.8 m ) were built of medium-sized stones $(0.4 \times 0.5 \mathrm{~m}$ ), preserved two courses high. The main unit, whose entry faced the southeast, was divided into two rooms $(2 \times 3 \mathrm{~m})$ that opened toward the center of the building. The entryways to the rooms, attached to the south of the main unit, faced east
2. Three farming terraces (length $6-10 \mathrm{~m}$ ) were built in the wadi channel c. 50 m south of the building. Fragments of cooking pots from the Roman and Byzantine periods were found scattered across the terraces.

Site H. A field road (width 2.0-2.5 m; Fig. 5), oriented east-west and cleared of stones, extended c. 800 m northeast of Mezad Tamar. The road led from the wadi channel to the hilltop.

Site I. A cluster of stone heaps ( $1.0 \times 1.5 \mathrm{~m}$, height 0.2 m ) and a circular building (diam. 1 m ) on a saddle near the hilltop, c. 1.2 km east of Mezad Tamar.

It seems that most of the activity in the surveyed region should be ascribed to the Roman and Byzantine periods, when a government stronghold operated in the area and defended the main road. Agricultural activity was conducted on the farming terraces in the vicinity of the stronghold and dwellings were founded nearby; the activity that transpired in the area was probably seasonal. Some of the sites - buildings, stone heaps and roads - cannot be dated, but they are characteristic of the Negev hill country.


Survey boundary בובו שטח הטקר -_

1. Survey map.

2. Mezad Tamar, looking north.

3. Site A1, looking north.

4. Site E3, elliptical buildings, looking north.

5. Site H, road, looking north.

# (Volume No. HA-ESI 121 (2009 <br> Midrakh ‘Oz, Khirbat el-Khishash, Survey <br> Final Report 



1. The survey map.

2. Site 287, tesserae, cubes of roof tiles and production fragments of basalt vessels.

3. Site 548, a threshold and lintels, looking south.

4. Site 240, a cave opening. looking west.

5. Site 83, two tethering installations, view from above.

## Yotam Tepper

 22/9/2009During April-May 2006 and 2007, two archaeological surveys were conducted at Khirbat el-Khishash (Permit Nos. A-4775, A-5090; map ref. NIG 21495-550/72270-337; OIG 16495-550/22270-337), prior to expanding Moshav Midrakh 'Oz. The surveys, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Yair Rahamim and Peled Klein Companies, were directed by Y. Tepper, with the assistance of F. Abu Zidan and A. Shapiro (GPS), M. Zoabi (antiquities inspection) and J. Neguer and R. Abu Diab (mosaics).
Khirbat el-Khishash is situated on the fringes of Ramat Menashe, along the western border of the Jezre'el Valley, east of Tel Bar and north of Tel Midrakh 'Oz. The site was documented in the Archaeological Survey of Israel (Map of Mishmar Ha-Emeq [32], Site 121) as a ruin from the Ottoman period, located on a hilltop. Remains of buildings, stone heaps, quarries, installations and ceramic artifacts from the Late Roman and Byzantine periods were found on the slopes of the hill and the surveyors suggested that a farmhouse had existed on the site during these periods.
Approximately one thousand antiquities sites were documented in the survey of the hill and its slopes (c. 500 dunams; Fig. 1). These included walls that delimited plots, stone heaps, remains of ancient and modern buildings, a field tower, a road, as well as hundreds of rock-hewn installations, only partly identified, including ashlar stone quarries, cupmarks, basins, winepresses, crushing and tethering installations. The ceramic finds collected in the survey dated to the Roman, Byzantine and Ottoman periods. The most important finds are described below (Only sites described in the text are marked in Fig. 1).

The Ruin (297) extends across c. 5 dunams on the hilltop. Remains of a modern building, surrounded by concentrations of large ashlar stones $(0.30 \times 0.40 \times 1.95 \mathrm{~m} ; 0.35 \times 0.55 \times 1.30 \mathrm{~m})$ and stone clearance heaps $(287,453)$, were found. Various finds were dispersed in the area of the ruin, including roof tiles; a large quantity of various size, square and rectangular tesserae (Fig. 2); industrial tesserae that bear the remains of plaster, which point to their use in an installation that was not located; ceramic squares $(2 \times 2 \mathrm{~cm})$ cut from roof tiles and worked basalt stones of different sizes. It seems that all these were used in the paving of buildings or installations. Dozens of tesserae of different types and sizes were counted in a 50 sq m area at Site 683; most were prepared from indigenous limestone rock and roof tiles. This concentration indicates that the tesserae were produced on site or they originated from a building or a large installation that was not found. The ruin is surrounded by caves and different installations, including a hewn basin (303) to the south of the ruin and a cist grave (300) to its west. Numerous ashlar stone quarries (see below) were documented on the northern and eastern slopes of the hill and potsherds that dated to the Roman, Byzantine and Ottoman periods were collected.

The Farmhouse (Site 548; $20 \times 30 \mathrm{~m}$ ) was built along a shoulder of the hill's northern spur. The northern and eastern walls, built of large ashlar stones, had survived of the structure. Remains of the opening in the center of the northern wall consisted of a threshold stone (length c. 1.5 m ), a lintel and other ashlar stones nearby (Fig. 3). A cistern (549) was discerned in the middle of the building and concentrations of building stones and stone clearance heaps $(538,699)$ were found west and south of the farmhouse. Fragments of pottery vessels from the Late Roman, Byzantine and Ottoman periods and industrial tesserae, bearing remains of plaster, were recorded in the area of the building. A large cave that was partially collapsed (520) and a round structure ( 605 ; diam. c. 10 m ) were close to the building, to whose south and east was a concentration of installations, including a hewn elliptical surface (584; $10 \times 12 \mathrm{~m}$ ), a cave (553), a hewn channel (591), a bodeda (647), cup marks (598, 610), tethering installations and ashlar stone quarries. North of the building was a tiny winepress and next to it were tethering installations and cupmarks (536), a rock-hewn game board (532), another tethering installation and ashlar stone quarries.

Buildings. A stone heap (269) on the northern part of the spur, which included a number of large fieldstones that were probably the remains of a dismantled ancient building, as well as a field tower ( $270 ; 3.8 \times 3.8 \mathrm{~m}$ ) whose opening was on the southern side, were documented. Near the buildings werequarries and a few potsherds from the Byzantine period.

Caves. Twenty-one caves (1, 6, 18, 56, 85, 98, 105, 179, 186, 240, 247, 275, 327, 402, 421, 422, 461, 521, 553, 565, 648), mostly discovered filled to their openings, were documented. Two of the caves were used for dwelling and storage until the present period and two others ( 6,240 ; Fig. 4) were identified as burial caves from the Byzantine period, according to their plans.

Winepresses, Extracting Installations and Bodedot. Seventeen winepresses were located on the hill, among them a large winepress (61) with a large treading floor ( $3.5 \times 3.5 \mathrm{~m}$ ), a hewn recess for the press screw and a deep collecting vat $(1.7 \mathrm{~m})$. The rest of the winepresses ( $35,36,68,110,157,160,168,177,219,264,321,333,353,405,420,554$ ) were simple installations with mostly irregular treading floors and cupmarks, often located nearby. The relatively small collecting vat is usually next to the wide side of the treading floor (e.g., 157; Fig. 5). Simple winepresses with an elliptical treading floor (diam. c. 1 m ) and a collecting vat were located alongside buildings (309, 310, 536). Bodedot and tiny extracting installations $(536,609)$, one of which was hewn in the treading floor of Winepress 61 , were also recorded.

Olive Press-like Crushing Installations were present in the eastern (37)and northern parts (101) of the hill, close to other installations, such as winepresses, rock cuttings and tethering installations.

Cupmarks. Sixty-one cupmarks were documented, excluding those located alongside winepresses. Most were conical and had various diameters (depth 0.3 m ) and a few were elliptical and shallow (e.g., 406). One of the cupmarks (647; diam. 0.26 m ) was used as a collecting vat of a bodeda and in another ( 435 ; diam. 0.27 m ) a tethering installation was hewn, negating the object's use as a cupmark. Unidentified flint flakes were found while cleaning Cupmark 393. Seven clusters that included 2-5 cupmarks (a total of 26) were documented. Some were hewn in an obvious array, e.g., four cupmarks (average diam. 0.17 m ) arranged in a square (50; Fig. 6) and five cupmarks ( 477 ; diam. 4-9 cm) arranged in an arch that extended along a bedrock terrace. Another cluster (598) consisted of four cupmarks, three large (diam. $0.23-0.25 \mathrm{~m}$ ) and one small (diam. 8 cm ).

Rectangular Rock-cuttings. Five rock-cuttings (136, 139, 268, 308, 374; max. length per side 0.3 m , depth c. 0.2 m ) that may have been used to stand wooden beams were identified. A group of sixteen rectangular installations (337, 344, $346,430,440,442,443,444,541,559,560,587,588,615,637,694$; max. length per side 0.6 m , depth c .0 .3 m ) was recorded. It had been suggested in the past that these were used as planting holes or vats for collecting rainwater because they were located alongside concentrations of tethering installations (e.g., 430; Fig. 7).

Tethering Installations. Some 360 tethering installations were identified; some were single units (289), some in pairs (83; Fig. 8) and some in clusters (111-122). These installations can be divided into four types according to the lengths of their perforations: short ( 516 ; length c. 0.15 m ), medium ( 10 ; length c. 0.25 m ), long ( 326 ; length c. 0.35 m ) and very long ( 550 ; length c. 0.45 m ). The perforations in the group of long tethering installations were cut in either a round (65) or square (454) shape. The tethering installations were hewn in isolated bedrock outcrops (552), near winepresses and installations ( $97,98,311$ ), in the sides of quarries $(90,98)$, in the upper part of bedrock terraces $(248,250)$, alongside
natural depressions (122) and even in cupmarks (435). The tethering installations were grouped in clusters of several dozen rock-cuttings, which were concentrated in a number of compounds near installations. Given this distribution, they were apparently used in agricultural activity, possibly for tethering and trellising crops, such as grapes, as opposed to the accepted theory that claims they were used to tie animals.

Quarries. Approximately 330 quarries were discovered, mostly at the top of the spur and on the northern and eastern slopes. Three types of quarries could be discerned: several lines of rock-cuttings and quarrying attempts that were incomplete; small quarries for a single stone and large clusters of quarries (diam. in excess of 5 m ). Several quarries of the first two types were found on the northern spur and on the western and southern slopes. Rather large ashlar stones $(0.5 \times 0.5 \times 0.7 \mathrm{~m})$ were mostly hewn in the quarries. The stones $(0.40 \times 0.40 \times 0.65 \mathrm{~m})$ in Quarry 249 , enclosed by wide, deep severance channels (width c. 0.12 m , depth up to 0.6 m ), were in the process of being hewn.

Crosses. Eight bedrock-engraved crosses (length per side c. 0.25 m , depth and width of the stone carving c. 2 cm ; Fig. 9) were documented; six were on the western slope and two-on the eastern one. The crosses were carved on bedrock surfaces $(7,398,509)$, near winepresses $(335,368)$ and near caves $(336,403,670)$. It is possible that the crosses were meant to designate ownership of cultivation plots or their boundaries.

Stone Fences and Enclosure Walls. Hundreds of meters of enclosure walls, built of medium and large fieldstones, were documented; sometimes stone clearance was placed on top of them. The walls crossed some of the quarries and the installations and several walls blocked cave openings. An enclosure wall was built on top of an earlier wall, probably from the Byzantine period, within the precincts of the farmhouse (548). An extensive system of enclosure walls was discerned on the northern spur, including a wall that ran for a distance of 600 m in a north-south direction and was abutted by walls from the east and west, which divided the hill area into large plots. Another system of walls was noted around the modern building at the top of the hill. The road that crosses the hill along the eastern and western slopes passed through the northern part of the enclosure. Plots were arranged along the road, including olive groves. Therefore, it seems that the system of enclosure walls was set up during the previous century.

Limekiln (159). This installation, possibly dating to the previous century, was discovered on the eastern slope of the hill.
Ruins and Modern Buildings. About 25 stone heaps and ruinous buildings, constructed from stone and reinforced with concrete, were documented in the survey. Large structures were built at the top of the hill and occasionally, along the northern and southeastern slopes. Stones in secondary use, including architectural elements (172, 196, 225, 286), were found in the stone heaps and it is thus assumed that they superposed ancient remains.

The finds of the survey indicate that the hill was used as a quarry in the first phase, mostly on the eastern slopes that face the Jezre'el Valley and the main road in the region. Later, the slopes of the hill were utilized for cultivation. It seems that this process reached its zenith in the Roman and Byzantine periods, when farmhouses were built on the hilltop and where tesserae were probably produced. The location of the hill next to the important Roman road from Legio to Ptolemais and its proximity to Geva (Mishmar Ha-'Emeq) and Maximianopolis (Legio) explains the extensive activity that transpired there. During these periods, the surface of the hill was apparently planted with large vineyards that utilized a unique trellising method, as attested to by the winepresses and the adjacent concentrations of tethering installations, scattered throughout the entire hill. In a later phase, probably during the Ottoman period and the time of the British Mandate, enclosure walls divided the area into cultivation plots where olive trees were planted; stone clearance was piled up; buildings were constructed and between them, a rural road was paved. A Turkeman population resided in this region during the twentieth century CE and it can reasonably be assumed that the buildings and the remains of agricultural activity belong to the site of Khirbat el-Khishash, whose name (Horbat Ha-Hushot) reflects the hill, dotted with building remains.


1. The survey map.

2. Site 287, tesserae, cubes of roof tiles and production fragments of basalt vessels.

3. Site 548, a threshold and lintels, looking south.

4. Site 240 , a cave opening, looking west.

5. Site 157, a winepress, looking east.

6. Site 50, a group of cupmarks, view from above.

7. Site 430, a rectangular rock-cutting, view from above.

8. Site 83 , two tethering installations, view from above.

9. Site 509, an engraved cross, view from above.

# (Volume No. HA-ESI 121 (2009 

Migdal
Preliminary Report


1. Strata II and III, plan.

2. Stratum III, elongated building, looking south.

Dina Avshalom-Gorni
During April 2006, a trial excavation was conducted along the northwestern fringes of Migdal, at the 'Recital Beach' on the shore of the Sea of Galilee (Permit No. A-4726; map ref. NIG 248663-96/747629-64; OIG 198663-96/247629-64; ES/ 13:28, ES/ 16:34-35) in the wake of a project to replace the salt-water carrier. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Meqorot Water Company, was directed by D. Avshalom-Gorni, with the assistance of A. Mokary and H. Bron (area supervision), Y. Ya‘aqoby (administration), A. Hajian (surveying), H. Smithline (field photography) and N. Getzov (guidance).
The site is situated along the western shore of the Sea of Galilee, c. 4 km north of Tiberias. The current excavation was carried out c. 500 m south of a previous excavation ('Atiqot 42:9*-25* [Hebrew]) that exposed remains from the Byzantine and Early Islamic periods.
The excavation area (c. 120 sq m ) revealed settlement remains from the Hellenistic, Early Roman and Late Roman periods.

## Stratum I: The Hellenistic period

Finds from this period were exposed throughout the excavation area in a layer of small-medium sized pebbles, which is characteristic of the northern shore of the Sea of Galilee. The foundations of buildings that consisted of large unworked stones were discovered. The southwestern corner of a building (W234, W235; Fig. 1) was exposed at the northern end of the excavation area. The corner of another building was revealed in the southern part of the excavation area.
Fragments of imported pottery vessels, such as Eastern Terra Sigillata and Rhodian amphorae, as well as locally produced pottery, dating to the Hellenistic period, were attributed to this stratum.

## Stratum II: The Early Roman period

Building foundations of natural unworked stones were exposed. These were preserved two to three courses high and building stone collapse was found near them.
The ceramic finds ascribed to this stratum included fragments of pottery vessels that dated to the Early Roman period including storage, cooking and serving vessels, the overwhelming majority of which were produced in local workshops. Other artifacts included fragments of stone bowls and glass vessels, as well as coins.

## Stratum III: The Late Roman period

Buildings, which were founded on top of wall foundations and the collapse layer from the Early Roman period (Stratum II) and maintained the same building alignment, were exposed. The walls were built of roughly hewn basalt stones and survived two courses high above the rooms' floors. Two building complexes in the south and north, separated by an east-west oriented alley, were uncovered.
The northern end of an elongated building (W232, W240, W222; Fig. 2) was exposed in the southern complex. It consisted of a courtyard, paved with basalt flagstones and enclosed within W252 in the north, W222 in the west and W244 in the south; a passageway from the courtyard led to a room, enclosed within W223 in the north and W222 in the east, which was paved with plaster and tamped earth.
Three buildings, a storehouse; a building with installations; and another building, were exposed in the northern complex. The storehouse was a square structure (W203, W206, W212), partitioned by Wall 204. A carefully tamped gray plaster floor (thickness c. 0.2 m ) was well preserved in the southern room and six complete store jars were found in situ above it. All that remained of the second building was its southwestern corner (W205, W227). Three steps built of roughly hewn stones, which led to the roof of the building or to a second story, were uncovered in the western side of the corner. A circular and a square installation, connected by an opening, were exposed next to W227. A poorly preserved floor of plaster and tamped soil was exposed in the space between W203 and W227. A number of roughly hewn basalt beams that were probably used to support the roof of the building were found in situ on top of this floor.
Another building (W229, W250), which included two rooms with tamped-plaster floors, was discovered at the northern end of the excavation area.
The artifacts attributed to this stratum comprised pottery vessels, including jars, cooking vessels and serving vessels that were all manufactured in local workshops, as well as fragments of glass vessels, coins, clay lamps, lead fishing weights, a large basalt basin and a basalt millstone.

A preliminary examination of the excavation findings shows that the settlement at the site had begun in the Hellenistic period (second-first centuries BCE), continued uninterrupted throughout the Early Roman period (mid-first century BCEbeginning of second century CE) and ended in the Late Roman period (third century CE).
The ceramic finds indicate that during the Hellenistic period, pottery vessels were locally produced, as well as imported. The pottery vessels in the Roman period included no imported vases and were similar to those produced in the workshops of Kefar Hananya, which is mentioned in Jewish sources. Fragments of limestone measuring cups were found together with these vessels. These finds seem to corroborate the historical sources that listed Migdal as a Jewish settlement.
The finds from this excavation and from previous excavations at the site underline the historical sources from the Second Temple period, regarding the existence of a large settlement named Migdal Taricheae. The collapse layer, which dated to the Second Temple period (Stratum II) further substantiated Josephus' story about the destruction of the city in the Great Revolt. The results of the excavations indicate that during the Byzantine and Early Islamic periods, the settlement was located further north and did reach the current excavation area.


1. Strata II and III, plan.

2. Stratum III, elongated building, looking south.

## (Volume No. HA-ESI 121 (2009

## Mi'ilya, the Church Square

 Preliminary Report
## Leea Porat



1. The excavation area.
looking south.

2. The channel, looking north.

During July-August 2007, a salvage excavation was conducted in the village of Mi ilya, between the Catholic Church and the Crusader fortress on the eastern hill (Permit No. A-5202; map ref. NIG 22471-2/76993-4; OIG 17471-2/26993-4), prior to construction in the church square. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Mi'ilya local council, was directed by L. Porat, with the assistance of Y. Ya'aqobi (administration), A. Grishna (registration), A. Hajian and M. Kipnis (surveying and drafting), A. Shapiro (GPS), H. Smithline (field photography), M. Hartal (guidance) and laborers from Kafr Manda. The author wishes to express her gratitude to A. Yassur, E.J. Stern and N. Getzov for their valuable assistance in reading the ceramic artifacts.

The eastern part of the Míilya village is located on top of an ancient tell at whose summit stands a Crusader fortress (Castellum Regis) from the twelfth century CE. A survey conducted in the village and its surroundings recorded potsherds from the Middle Bronze, Late Bronze and Iron Ages, as well as from the Hellenistic, Roman, Byzantine, Crusader, Mamluk and Ottoman periods (IAA Reports 14: Site 161).

One square was opened and excavated to bedrock, revealing four archaeological strata that dated to the Late Bronze Age, Iron Age and the Crusader period (Fig. 1).
Stratum IV. The bedding of a floor, built of medium and large stones and overlain with the scant remains of a wall, was exposed above bedrock (chalk; depth below surface 2.35 m ). A floor of tamped chalk, overlaid with animal bones and numerous fragments of pottery vessels that dated to the Late Bronze Age, was discovered above the stone bedding.
Stratum III. Two construction phases were identified. The first phase consisted of a channel that was covered with stones (length 5.3 m , width 0.5 m ; Fig. 2) and sloped down to the south, splitting off into two branches. The sides of the channel were built of medium and large stones that were not always close to each other and its floor was tamped yellow soil. The channel was built over soil fill in the northern part of the area and its southern part was founded on the stone floor of Stratum IV; its decline was more moderate. A floor of crushed and tamped chalk abutted both sides of the channel at the level of the covering stones. This floor was overlaid with animal bones and numerous fragments of pottery vessels, dating to the Late Bronze Age.
A wall (length 4.8 , min. width 1 m , height 0.7 m ) that was partly exposed in the eastern section of the excavation area was ascribed to the second phase of this stratum.
Stratum II. A slightly curved wall (length 4.8 m , width 0.9 m , preserved height c .1 m ), partly built on the wall of Stratum IV, was exposed. A tamped earth floor in the southwestern corner of the square abutted the wall and above it were the remains of a square oven that was built of medium-sized stones and mud bricks. The ceramic finds dated to the Iron Age. Stratum I. A pit $(3.0 \times 4.5 \mathrm{~m}$, depth c. 0.8 m$)$, which was dug into the earlier strata and severed floors, walls and the covering stones of the channel that was ascribed to Stratum III, was exposed. The pit contained large stones, animal bones and fragments of pottery vessels from the Crusader period, particularly large fragments of amphorae, as well as fragments of glazed bowls that dated to the twelfth century CE.


1. The excavation area, looking south.

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Mishor Yamin, Survey

## Final Report



Flavia Sonntag and Nir-Shimshon Paran
During February-March 2007, an archaeological survey was conducted in the southern part of Mishor Yamin, extending south of the nuclear reactor in Dimona (Permit No. A-5063; map ref. NIG 20860/54280; OIG 15860/04280), prior to the construction of a solarpower station. The survey, undertaken on behalf of the Israel Antiquities Authority and funded by the Rotem Industries Company, Ltd., was directed by F. Sonntag and N.S. Paran, with the assistance of S. Gal (GPS).
The survey was carried out along a very narrow strip (length c. 7.5 km , width c. 20 m ), running the length of a trail that crosses Mishor Yamin from north to south and for a distance of c. 4 km along a route that branches off from the middle of the trail to the west and northwest (Fig. 1). Five sites were identified in the northern part of the eastern survey strip, including two scatterings of flint implements and potsherds (each $50 \times 50 \mathrm{~m}$; Fig. 1:2, 5); a structure, two tombs and a cairn with potsherds from the Chalcolithic period ( $40 \times 40 \mathrm{~m}$; Figs. 1:3; 2, 3); a cairn ( $20 \times 20 \mathrm{~m}$; Fig. 1:4); and remains of a field wall and potsherd scattering that dated to the Iron Age and Byzantine period ( $30 \times 30 \mathrm{~m}$; Figs. 1:1; 4). It was impossible to study the settlement patterns of the region due to the limitations of the survey area.


Nine sections (length of each 20-500 m, width 2.6 m ) of a fieldstone-built road with dressed curbstones were identified along a route, c. 6 km long; the northern end of the road was destroyed by modern quarrying. This is the Mamshit-Ma'ale 'Aqrabim road that was paved during the British Mandate (Fig. 5). Although sections of the road were dirt, it was built of stones in places where it crossed streams and sandy areas (Figs. 6, 7). The crumbling remains of a chalk milestone (Figs. 1:6; 8) were found alongside the road.
3. Site 3, tomb, looking southwest.

5. The Mamshit-Ma'ale 'Agrabbim road; map dating to 1946.

6. Remains of road that crossed Nahal Yamin. looking north.


2. Site 3 , building remains, looking south.

3. Site 3, tomb, looking southwest.

4. Site 1, field wall, looking south.


Road
5. The Mamshit-Ma'ale 'Aqrabbim road; map dating to 1946.

6. Remains of road that crossed Nahal Yamin, looking north.

7. Southern section of road, looking south.

8. Remains of milestone.
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## Mizpe Ramon

Final Report


1. Plan.

Emil Aladjem
29/7/2009
During September 2004, a salvage excavation was conducted within the precincts of the Ramon Marble Quarry north of Mizpe Ramon (Permit No. A-4254; map ref. NIG 18075/50485; OIG 13075/00485). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ramon Marble Quarry, was directed by E. Aladjem, with the assistance of V. Pirsky (surveying).
Four squares were opened in a hilly region, within a round threshing floor (diam. 12 m ) that was built in a low spot between the hills. The southeastern part of the threshing floor was founded on a natural bedrock outcrop, whereas the northwestern part was built on alluvium that covered bedrock.

The threshing floor was built of indigenous undressed stones. The region is characterized by bedrock outcrops and numerous terraces, which due to natural weathering, provided a supply of building material. The threshing floor was delimited by a curved wall (W10), preserved two courses high. A rectangular platform (L106; length 2 m , width 1 m ) was adjacent to the wall on the west. Another semicircular installation joined the inside of the threshing floor (L101; diam. 1 m ). A wall (W13), which abutted the threshing floor on the south, was probably the remains of another installation that also joined W10. No archaeological finds were discovered.

The threshing floor is the sole remain of agricultural activity in the area of the quarry and no ancient settlements were discerned in this region. Threshing floors of this kind are known from the Negev Highlands and the region north of Makhtesh Ramon (S. Rosen 1994. Map of Makhtesh Ramon [204]; M. Haiman, 1999. Map of Har Ramon [203]. They date to the Byzantine and the Early Islamic periods and are characteristic of farmstead activities in the region.


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## Modi'in, Umm el-‘Umdan

Final Report
Tamar Lakichevic


1. Plan and section.

2. Column in cave opening, looking south.

3. Hearths, looking north.

4. Decorated potsherd.

During February 2007, a trial excavation was conducted in the Buchman compound (South), in Modifin (Permit No. A-5045; map ref NIG 200676/643788; OIG 150676/143788), following the exposure of a cave. The excavation, undertaken on behalf of the Israel Antiquities Authority and funded by the Ministry of Construction and Housing, was directed by T. Lakichevic, with the assistance of S. Ya'aqov-Jam (administration), A. Hajian and N. Zak (surveying and drafting), D.T. Ariel (numismatics), M. Peilstöcker, A. Re'em, R. Lupo, T. Kanias, A. Gorzalczany and Y. Elisha (IAA Central Region).

A karstic cave, used at the beginning of the Early Islamic period, was excavated at Kh. Umm el-'Umdan. East of the cave, a site from the Chalcolithic period was excavated (HA-ESI 119). Remains from the Hellenistic, Early Roman and Byzantine periods were excavated at Umm el-‘Umdan to the west (HA-ESI 114:64*-68*; $\underline{\text { HA-ESI }}$ 118) and a monastery and church were exposed at $\underline{H}$ orbat Hadat, to the south (HA 5:17-18 [Hebrew]). The rock formation in the region was used in antiquity for hewing rock-cut installations, quarries, caves and olive presses.

The elliptical cave ( $4 \times 5 \mathrm{~m}$; Fig. 1) had its opening in the north (width c. 2.5 m , height $0.5-1.0 \mathrm{~m}$ ). The ceiling slanted to the west (east side height 1.5 m , west side height 0.5 m ) and the southern part of its floor sloped to a depth c. 2 m (L108; ceiling height 2.5 m ). A column built of three large stones and standing 1 m high supported the ceiling in the western side of the cave, opposite the opening (Fig. 2).

The interior of the cave was covered with collapse that was devoid of finds. A level of soil below it had two hearths in its center (Fig. 3), one of which contained potsherds and a flint flake (L105) and in the other (L103) were tiny animal bones, possibly those of a bird. The potsherds were mainly ribbed body fragments, characteristic of the Byzantine and Early Islamic periods and a potsherd of a large jar with wavy decoration that prevail at the beginning of the Early Islamic period (Fig. 4). A Byzantine-Arab coin from the middle of the seventh century CE (IAA 111474) was also found.

It appears that the cave was used for some activities at the end of the seventh or the beginning of the eighth centuries CE.


2. Column in cave opening, looking south.

3. Hearths, looking north.


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## Modi'in, Horbat Be'erit

## Final Report



1. Location map.

2. Area A, Limekiln 5 and the stone collapse inside it, looking west.

3. Area A, Wall 3, looking northwest.

4. Pottery.

5. Area A, Limekiln 3, plan and section.

Ron Toueg
During November 2005 and February 2006, an excavation was conducted along the northern fringes of Horbat Be'erit (Permit No. A4633; map ref. NIG 20120-35/6427-34; OIG 15120-35/1427-34; Fig. 1), prior to paving Highway 1112 in Modi'in. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Netivē AyyalonCompany, was directed by R. Toueg, with the assistance of A. Hajian (surveying and drafting), T. Sagiv (field photography) and M. Shuiskaya (pottery drawing).
Horbat Be'erit (Khirbat el-Buweira) is named after the village well, the only one known in the Moditin hills. Clermont-Ganneau (1874) described architectural remains in the village and its environs, some of which were decorated with crosses; he dated them to the Byzantine period. Quarries, tombs and buildings from the Hellenistic, Roman and Byzantine periods were identified near the site; a farmhouse and installations from the Hellenistic period and a tomb from the Hellenistic-Roman periods were excavated (HA-ESI 118; HA-ESI 119; Permit No. A-4069). A church dating to the Byzantine period was discovered in nearby Horbat Hadat (Permit No. A-3816).

Two excavation areas were opened. Two limekilns, one of which probably dating to the Hellenistic period, were exposed in Area A, on the northwestern fringes of Horbat Be'erit; a hollow in bedrock that contained worn potsherds from the Hellenistic and Byzantine periods was excavated in Area B, east of Area A.

## Area A

A sloping bedrock terrace that formed a U-shaped enclosure was located on the upper part of the northern slope, at the bottom of the Horbat Be'erit hilltop. A limekiln blocked with stone collapse and a large boulder that had apparently rolled down the slope (Fig. 2) was discerned on the lower part of the bedrock terrace, c. 2.5 m from its top. The kiln (L5; outer dimensions $3.25 \times 5.30 \mathrm{~m}$, inner dimensions $1.6 \times 2.0 \mathrm{~m}$, depth 2.5 m ; Fig. 3) consisted of a wall that encircled a hewn pit. The wall was preserved three courses high in the north and west (W1, W5) and five courses in the east (W3; Fig. 4). It was founded directly on chalk bedrock and rested on large rocks to the south (W4). The dry construction of the wall used medium and large coarsely dressed stones, which were arranged in two adjacent rows that had straight faces. Small stones were inserted between the courses to stabilize them. The stones ( $0.4 \times 0.4 \times 0.6 \mathrm{~m}$ ) in the eastern part of the wall were larger than those in the western part $(0.2 \times 0.2 \times 0.3 \mathrm{~m})$. On the northern side was an opening, paved with coarsely dressed stones that were set on a bed of soil (thickness c. 0.2 m ). This may have been a vent for stoking or a wind tunnel that was meant to fan the flames of the fire because the predominant winds in the region are from the north.
The pit was lined with small and medium stones and its area gradually tapered toward the bottom (tapering to $0.4 \times 0.9$ m ). Burnt stones (L5) were discovered on the bottom of the pit, and below them were layers of ash and lime; hence, the installation has been identified as a limekiln. Two jug rims from the end of the Hellenistic period (third-second centuries BCE; Fig. 5) were found between the burnt stones, whereas no finds were discovered outside the kiln, except for a few jar fragments from the Byzantine period (sixth-seventh centuries CE) on surface. It seems that the kiln should be dated to the Hellenistic period, although it could have also been used in the Byzantine period.
A wall (W2; length 3.3 m ) whose end rested on the bedrock terrace to the east was identified east of Limekiln 5. The wall, haphazardly built of small fieldstones $(0.2 \times 0.2 \times 0.2 \mathrm{~m})$, was preserved five courses high. Alluvium, devoid of any finds, had accumulated south of the wall (L6).
A similar installation (L3; upper diam. c. 3.5 m , lower diam. 1.5 m ; Fig. 6) was partly excavated c. 50 m west of Kiln 5 , on the lower part of the terrace. Only the rock-hewn part of the installation, lined with small stones, was preserved, although it had been slightly damaged when the road was paved. It was found blocked with burnt stones that overlay ashes and a layer of lime (L3). It seems that this was another limekiln, even though no wind tunnel or stoking vent was identified and no potsherds or other datable finds were discovered.

## Area B

A hollow in bedrock was completely excavated c. 1 km east of Area A. A large quantity of small stones and small worn body sherds of pottery vessels were recovered from the hollow. Most of the potsherds dated to the Byzantine period (sixth-seventh centuries CE) and a few were from the end of the Hellenistic period (third-second centuries CE); no architectural remains or masonry stones were exposed. It seems that this was a topographical depression into which potsherds had been swept.


1. Location map.

2. Area A, Limekiln 5 and the stone collapse inside it, looking west.



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5. Pottery.


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## Natal 'Adarim

Final Report
Emil Aladjem


1. The eastern cave, plan.

2. The western cave and the animal pen enclosure wall, plan.

3. The cistern and the pool. plan.

4. The farming terrace, plan.

During July 2007, a salvage excavation was conducted in the region of Nahal 'Adarim, within the precincts of the Nevatim Air Force Base (Permit No. A-5189; map ref. NIG 202812-77/565566-714, OIG 152812-77/065566-714), prior to the expansion of the base. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by E. Aladjem, with the assistance of A. Hajian (surveying and drafting).

The site was discovered in a flat landscape area during a survey preceding the expansion of the base. The openings of two caves and a cistern, 50 m northeast of them, were excavated. A farming terrace located c. 100 m south of the caves was documented.

The Caves (Figs. 1, 2) are c. 20 m apart and their openings face east; an excavation square was opened in the entrance of each. The caves were coarsely hew and modern debris was found on their floors; it was not possible to reconstruct their complete dimensions. The remains of an animal pen enclosure wall, preserved a single course high (W10; length 3 m , width 0.3 m , height 0.1 m ), were excavated c. 1.5 m east of the entrance to the western cave. A layer of soil mixed with sheep droppings (thickness c. 5 cm ) was found within the enclosure.
The Cistern (Fig. 3) and a pool nearby were exposed. The cistern (depth 9 m ), which was hew in conglomerate bedrock, the pool that was used to collect the excess water, and the channel that connected them were coated with a layer of modern concrete. The cistern's ceiling was built of concrete and a square capstone within it, which had a square perforation $(0.5 \times 0.5 \mathrm{~m})$ in its center, was also made of poured concrete $(1 \times 1 \mathrm{~m}$, height 0.6 m$)$. The run-off and excess water were conveyed via a covered channel to the pool ( $1.5 \times 2.0 \mathrm{~m}$, depth 0.6 m ), located south of the cistern. Steps built in the southeastern corner of the pool led down to its floor, which consisted of fieldstones bonded with mortar, as was the channel. No archaeological finds were discovered. The cistern is still used today but the pool is covered with silt. Farming Terrace. The terrace, c. 100 m south of the caves, was preserved five courses high (length 13 m , preserved height 1.2 m ; Fig. 4). It was oriented east-west and built of medium and large fieldstones.

The caves, the cistern and the farming terrace were and are still used to date by local shepherds.


2. The western cave and the animal pen enclosure wall, plan.

3. The cistern and the pool, plan.


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## Nahal ‘Adasha

## Final Report

Mordechai Haiman


1. Location map and
antiquities sites.

2. Terrace 100, looking
south.

3. Wall 107, looking south.

4. Sites 108, 109, plan.

5. Wall 109, looking west.

During July 2006, a trial excavation was conducted in ancient farming areas along Nahal 'Adasha (Permit No. A-4845; map ref. NIG 21500/58535; OIG 16500/08535), following the planned construction route of the separation fence. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by M. Haiman, with the assistance of A. Hajian (surveying).
Terrace walls, stone heaps and fences that delimited cultivation plots were excavated along the course of c. $1,500 \mathrm{~m}$ on the slopes of both sides of Nahal 'Adasha (Fig. 1).

Terrace 100: A wall (length c. 9 m , width 0.3 m , height 0.3 m ) built of small fieldstones (max. length of stones 0.3 m ) that retained a strip of ground (width c. 0.7 m , depth $0.2-0.3 \mathrm{~m}$; Figs. 2, 3).

Terrace 101: A wall (length 2.4 m , width 0.3 m , height 0.4 m ) built of small stones that retained a strip of ground (width c. 0.6 m, depth 0.3 m; Figs. 2, 4).

Stone Heap 102 (diam. 0.8 m, height 0.5 m , max. length of stones 0.4 m ). The heap was situated atop a layer of natural loess (thickness 0.1 m ) that overlay bedrock (Figs. 2, 5).

Terrace 103: A wall (length 3.1 m ), preserved a single course high and built of a single row of small stones (max. length of stones c. 0.2 m ), which retained a strip of ground (width c. 0.4 m , depth c. 0.1 m ; Figs. 2, 6).

Terrace 104: A wall (length 2.6 m , width 0.2 m , height 0.35 m ) built of small stones that retained a strip of ground (width 0.6 m , depth 0.2 m ; Figs. 7, 8)

Stone Heap 105 (diam. 1.2 m , height 0.4 m ). The heap was situated atop a layer of loess (thickness 0.2 m ) that overlay natural bedrock (Figs. 7, 9).

Stone Heap 106 (diam. 1.2 m , height 0.5 m ) consisted of stones (length up to 0.4 m ) and was situated atop a layer of loess (thickness 0.2 m ) that overlay natural bedrock (Figs. 7, 10).

Wall 107 (width c. 0.7 m , height 0.2 m ) was built of a small pile of stones and delimited an area ( $30 \times 70 \mathrm{~m}$ ) that contained lines of terraces and stone heaps (Figs. 7, 11).

Terrace 108: A wall (length 2.0 m , width 0.2 m , height 0.2 m ) built of small stones (up to 0.2 m long) that retained a strip of ground (width 0.5 m , depth $0.1-0.2 \mathrm{~m}$; Figs. 12, 13).

Wall 109 (length 3.3 m , width 1.0 m , height 0.6 m ), built of large stones (max. length 0.6 m ), was probably a stone heap rather than a retaining wall (Fig. 12, 14).

Terrace 110: A wall built widthwise across the wadi channel (length 2.8 m , width 1.1 m , height 0.7 m ; Fig. 15).
Stone Heap 111 (diam. 0.9 m, height 0.4 m , max. length of stones 0.2 m ) was situated atop a layer of loess (thickness 0.25 m ) that overlay natural bedrock (Fig. 16).

Stone Heap 112 (diam. 1.3 m , height 0.6 m , length of stones $0.4-0.6 \mathrm{~m}$ ) was situated atop a layer of loess (thickness 0.2 m ) that overlay natural bedrock.

Wall 113 (width 0.8 m , max. length 0.4 m , preserved height c. 0.5 m ), which delimited an agricultural area on a slope (43 $\times 51 \mathrm{~m}$ ), was built of two rows of fieldstones and preserved two-three courses high.

Terrace 114 (length 6.6 m , width 0.6 m , height c. 0.2 m ) is a wall situated atop natural bedrock (Fig. 17).
Stone Heap 115 (diam. 3.3 m , height 1.2 m , length of stones $0.1-0.2 \mathrm{~m}$ ) is situated atop a layer of loess (depth 0.25 m ) that overlay natural bedrock (Fig. 18).

The antiquities sites are located in the midst of agricultural complexes on the slopes of both sides of Nahal 'Adasha. The complexes included fences that delimited farmland ( $30-60 \times 60-70 \mathrm{~m}$ ), which contained shallow terraces, small and large stone heaps and lines of walls. Similar complexes that also included monasteries, churches and square watchman's huts were found in the Shephelah (the Yattir region) and in the northern Negev (see M. Haiman, 2007, The Agricultural Landscape of the Yattir Region from the Sixth to Eighth Centuries CE - Ethnic and Economic Aspects, Judea and Samaria Research Studies, Vol. 16, pp. 131-146 [Hebrew]). Two square watchman's huts (not excavated) were discovered near the Nahal 'Adasha excavations, c. 3.5 km from the Horbat Qeriyyot monastery. The excavations of similar agricultural complexes in the Yattir region revealed that they were located near industrial winepresses. This is the case of the agricultural complexes in Nahal 'Adasha as well; c. 500 m to their north, near Horbat Merkaz, an industrial winepress with a large collecting vat (capacity of 6,000 liters) was discovered. It seems that the agricultural complexes in Nahal 'Adasha, like other complexes in the Yattir region, date to the fifth-seventh centuries CE.


1. Location map and antiquities sites.

2. Sites $100,101,102,103$, plan.

3. Terrace 100, looking south.


4. Stone Heap 102, looking east.

5. Wall 103, looking east.

6. Sites 104, 105, 106, 107, plan.

7. Wall 104, cross-section, looking east.

8. Stone Heap 105, looking west.

9. Stone Heap 106, looking east.

10. Wall 107, looking south.


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12. Sites 108, 109, plan

13. Wall 108, cross-section, looking south.

14. Wall 109, looking west.

15. Wall 110, cross-section, looking north.

16. Stone Heap 111, looking east.

17. Stone Heap 114, looking west.

18. Stone Heap 115, cross-section, looking north.


1. Location map of excavation areas and probe trenches.

2. General view of Shelomi and Nahal Bezet, looking north.

3. A grinding stone in rounded feature, looking north.

4. PPN, PN and Early Chalcolithic (Wadi Rabah) flint artifacts.

5. PN and Early Chalcolithic
(Wadi Rabah) potsherds.

Ofer Marder and Nimrod Getzov
During October-November 2003, an excavation was conducted at Nahal Bezet II (Permit No. A-4010; map ref. NIG 213952-214091/774458-575; OIG 163952-164091/274458-575). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Construction and Housing, was directed by O. Marder, with the assistance of A. Dadoush and Y. Ya'aqobi (administration), V. Essman and V. Pirsky (surveying), A. Shapiro (GPS), H. Smithline (field photography), N. Getzov (pottery), I. Milevski (groundstones), O. Barzilai (flints), L. Zeiger and M. Smilansky (flint drawing), N. Marom (archaeozoology) and workmen from Kafr Manda and Nazareth. Further assistance was provided by Y. Lerer, E. Stern and D. Barshad of the IAA northern region.

Nahal Bezet II is located on a small hill, on the southern bank of Nahal Bezet, c. 300 m south of Shelomi and c. 41 m above sea level (Fig. 1). Geomorphologically, the Nahal Bezet valley is composed of dark gray alluvium vertisol, overlying an Eocene formation (Fig 2). The site was discovered during a survey conducted by R. Frankel and N. Getzov (Map of Akhziv [1] Map of Hanita [2], Jerusalem 1997).
Five areas (A-E) were excavated and 19 probe trenches were dug by mechanical equipment to estimate the size of the site and to clarify the stratigraphic sequence (Fig. 3).
Squares of $2 \times 4 \mathrm{~m}$ were opened in Areas $A, B, C$ and $E$, while a deep sounding of $1 \times 2 \mathrm{~m}$ was cut in the center of the site (Area D). All areas were subject to random sieving, except for Area D whose sediments were completely sieved.

## Stratigraphy

The stratigraphic sequence was based on the profile of the deep sounding in Area D (c. 1.8 m ; Fig. 4). All other areas and features were correlated to this profile, pending the objects they contained (see below).
Three layers were identified in Area D. The lowermost Layer 3 (thickness 0.8 m ) consisted of yellow to light gray sediment. A thin horizon of small angular stones, including cobbles and pebbles, was possibly an anthropogenic surface found at the base of this layer. Possible remains of walls, built of flat medium-sized undressed stones ( $0.25 \times 0.30 \mathrm{~m}$ ), were visible $0.2-0.4 \mathrm{~m}$ above the cobble surface. These remains were sealed by another thin cobble surface, $0.10-0.15$ $m$ above (Fig. 5). Flint artifacts and animal bones were evident throughout the entire layer, while a few potsherds, probably from Layer 2, were found only above the upper cobble surface.
Layer 2, subdivided into two phases on the basis of diagnostic pottery, was characterized by a thick horizon (thickness $0.6-0.7 \mathrm{~m}$ ) of light gray soil with a high density of burnt angular stones. The lower phase (2b; c. 0.4 m ) included Pottery Neolithic potsherds and was rich in Yarmukian lithics (PN) and a few animal bones. The upper phase (2a; c. 0.2 m ) contained numerous Early Chalcolithic (Wadi Rabah) potsherds.
The top Layer $1(0.2-0.3 \mathrm{~m})$ was plowed dark gray loose sediment that contained angular stones and sporadic finds.
A thin archaeological horizon that consisted of random features was exposed in the other excavated areas. The features include pits (Fig. 6) and hearths, mainly within the trenches that were dug into the lower phase of the vertisol. Most of the artifacts that derived from this horizon included flint tools, a few ground-stone tools, poorly preserved ceramics and animal bones that mostly dated to the PN period. Areas A, B and C corresponded to the PN occupational phase (Layer 2b), while Area E was attributed, in all likelihood, to the PPN (Layer 3).
Within the probe trenches (TR 1-19; L150-L172; see Fig. 3), numerous oval or circular pits that consisted of pebbles and cobbles, were found (L153, L162-L164, L167, L168). In addition, fieldstones (L156-L161, L169), patches of burnt clay (L166) and possible remains of walls (L155; Fig. 7) were discovered. The features within the probe trenches were not excavated yet were systematically recorded with the aid of GPS. Their dating was complicated, as in some of them only worn potsherds were uncovered. The site was estimated to extend over an area of c. 1.5 hectares, based on the distribution of finds within the probe trenches and the excavated areas.

## Architecture

A shallow hearth (L102), delimited by two fieldstones, was revealed c. 0.2 m below top soil in Area A. Several charcoal pieces and burnt clay were noted in its center. A single ${ }^{14} \mathrm{C}$ date, retrieved from a large piece of charcoal, was dated to the Medieval Age ( $1,240 \pm 100 \mathrm{cal}$. BC). This hearth should be considered intrusive within the PN layer, since all the finds (lithic and small potsherds) in its vicinity undoubtedly dated to the PN.
A small rounded feature (L111; diam. 2.0-2.4 m), built of undressed globular hard limestone ( $0.2-0.6 \mathrm{~m}$ ), was revealed in Area B (Figs. 8, 9). Although the overall plan was not clear it appears the entrance was from the north. The presence of a large grinding stone (Fig. 10) and some worn potsherds suggests that the feature was used for domestic activities.

## Flints

The small PPN assemblage (Layer 3) comprises 474 artifacts, dominated by flakes and blades. Represented in the assemblage and characteristic of the PPNB are blades produced by bidirectional technology. The projectile points are fashioned by bifacial-pressured flaking that is typical to the final stage of the PPNB or the PPNC (Fig. 11:1, 2). The sickle blades also display characteristics typical to the Late PPNB or PPNC, as their glossed edges are nibbled by fine retouch on both ventral and dorsal surfaces; their backs are modified by semi-abrupt retouch and are distally truncated (Fig. $11: 3$ ). It should be noted that during the survey of R. Frankel and N. Getzov at the site, some tools, including a Helwan arrowhead (Map of Akhziv [1] Map of Hanita [2]:121, Fig. 2.80.4:3) made on a blade purple in color, were found. It might indicate a Middle PPNB occupation.
The PN assemblage (Layer 2 b ) is relatively large and representative ( $\mathrm{N}=4104$ ).
The debitage is dominated by flakes, whereas blades play a minor role compared to the PPN
assemblage. Sickle blades fashioned by deep denticulation (Fig. 11:4,5) characterize the assemblage, as well as small elliptical chisels that are distinctive to Yarmukian chipped stone assemblages (Fig. 11:7).
The Early Chalcolithic (Wadi Rabah; Layer 2a) assemblage is small and comprises 357 items. Like the PN, it is dominated by flake technology, evidenced by debitage and core frequencies. Sickle blades are the most diagnostic tool type, backed truncated with plain working edge (Fig. 11:6, 8, 9).

## Pottery

A few potsherds were recovered from all excavated areas. Most of them, dating to the Roman and Byzantine periods, are considered intrusive in the early layers. The pottery finds are significant only in Area D, where two diverse assemblages, PN (Layer 2b) and Early Chalcolithic (Wadi Rabah; Layer 2a), were found.
The PN assemblage is small. Numerous handmade potsherds of rough fabric were found and diagnostic among them are a few bowl rims (Fig. 12:1-3). Hardly any surface treatment is noted on the vessels, which is characteristic of the PN cultures. The lack of sufficient elements at Nahal Bezet II, which could define the ascription of pottery to one of the known repertoires of the period, either Yarmukian or Jericho IX (Lodian), is evident.
The Early Chalcolithic finds are few in comparison to the PN; however, they consist of vessel types that are common to the Early Chalcolithic assemblages (Wadi Rabah). They are handmade and some of them exhibit a burnished red and black slip, as the shallow incurving bowl (Fig. 11:4). A carinated vessel, decorated with wavy lines on the exterior, was found in this layer. Its interior shows an incised pattern of intersecting lines (Fig. 11:5). Two other decorated potsherds with punctuated incisions, which are characteristic of the Wadi Rabah culture, were found (Fig. 11:6, 7). Finally, a clay whorl, probably a spindle, was found in Layer 2a (Fig. 11:8).

The small stone-tools assemblage comprises 21 items. Almost half of the stone tools were found out of archeological contexts in top soil or in probe trenches. The tools found in clear contexts are attributed to the PPN and PN. They consist of hand stones, grinding stones, a grinding quern, hammer stones and rims of bowls. Noteworthy are a perforated item (a macehead?) and a votive small axe of green stone found on surface. The perforated item should be dated to the Early (Wadi Rabah) or Late (Ghassulian) Chalcolithic, while the type of the votive axe is generally related to PPNB contexts. Of particular note is a point sharpener or a shaft straightener found in the PPNB (Layer 3).

## The Fauna

The Nahal Betzet II faunal assemblage (NISP [number of identified specimens]=88) is mainly composed of caprines (Capra hircus and Ovis aries; NISP=40), cattle (Bos sp.; NISP=27) and wild boar (Sus scrofa; NISP=18) remains from PN and Early Chalcolithic contexts. A single Capra bone was the only identifiable specimen from the PPN contexts.
The excavations at Nahal Betzet II revealed three occupational horizons that dated to the PPN, PN and Early Chalcolithic periods. Although the site extends across a relatively large area, the superposition of the different layers was located only in a restricted area (D).
The PPN was revealed in a limited area, which made it difficult to draw any comprehensive conclusions. Yet, it appears that it should be attributed to the latest phases of the PPNB (late PPNB) or to the PPNC. This assumption is based mainly on the pressure flaking production of the arrowheads.
The PN is the main occupation horizon at the site (Layer 2b); it includes one architectural feature and several pits and hearths. Thepottery dating to the PN is not sufficient to define the cultural ascription of the site; however, the flint assemblage consists of sickle blades fashioned by deep denticulation and small elliptical chisels that are characteristic of Yarmukian chipped stone assemblages. In addition, no distinctive sickle blades, made on flakes of rectangular or triangular shape with pressure retouch, were found; the latter are characteristic of the Jericho IX (Lodian) assemblages. Although the pottery of Layer 2 b lacked elements that could define it as Yarmukian, the flint assemblage of this layer shows clear features of Yarmukian repertoires; hence, it is assumed that Layer 2 b should be defined as belonging to the Yarmukian culture.
The Early Chalcolithic (Wadi Rabah) occupation (Layer 2a) is small, although during the survey most of the collected pottery belonged to this horizon (Map of Akhziv [1] Map of Hanita [2]: Fig. 2.80.5); it is possible that this layer was damaged by modern activities. The pottery and flint assemblages retrieved from the excavations are small but very homogeneous. Most of the pottery vessels are bowls that exhibit the characteristic decoration of the standard Wadi Rabah culture.
The economy, based on the fauna at the site, indicates some changes in the transition from the PN to the Early Chalcolithic periods. Whether this change indicates different strategies at the site throughout time or environmental changes in the region require further examination.
The excavation at Nahal Bezet II shows that occupation of the site continued from the PPNB, through the PN, probably the Yarmukain, to the Early Chalcolithic (Wadi Rabah) period; thereafter, the site was abandoned. The reconstruction of settlement patterns in the 'Akko Plain reveals a similar picture. This region shows continuation also from PPNB until the Early Chalcolthic, with a small gap in the Jericho IX (Lodian) horizon, while the Late Chalcolithic settlements are mostly located in the high Galilee, out of the 'Akko Plain.


1. Location map of excavation areas and probe trenches.

2. General view of Shelomi and Nahal Bezet, looking north.

3. Excavation areas and probe trenches, plan.


4. Square A8, oval pit, looking north.

5. TR 1, remain of a possible wall (L155), looking west.

6. Area B, rounded feature, plan.

7. Area $B$, rounded feature, looking southwest.

8. A grinding stone in rounded feature, looking north.

9. PPN, PN and Early Chalcolithic (Wadi Rabah) flint artifacts.

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10. Plan.

11. General view, looking southeast.

12. Pottery.

In May-June 2007 a trial excavation was conducted in Nahal Be'er Sheva‘ (Permit No. A-5139; map ref. NIG 175421-53/57021654; OIG 125421-53/070216-54). The excavation, undertaken on behalf of the Antiquities Authority with the financial support of the Israel Natural Gas Lines Company, was directed by D. Varga and A. Krokhmelnik, with the participation of S. Lender (administration), A. Hajian and N. Zak (surveying and drafting), I. Lidsky-Reznikov(pottery drawing), F. Sontag and N.S. Paran (Southern Region).
The site is located on a level area c. 20 m from the Nahal Be'er Sheva‘ river channel and c. 1.5 km southwest of Be'er Sheva' (Fig. 1).

Two areas (A, B) were excavated in which a roundish structure ( $20 \times 25 \mathrm{~m}$ ) was discovered (Fig. 2). Sections of its perimeter wall (W1, W2, W3), which was built of flint and undressed chalk stones, survived to a height of two courses ( 0.55 m ); no remains of a floor were found.

A few potsherds were discovered in the structure, mostly on either side of Wall 2. These included a Late Roman C bowl (Fig. 3:1), a locally manufactured bowl (Fig. 3:2), cooking pots (Fig. 3:3, 4) and a jar (Fig. 3:5), all of which date to the Byzantine period.

The structure should probably be identified as an animal pen from the Byzantine period.


1. Plan.

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2. Bird's-eve view of Nahal David and Cave of the Pool. looking west.

3. Plan.

4. Coin.

5. Locus 21006 and hearth, plan.

6. Pottery.

During February 2006, a second season of excavation was conducted at the Cave of the Pool in Nahal David (License No. G22/2006; map ref. NIG 2350/5975; OIG 1850/0975). The excavation, undertaken on behalf of Ben-Gurion University and underwritten by generous contributions of Mrs. Sheila Bishop (the Foundation for Biblical Archaeology), the Stella and Charles Guttman Foundation and the Mary Fisher Foundation, all of the USA and Jennie Monro from O.D.P England, was directed by H. Cohen, with the assistance of H. Goldfuss (academic consulting), B. Arubas (surveying and drafting), V. Demob (pottery drawing) and B. Safrai (consultation). Thanks are extended to Y. Shavtiel, S. Graciani, V. Boslov, B. Langford, Z. Fisher, M. Carni and D. Greenbaum ('En Gedi Reserve) and D. Ben Yosef (a friend of many years).

The cave had been surveyed and excavated in the past (Fig. 1; HA-ESI 117).
During the current season, the excavation focused in Area A, where three subareas (A1-A3) were opened at the entrance to the cave (Fig. 2).
Subarea A1 was located in the northern part of the entrance to the cave, near the ritual bath (miqwe). A square ( $4 \times 4 \mathrm{~m}$ ) was opened to resume work that had begun in the first season. The excavation was made deeper (51.59-51.79 m below sea level (hereafter, bsII) in a layer of light color soil fill that contained mixed finds, including fragments of pottery vessels, pieces of cloth and animal bones, as well as a bronze coin from the Year 2 of the Great Revolt (Fig. 3), remains of a leather sandal and the bottom part of a carved animal horn, probably a shofar.

Subarea A2, in the southern part of the cave's front, was a niche of sorts (c. $1.5 \times 3.0 \mathrm{~m}$; Fig. 4) whose ceiling descended slightly toward the southwest. Remains of a north-south oriented wall that closed the opening of the cave were discerned east of the niche. It seems that the niche should be dated to the Roman period, based on the quarrying marks visible on its eastern and western sides and ceiling. The niche had two entrances, separated by a large rock; one was outside the cave to the northeast and the other-inside the cave to the north. Grayish black soil mixed with stones and gravel was found at the front of the niche (L21001, sloping top elevation $50.8-51.0 \mathrm{~m}$ bsl, bottom elevation 52.17 m bsl). Scant remains of light colored calcite material were observed between the cracks in the ceiling of the niche. The excavation ascertained that the niche was filled with gravelly material that was brought from outside the cave, probably by man. The niche yielded fragments of pottery vessels, animal bones, flint, glass fragments, remains of worked wood, trees, organic material and pits, mostly of palm dates, as well as a fragment of an elliptical stone pounder, similar to the one discovered in the first season, which was probably used in the quarrying of the niche.
A layer of soil, which contained remains of flint tools from the Pre-Pottery Neolithic period, was exposed in the lower southwestern part of the niche (elevation c. 54.0 m bsl). The excavation was suspended at a depth of minus 4.46 m , due to a large limestone rock that had probably fallen inside from the opening of the niche.

Subarea A3, west of Subarea A1, was a probe trench (c. $1 \times 2 \mathrm{~m}$ ) oriented north-south, which was opened due to an illicit dig that had recently taken place. The excavation from surface (elevation 51.10 m bsl) was in grayish black powdery soil, mixed with organic material (L21002; depth c. 0.4 m ). Below it (L21004; depth c. 0.4 m ) were the remains of a hearth, fragments of pottery vessels, animal bones, pits, wood remains, flint and glass fragments, which indicated an occupation level.
Gray soil fill that contained many reeds (L21005; depth c. 0.6 m ) and a plethora of artifacts, which indicated an occupation layer, were excavated below L21004. The artifacts included a hearth, fragments of pottery vessels and glass, flint, pits, a worked seashell and remains of trees. The excavation beneath the hearth (L21006; c. 0.1 m to elevation 52.17 m bsl; Fig. 5) revealed that it was founded atop natural bedrock.

The pottery vessels from Area A were dated to the Early Roman and the Chalcolithic periods; all have comparisons in the Judean Desert caves or in more distant sites. The pottery from the Roman period included two bowls (Fig. 6:1, 2), five cooking pots (Fig. 6:3-7), three jars (Fig. 6:9-11), three jugs (Fig. 6:12-14) and three juglets (Fig. 6:15-17). Two diagnostic artifacts from the Chalcolithic period were a flat base of a holemouth vessel (Fig. 6:18) and a lug handle (Fig. 6:19).

The wealth of finds indicates that the vicinity of the entrance, the miqwe and the niche were the main areas of activity in the cave during the Chalcolithic and the Early Roman periods. The cave dwellers were not satisfied with the natural dimensions of the cave and had hewn the niche and fitted it to suit their needs. At a later phase the niche was sealed by man. The excavation of the niche was not completed and therefore, it is difficult to determine its exact use.
The pottery vessels attest to activity during the Early Roman period, in the first century BCE-the first century CE. Hence, it is cautiously suggested that the cave was in use during the events that transpired during the Second Temple period until the time of the Great Revolt. This proposal is further corroborated by the recovery of the bronze coin that is dated to the Year 2 of the Great Revolt.


1. Bird's-eye view of Nahal David and Cave of the Pool, looking west.

2. Coin.

Rock $\because \because \because$ סלע
Fill $\square$ מילוי
Fill beneath Rock $\square$ מילוי מתחת לסלע
3. Niche.

4. Locus 21006 and hearth, plan.

NTM


5. Pottery.

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Nahal Ha-Ela Preliminary Report


1. Location map.

2. Area A, Burials 153, 154 looking south.

3. Area B, Phase II, plan and section.

4. Area B, Phase II, looking west.

5. Area D, Chalcolithic pit, looking east.

Anna Eirikh-Rose 11/1/2009
During June-August 2005, a trial excavation was conducted at Horbat Zurin the Ela Valley (Permit No. A-4511; map ref. NIG 20155-65/618045-50; OIG 15155-65/118045-50), in an area slated for the construction of the separation fence. The excavation, undertaken on behalf of the Israel Antiquities Authority and financed by the Ministry of Defense, was directed by A. Eirikh-Rose, with the assistance of O. Barzilai and M. Birkenfeld (area supervision), R. Abu-Halaf (administration), T. Kornfeld (surveying and drafting) and D. Sklar and Y. Nagar (physical anthropology).
Four areas (A-D; Fig. 1) were excavated along the northern slope of Horbat Zur, which is situated on the southern bank of Nahal Gedur and in the vicinity of three Chalcolithic sites: Khirbat esh-Sheikh Madkur (c. 1 km to the west), Horbat Naqqar (c. 500 m to the northwest) and Horbat 'lllit (c. 800 m to the east).
Area A. Remains of a burial cave whose western part was destroyed during the construction of the separation fence were found. The cave was circular (diam. c. 2.5 m ) and its entrance, probably from the north, was paved with flagstones, which were partly roughly hewn (L105). Remains of the pavement were also preserved in the eastern part of the cave $(3.0 \times 3.7 \mathrm{~m})$. The interments in the cave consisted of secondary burials in jars that were placed on the pavement in the center and on the bedrock floor in its western part. At least 19 in situ burials were exposed during the excavation and elements of other ex situ burials were found scattered in the area between the jars and on top of the pavement. At least two phases of interment were discerned in the western part, whereby the burials of Phase I (Loci 108-110, 117-121, 124, 135, 200; Fig. 2) were placed directly above those of Phase II (Loci 126, 144, 145, 147, 153, 154, 160, 161; Fig. 3). The pottery vessels and the bones were poorly preserved; however, it was possible to differentiate the pottery vessels that were utilized in secondary burials, as well as one or two of the interred individuals. Mostly adult individuals were buried, but in several instances deciduous teeth and bones of children were found in the jars. Nearly all the preserved human remains consisted of long bones and teeth of upper and lower jaws. It was difficult to identify the vessel types because of the poor preservation; however, it seems that some were mushroom-shaped jars (Fig. 4). The meager funerary offerings consisted mostly of V -shaped bowls from the Chalcolithic period.

Area B. Remains of a dwelling cave that was used for industrial activity, based on procurement marks and debris and a large amount of waste material, were found. The upper part of the cave was not preserved, nor was the northern part that had been cut during development work; consequently it was impossible to determine the complete outline of the cave. The preserved part was rectangular $(2.5 \times 4.0 \mathrm{~m})$ and on the eastern wall were signs of rock cuttings that indicated it was partially hewn.
Two phases were exposed in the cave. The first phase was noted in the western part and included two concentrations of stones (Loci 114, 115; Fig. 5) and a pavement of potsherds (L116). The second phase consisted of occupational debris on top of the bedrock floor (Figs. 6, 7). Both phases dated to the Chalcolithic period. Four pits of different shapes that were hewn in the sides of the cave should be ascribed to the second phase. Three of them (Loci 142, 149, 150) were hewn from above, suggesting that the ceiling of the cave had already collapsed in the Chalcolithic period. Pit 142, which had an elliptical plan ( $1.4 \times 1.8 \mathrm{~m}$ ), was rather shallow and contained terra rosa fill and large fragments of pottery vessels; in its last phase it was probably used as a refuse pit. Pit 150 was elongated $(0.8 \times 1.4 \mathrm{~m})$, shallow and filled with alluvium. Pit 149 was circular (diam. c. 1 m ), relatively deep and filled with small limestone chips, most likely debris from quarrying activity and large fragments of pottery vessels. At its bottom, a hearth full of ash (L151) was built. An additional hearth in the center of the area was filled with ash and burnt pottery vessels (L106) and should also be ascribed to the second phase.
Another large, shallow pit (L152) was probably used as another room, whose entrance was from the destroyed northern part of the cave.
The lithic finds from the cave included a large quantity of waste material, apparently indicating that flint procurement and initial knapping had taken place in the cave.

Area C (Fig. 8). Remains of a structure whose curved wall (W1) was built around a depression, were found. The wall, which probably served to support the roof of a rock shelter, was built of fieldstones and preserved three courses high in its southern part (width 1 m ). Bedrock served as the floor of the building and fragments of pottery vessels, flint artifacts and basalt bowls were found above it. The rock shelter was probably used for dwelling.

Area D. Remains of a rock shelter whose ceiling had collapsed were found. Two periods, Chalcolithic and EB I, were identified. It was impossible to distinguish the building remains from the Chalcolithic period, except for a deep elongated, bedrock-hewn pit in the northern part of the rock shelter (L164; Figs. 9, 10). The area was cleaned out and used for burial in EB I. A partition wall (W2) that delimited the burial area was built. Scattered remains of several individuals in secondary burial were found (L163). The few funerary offerings included a number of small bowls and miscellaneous potsherds. The meager finds probably testify to the looting of the cave. Some 20 m south of the area, at the top of the slope, were several oval-shaped, bedrock-hewn cupmarks, of the type that is usually located near Chalcolithic sites; a similar field of cupmarks was observed near Horbat 'Illit (A. Eirikh-Rose and Y. Milevski, 2008, Chalcolithic Sites in 'Emeq Ha-Ela. In D. Amit and GD. Stiebel, eds. New Studies in the Archaeology of Jerusalem and Its Region: Collected Papers. Jerusalem. Pp. 107-116).

The exposed remains, which mostly belonged to the Ghassulian culture of the Chalcolithic period, included a burial cave, remains of flint procurement and probably a dwelling. The remains in the four areas represent, most likely, the peripheral activity of a large Chalcolithic settlement nearby (Khirbat esh-Sheikh Madkur, Herbat Naqqar or Horbat 'lllit). The rock shelter in Area D was used for burial during EB I.


1. Location map


2. Area A, Burials 153, 154, looking south.

3. Area B, Phase I, plan and section.

4. Area B, Phase II, plan and section.

5. Area B, Phase II, looking west.

שטח Area C

8. Area C, plan and section.

9. Area D, plan

10. Area D, Chalcolithic pit, looking east.
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Nahal Hazerim, Survey
Final Report
Emil Aladjem


1. Survey map.

During July 2006, an archaeological survey was conducted northeast of Nahal Hazerim (Permit No. A-4868; map ref. NIG 17510-30/57280-320; OIG 12510-30/07280-320), prior to preparing the ground for development. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Jewish National Fund, was directed by E. Aladjem, assisted by S. Gal (GPS).

The survey extended across a hilly area north of Nahal $\underline{H} a \underline{z} e r i m$ and six sites were recorded.
Site 101 (map ref. 175168/572964). A scatter of flint items (diam. 20-30 m) that dated to the Middle Paleolithic period. Site 102 (map ref. 175239/573142). A circular structure (diam. 4 m ) built of undressed chalk stones. Numerous flint artifacts that dated to the Middle Paleolithic period and were not connected to the structure were found scattered on surface.
Site 103 (map ref. 175202/572933). Remains of walls built of undressed chalk stones.
Site 104 (map ref. 175173/572875). Wall remains (length 4 m ), built of undressed chalk stones.
Site 105 (map ref. 175239/572883). A rectangular structure whose walls (length 20 m , width 10 m ) were built of chalk stones.
Site 106 (map ref. 175290/572916). Five chalk slabs scattered across surface, three of which were partly buried in the ground; these were probably the remains of tombs.



1. Map.

2. Caves 109, 131, 132, plan

3. Cave 100, entrance shaft.

4. Cave 103, entrance shaft.

5. Installation 141.
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Nahal Modi im
Final Report
Mordechai Haiman
During February-March 2004, a trial excavation was conducted in Nahal Modi'in, at the foot of El-Midya village and Khirbat er-Ras (Permit No. A-4113; map ref. NIG 199987-200659/64862-963; OIG 149987-150659/14862-963), to explore the proposed route for the construction of the separation fence. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by M. Haiman, with the assistance of E. Aladjem and E. Peretz (area supervision) and A. Hajian (surveying).
The excavation area (c. $50 \times 350 \mathrm{~m}$; Fig. 1) was located on a steep slope, at the foot of Khirbat er-Ras. Some 80 antiquities sites were documented and inspected, but the excavation was suspended before all were mapped. The inspected sites included a large cemetery that comprised at least 50 shaft tombs and rock-hewn installations that are characteristic of the farming settlements in the region from the Iron Age through the Byzantine period. An assortment of potsherds was found in all the installations and caves, as well on surface, dating to the Chalcolithic period, Early Bronze I, Early Bronze II-III, the Iron Age and the Hellenistic and Byzantine periods (HA-ESI 117).

## Burial Caves

The openings of sixteen caves (diam. 0.8-1.0 m, max. depth 1.0 m ; Figs. 2, 3) were partly excavated: 100 (Fig. 4), 103 (Fig. 5), 109, 129 (Fig. 6), 131 (Fig. 7), 132 (Fig. 8) and 173, as well as Caves 502, 508, 515, 517, 518, 519, 520, and 521. The elliptical Cave 118 (length c. 5.0 m , height c. 1.5 m ) was found exposed because the side of cliff into which it was hewn had collapsed in antiquity. This cave was apparently connected to the shaft of Cave 100 (c. 2 m far from it).
The investigation was limited to the upper parts of the shafts, down to where the cave became wider, to ascertain that these were burial caves. Similar shaft tombs are typical of the hill country during the Early and Middle Bronze Ages; however, it is impossible to date them without an excavation.
Cave 114 (opening dimensions: $0.4 \times 0.6 \mathrm{~m}$; Fig. 9) was a kokh-type burial cave. The cave's opening was hewn in the face of the cliff and a small bedrock-hewn courtyard fronted it. The non-excavated cave was filled with alluvium and probably dated to the Roman period.

## Rock-hewn Installations

Fifteen rock-hewn installations were found, including a winepress, circular installations, cupmarks and others.
The winepress (106; Figs. 10, 11) consisted of a treading floor ( $3.5 \times 3.5 \mathrm{~m}$, depth 0.1 m ) and a round collecting vat (diam. 1 m , depth 0.7 m ).
The round installations included deep units (102; diam. 1.2 m , depth 0.7 m ), shallow ones ( 133 ; diam. c. 1 m , depth 0.1 m ; Fig. 12) and a round basin (172; diam. 1.2 m , depth 0.2 m ).
Some of the installations had a small depression or cupmark (diam. $0.1-0.2 \mathrm{~m}$, depth $5-15 \mathrm{~cm}$ ) in the center. These installations were small ( 188 ; diam. 0.5 m , depth 0.25 m ) and large ( 143 ; diam. 1.2 m , depth 5 cm ; Fig. 13), as well as elliptical ( $101 ; 1.0 \times 1.5 \mathrm{~m}$, depth 0.5 m ). A shallow depression (diam. c. 0.5 m , depth 5 cm ) was discovered near one of the round installations that had a depression in its center ( 141 ; diam. c. 1 m , depth 0.1 m ; Fig. 14).
A cluster of approximately 10 small cupmarks (diam. $5-10 \mathrm{~cm}$ ) was discovered on a bedrock surface ( $136 ; 3 \times 5 \mathrm{~m}$; Fig. 15). A deep cupmark ( 128 ; diam. 0.3 m , depth 0.6 m ) was also found.

Other installations included a groove in bedrock that led to a round surface (147; diam. 0.8 m , depth 0.1 m ; Fig. 16) or a cupmark ( 149 ; diam. 0.2 m , depth 0.1 m ); a rock-hewn surface on top of a large round stone ( 123 ; diam. c. 2 m , depth 5 cm ; Fig. 17) with a cupmark (diam. 0.1 m , depth 0.1 m ) hewn in its center; a square vat ( $115 ; 0.7 \times 0.7 \mathrm{~m}$, depth 0.6 m ) and a rectangular rock-cutting ( $145 ; 0.7 \times 1.5 \mathrm{~m}$, depth 5 cm ) in whose center was a depression (depth c. 0.1 m ) and another hollow (depth c. 0.2 m ) close by it.

## Miscellaneous Remains

Bedrock-hewn steps of various sizes ( $130 ; 30 \times 50 \mathrm{~m}$, max. depth 1.2 m ) were found over large parts of surface, as well as remains of a few walls, preserved one or two courses high (max. length 1 m , width 0.2 m , height 0.5 m ), which were probably remains of terrace walls, since no floors abutted them.


2. Caves 109, 131, 132, plan.

3. Caves 129, 173, plan.

4. Cave 100, entrance shaft.

5. Cave 103, entrance shaft.

7. Cave 131, entrance shaft.

8. Cave 132, entrance shaft.

9. Cave 114, the opening.

10. Winepress 106 and Installation 128, plan and section.

11. Winepress 106, looking south.

12. Installation 133.

13. Installations 143, 145, plan.

14. Installation 141.


16. Installation 147 and Quarry 130.

17. Installation 123.

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## Nahal Patish

Preliminary Report


1. Location Map

2. Aerial view of Area B in 2006, looking southwest.

3. Cultic stand, in situ.

4. Phase III, ash floor and installation, looking east.

5. Phase II, aerial view of Structures 249 and 209 in 2007, looking south

Pirhiya Nahshoni
During October-November 2006 (Permit No. A-4809), July-August 2007 (Permit No. A-5177) and March-April 2008 (Permit No. A5415), three Seasons of salvage excavations were conducted at a site near Nahal Patish (map ref. NIG 580395/167819; OIG $117819 / 080395$ ), in the wake of constructing a new railroad track from Ashqelon to Be'er Sheva'. The excavations, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel Railways Authority, were directed by P. Nahshon (photography), with the assistance of H. Lavi and Y. Lender (administration), S. Talis (area supervision, 2008 season), A. Hajian V. Essman, V. Pirsky and T. Korenfeld (surveying), the Skyview Company (aerial photography), N. Zak (drafting), C. Amit (studio photography), E. Kamaisky (pottery restoration), R. Gat (restoration of special finds), E. Maher (archaeozoology) and E. Weiss (archaeobotany).

The site (c. 12 dunams; Fig. 1), c. 12 km west of Be'er Sheva', is located on the southern bank of Nahal Patish, a tributary of Nahal Gerar and is spread on the slopes facing the wadi. It lies within the 200 mm rain zone, suitable for grazing and grain agriculture, especially in rainy winters. The nearest major sites inhabited during the same period are Tel Sera, c. 9 km to the north and Tel Haror, c. 9 km to the northwest.
Three areas (A-C) were opened, revealing building remains, living surfaces and refuse pits, dating to the end of the eleventh-early tenth centuries BCE.

## The 2006 season

Twelve excavation squares were opened in Areas A-C (Fig. 2).
Area A (Fig. 3)
A single square ( $4 \times 5 \mathrm{~m}$ ) in the southeastern end of the site was excavated. An earthen floor that covered a pebbled surface was found. Two storage jars were embedded into the margins of the pebbled surface.
Area B (Fig 4)
Six squares were opened and part of a built complex was unearthed. A small probe at the southeastern end of the complex yielded two fenestrated cultic stands, lying on a packed-earth floor near a stepped mud-brick platform (Fig. 5). These stands indicate the cultic nature of the complex. The stands and the platform, buried under collapsed mud bricks and stone, were overlain with a later earthen floor. Three storage jars were discovered in the corner of a small room in the northern end of the excavated area.
Area C
Five squares were excavated in the east and northeast; open-space living surfaces and refuse pits were found (see Fig. 2).

## The 2007 and 2008 seasons

The excavation continued only in Area B (c. 200 sq m; Fig. 6) and three phases (I-III) were discerned. The phases seem to have been close in time, dating to the late eleventh-early tenth centuries BCE, analogous to Tell Qasile Stratum X. The finds included cultic and various other pottery vessels, as well as numerous grinding and pounding artifacts.

Phase III
This earliest phase included living surfaces that consisted of thick ash layers and installations, underlying walls and floors of Phase II. The ash layers covered the slope and accumulated in depressions and pits, especially at the lower eastern part beneath W6 and farther east (L310). The stone pavement (L328) found in the storeroom and underlying W23 of Phase II and the floor and stone installation (L356; Fig. 7), underlying the mud-brick walls (W28, W37) of Structure 365, also belonged to this phase.

## Structure 365

This mud-brick and stone structure was situated in the northern end of Area B and only its southern end was excavated. Room 356 was delineated by mud-brick walls in the south (W28) and the west (W37) and a stone wall in the east (W26). A stone installation was found in the corner of W28 and W37. Another mud-brick wall (W27), adjacent to W26 on the east, possibly enclosed another room that was not excavated. The courtyard of Structure 209 extended as far as W28. Due to the limited excavated portion of this structure, it was impossible to determine its function. Collapsed mud bricks in Room 356 attest to a sudden destruction.

Phase II (Fig. 8)
The site underwent intensive construction in this phase. Two main stone structures (L209 and L249) and another structure (L365) of mud bricks and stone were built.

## Structure 209

This structure was the first to be built on the higher part of the slope. It comprised two contiguous small rooms in the west and an adjacent courtyard with a tabun. The courtyard's floor extended as far as Structure 365 in the northeast, which apparently was associated with Structure 209. It seems that the courtyard of Structure 209 was partly cut by the northern wall (W15) of Structure 249, which appears to be a revetment wall. Nevertheless, Structure 209 continued to be used after the construction of Structure 249.
The southern room (L238; $1.7 \times 2.6 \mathrm{~m}$ ) was paved with stones. Ash and pottery vessels were found on the floor. A tabun was placed in the courtyard, next to the doorway that led into the room.
The northern room (L241; $1.15 \times 1.60 \mathrm{~m}$ ), which may have served as a storeroom, was also accessible from the courtyard. It contained three storage jars in its northeastern corner and a lion-headed cup, decorated with typical Philistine motifs (Fig. 9), was found on the earthen floor, indicating that this structure was part of the original cultic complex.

## Structure 249

This well-planned structure was built to the south of the earlier Structure 209. Its southwestern wall (W29) was built on the slope after it had partly been cut away, thus creating a leveled surface, c. 1 m lower than the floors of Structure 209, The walls (width 0.54-0.70 m), built of pebbles and fieldstones of various sizes, were preserved $1.0-1.6 \mathrm{~m}$ high.
The rooms and courtyards were arranged in an L-shaped manner: the main courtyard in the west, the storeroom in the south, separated from the courtyard by a short wall and the Sanctuary adjacent to the storeroom in the east. A second courtyard with a paved area was in the north and northeast of the main courtyard. Both the Sanctuary and the storeroom were accessed via doorways in the southern end of the main courtyard; however, entering the Sanctuary required a perpendicular turn to the left.
The main courtyard was a rather small enclosure (L249; $4.0 \times 4.5 \mathrm{~m}$ ) with a stone bench built along the eastern wall (W6) and another short mud-brick and stone bench against the southern wall (W23). A sacrificial, nearly square altar (1.1 $\times 1.2$, height 0.2 m ) built of three undressed large stones and supported by small stones was situated in the center. A pit (L260; diam. 0.8 m , depth 0.9 m ) that functioned as a drain was to the south of the altar. A thick ash layer covered most of the earthen floor. A small rounded hearth (L266; diam. 0.45 m , depth. 0.3 m ) was cut into the natural loess soil east of the altar. Three small favissa pits (L352, L353, L364; diam. 0.4 m , depth $0.2-0.3 \mathrm{~m}$ ) were cut into the courtyard floor,
containing bones, pottery and stone vessels. Collapsed mud bricks topped with stone rubble covered the ash layer. The finds in the courtyard included many grinding and pounding stone vessels; several storage jars smashed by collapsed rubble were found along the walls and a group of cylindrical loom weights was found near the northern wall (W15). A figurative cultic stand, possibly originating from a higher shelf, was found within the collapsed mud bricks.
The north-eastern courtyard (L326), situated east of W6 near the entrance to Courtyard 249, was found partly paved with stones. It extended as far as W7 and W13 and included a stone bench (W4).
The storeroom (L261; $2.0 \times 2.8 \mathrm{~m}$ ) was entered from Courtyard 249. A stone bench ( $0.9 \times 1.1 \mathrm{~m}$, height 0.4 m ) and a bin of stone and clay (L311; $0.9 \times 1.0 \mathrm{~m}$, height 0.68 m ) were built along its southern wall (W30). Part of the floor was paved with large stones (L328) and this paving preceded the construction of the walls, filling up an existing depression and leveling the surface in preparation for the construction of Structure 249.
The finds in the storeroom included various pottery vessels, stone vessels and an Egyptian amphora, as well as a single fragment of a figurative cultic stand, which was found in Courtyard 249. The finds inside Installation 311 included parts of a restorable cooking pot, a bowl, some bones and a fragment of a bronze object. It may have served as a favissa, since it was intentionally filled up with earth and stones.
The sanctuary was an elongated room(L211; $2.0 \times 5.2 \mathrm{~m}$ ), accessed from the courtyard, in which two phases were discerned. The eastern wall (W18) had probably been built of mud bricks, as its collapse on the floor consisted of brick material. The earthen floor was plastered with clay and presumably white-washed, extending as far as the benches that were built along most of the walls.
A stepped platform was found in the eastern end. The lower step consisted of packed earth and the higher one was then added, cutting into the lower step and comprising three courses of single bricks. A standing stone was inserted into the platform, next to the higher step.
In addition to the cultic stands mentioned above, the finds also included a strainer jug, chalices, storage jars, a bronze knife, an earring, a bead and two small peaces of a gold-leaf. All these lay buried under a thick layer of rubble and mudbrick material that had been leveled and another floor was placed above (L251 of Phase I). The cause for the sudden destruction is not clear. It may have been the outcome of an earthquake, as demonstrated by north-south oriented cracks in the walls and in the floor of the Sanctuary.

## Phase I

Most of Structures 209, 249 and 365 lay in ruins in this phase. An earthen floor (L251; Fig. 10) and a stone column base were installed on top of the leveled debris in the Sanctuary. A new wall on a stone foundation was built at the eastern end (W11). Somewhat later, another wall (W5), possibly functioning as a revetment wall, was built next to it on the east.
An open-area living surface with ovens was found northeast (L244, L316) and southeast (L230, L317) of the sanctuary. Another living surface, badly preserved due to its proximity to the cultivated surface, was traced overlying Structure 209.

The architectural and small finds in Area B attest to the sacred nature of the complex during the last two phases and very likely, in the earliest phase as well. The paved surface and the thick ash layers indicate intensive activity of burning in Phase III. Structures 209 and 249 of Phase II contained cultic finds and Structure 249 can be classified as a temple of an irregular plan and indirect access, like the temples of Tell Qasile Strata XI-X (Mazar A. 1980. Excavations at Tell Qasile, the Philistine Sanctuary I: Architecture and Cult Objects [Qedem 12]. Jerusalem).
The functions of Structures 209 and 365 are not very clear. Structure 209 was certainly part of the cultic complex, as attested by the presence of the lion-headed cup in the assemblage. Only the Sanctuary was reused in the last phase, after raising the floor. This attests to the inherent sanctity of this spot, although no new platform was found. The ovens found to the north, east and south point to food preparation activities, possibly associated with rites and feasts in the temple of the latest phase.
The temple displays architectural elements that were adopted by the Philistines, e.g., the asymmetric plan, the indirect access to the sanctuary and the benches along the walls. It generally recalls the plan of the Tel Qasile X temple, although it is not similar to it. Preliminary observations of the ceramics from the temple indicate that it was of indigenous (Canaanite) and hybrid (Canaanite-Philistine) forms and only a small portion could be identified as Philistine.The most crucial argument for claiming a Philistine identity for the local inhabitants is the lion-headed cup, which to date, has been recovered only from Philistine contexts. The architectural features and the pottery assemblage point to the acculturation of the Philistines to local customs and way of life during their expansion into the Northwestern Negev during the late Iron period.


1. Location Map

2. The excavation areas.

3. Area A, looking southeast.

4. Aerial view of Area B in 2006, looking southwest.

5. Cultic stand, in situ.

6. Area B, plan.

7. Phase III, ash floor and installation, looking east.

8. Phase II, aerial view of Structures 249 and 209 in 2007, looking south.

9. Structure 209, Lion Head-Cup, in situ.

10. Phase I, column base and earthen floor in sanctuary, looking northeast.

## Nahal Pehar

Preliminary Report


1. Location map.

2. Area A, plan.

3. Mosaic, looking east.

4. Area B, plan.

In 2006 two seasons of excavations were conducted at two sites on the southwestern bank of Nahal Pehar, within the precincts of the settlement of Giv'ot Bar (Permit No. A-4779; map ref. NIG 176977/584995; OIG 126977/084995; Fig. 1), after three sites were discovered there in a preliminary survey. The excavations, undertaken on behalf of the Antiquities Authority with the financial support of the Bene Shimon Regional council, were directed by N.S. Paran, with the participation of O. Feder and A. Freiberg (area supervision), H. Lavi (administration), V. Essman and V. Pirsky (surveying) and L. Di Segni (epigraphy).
A monastery was exposed in Area A and a farm in Area B, both dating to the Byzantine period.

## Area A

A walled monastery ( $33 \times 33 \mathrm{~m}$ ) was exposed that included a main building in its northwestern part ( $18 \times 18 \mathrm{~m}$ ) and service wings in its eastern and southern parts (Fig. 2).
The service wings were partially excavated and it seems that they were delineated by a wall that was exposed mainly in the north (W1) and in sections in the east (W3, W25) and south (W26). In the middle of the courtyard was a depression (L173) that probably represents a collapsed cistern (not excavated). In the northeastern part of the service wing was a surface (Room 6) that was paved and lined with flagstones (L121; $6 \times 6 \mathrm{~m}$ ), which apparently functioned as the treading floor of a winepress. The walls that delineated it were preserved to a height of $0.4-0.5 \mathrm{~m}$. The flagstone pavement had been robbed but the negatives of the stones remained in the plaster bedding. The pavement descended gently to the south.
The main building, whose walls were preserved to a substantial height (1.4-2.0 m), had a central courtyard (R5; 5 $\times 9 \mathrm{~m}$ ) that was entered from the east by way of a narrow opening in Wall 24 (L167). On either side of the opening were door jambs. A recess, which apparently contained the door's locking mechanism, was discerned in the northern jamb.
Next to the southern side of the opening a staircase was built that led to a second story. On the southwestern side of the courtyard a room was exposed (R2; L154; 3.2 $\times 3.3 \mathrm{~m}$ ) and it seems that there were other rooms next to it, to the east, which have not yet been exposed. An opening with an arched lintel that was entirely preserved led to the room from the courtyard, and in the eastern wall (W5) of the room was a closet (L124) equipped with a groove in its sides for incorporating a wooden shelf and another groove that was meant for a hinged door at its front.
In the northern part of the courtyard were three rooms that were arranged in a row from west to east. An opening led from the courtyard to the middle room which served as a chapel (R1; L166; 3.7 $\times 6.2 \mathrm{~m}$ ). The room was paved with a mosaic and its walls were treated with white lime-based plaster that was applied to a mud undercoat. A meticulously dressed door jamb was discovered on the eastern side of the opening and it seems that a similar door jamb that has not yet been exposed is also standing on the western side. Two openings led from the middle room, one to the western room (R4; $\mathrm{L} 170 ; 2.0 \times 3.7 \mathrm{~m}$ ) and the other to the eastern room which was paved with flagstones ( $\mathrm{R} 3 ; 3.0 \times 3.2 \mathrm{~m}$ ). Below the floor of the eastern room were two tombs, each measuring $0.7 \times 1.7 \mathrm{~m}$. A cross was carved on the southern tomb. On the eastern side of the room was an apse (L169; diam. 2.8 m ) paved with a white mosaic floor and whose walls were made of mudbricks and lined with lime plaster. In the seam between the apse mosaic and the flagstone pavement to its west were two notches into which chancel screens were inserted. The fragments of one of the screens, which were made of soft chalk, were found in the collapse layer. Based on the thickness of the building's outer walls (W6 in the west, W16 in the north; width $1.2-1.5 \mathrm{~m}$; pres. height 2 m ), the thickness of the collapse layer and the staircase that was found in the courtyard, it seems that there was a second story on the wings of the building that flanked the courtyard to the west and north.
The chapel's mosaic floor was adorned with an illustrated carpet ( $2 \times 2 \mathrm{~m}$; Fig. 3); east of it was a Greek inscription, and east of the inscription, opposite the opening that led to the eastern room, was a cross. The decoration on the carpet includes two peacocks that face each other heraldically. Between them is an amphora from which a grape vine emerges that forms five medallions arranged in two rows. In the bottom row on the right side is a donkey (or hare) and above it a bird whose head is lowered. In the lower left medallion are two baskets of grapes (or loaves of bread) and in the medallion above it is a fish. Between the bird and the fish is another medallion with an image of a person praying (orant gesture). Above this medallion is an inscription that mentions Selamon, the deacon and dioiketes (here in the sense of head of the monastery) and a series of names: Fidus, Selamon and Zanys, the latter of which also has a religious title, apocrisiarios. The third row says "May the Lord bless the coenobium of Beth-mor [or Beth Morsy?]. Amen."

The finds at the monastery were meager and included a small quantity of potsherds from the end of the Byzantine period (sixth-seventh centuries CE), c. thirty iron nails that provide evidence for a wooden roof, and a bronze hook used to suspend a lamp.

## Area B

A farm was found ( $20 \times 25 \mathrm{~m}$ ) in which two phases were discerned. In the first phase a tower $(5.0 \times 6.5 \mathrm{~m})$ was built that consisted of two rooms; R1, the western room, $2.9 \times 3.7 \mathrm{~m}$, and $R 2$, the eastern room, $1.8 \times 3.7 \mathrm{~m}$ ). They were delineated by walls (height 1.3 m , width $0.65-0.75 \mathrm{~m}$ ) and were paved with wadi cobbles and fieldstones. A window lined with smooth stone slabs was found in the inner partition wall (W53), c. 0.8 m above the floor. Affixed to the outside of the building's western wall was an inclined retaining wall (W56) that was probably meant to protect the western side of W52 from rain. In the northwestern corner of the tower, next to the opening, were three steps built of dressed limestone slabs (L207) that seem to have led to a roof or second story.
In a later phase, the tower was enlarged into a farmhouse and rooms were added around it. Since the excavation has not yet been finished we do not have a complete plan of the complex but it seems that it extended across an area of c. $20 \times$ 25 m and was composed of a minimum of four rooms around a central courtyard and an additional side courtyard.
The finds from the farmhouse included a few potsherds from the end of the Byzantine period (sixth-seventh centuries CE ). Since there is no evidence of destruction as a result of the Islamic conquest, it seems like the monastery and the farmhouse adjacent to it were abandoned. This is consistent with finds from other Christian settlements in the northern Negev during the latter part of the Byzantine period.


1. Location map.


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2. Area A, plan.

3. Mosaic, looking east.


# (Volume No. HA-ESI 121 (2009 

## Nahal Samtar

Final Report
Marwan Masarwa
9/3/2009


1. Plan and sections.

2. Building 500, looking northeast.

During November 2006, an excavation was conducted along the southern bank of Nahal Samtar, where the Vered Quarry is slated to be enlarged (Permit No. A-4937; map ref. NIG 205923-6083/709275-372; OIG ${ }^{1}$ 155923-6083/209275-372), in the wake of discovering antiquities during development work. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Vered Quarry Ltd., was directed by M. Masarwa, with the assistance of S. Ya'aqov-Jam (administration), V. Essman (surveying), T. Sagiv (field photography), A. Oshri (preliminary inspections) and N. Zak (drafting).
The area is located on the edge of a hill covered with natural vegetation, southeast of the present quarry. A winepress and a field tower had previously been excavated nearby and excavations were also conducted on the hill, along the northern fringes of the quarry ('Atiqot 46:1-3 [Hebrew]; HA-ESI 119; Permit No. A-4165). The current excavation exposed building remains and terrace walls; several worn potsherds from the ByzantineEarly Islamic periods were gathered from surface.

A partly destroyed, rectangular-like building (L500; $8.5 \times 11.0 \mathrm{~m}$; Figs. 1, 2) was exposed at the western end of the area. The slightly curved walls (width $1.0-1.2 \mathrm{~m}$ ) were founded on bedrock and delimited a bedrock surface that sloped to the north. The walls, built of two rows of fieldstones and a core of small stones and brown earth, were preserved one-three courses high. A gap (width 1.8 m ) that may have been the entrance to the structure was exposed in the center of the western wall. It can reasonably be assumed that the structure was used as a pen for sheep and goats.
Two terrace walls (length 3-4 m), built of fieldstones and incorporated in bedrock, were identified east of the building (c. 20 and c .40 m away). Probes were excavated to the bottom of the walls but no potsherds or other artifacts that could aid in dating them were discovered.


2. Building 500, looking northeast.

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## Nahal Samtar

Final Report


1. Winepress A, plan and section.

2. Winepress A, Collecting Vat 101 and Settling Pit 110,
looking northeast.

3. Winepress B. upper collecting vat, looking north.

4. Winepress C, treading floor, looking south.

During May 2004, a salvage excavation was conducted within the precincts of the Vered Quarry, north of Nahal Samtar (Permit No A-4165; map ref. NIG 2054-5/7097-8; OIG 1554-5/2097-8; HA-ESI 119, HA-ES/ 121), prior to the expansion of the quarry. The excavation, on behalf of the Israel Antiquities Authority, was directed by E. Oren, with the assistance of A. Hajian (surveying and drafting), T. Sagiv (field photography) and P. Gendelman (pottery reading).
Three rock-hewn winepresses (A-C) and the remains of a watchman's hut, 30-40 m apart, were excavated. A few worn potsherds that dated to the Byzantine period (fourth-sixth centuries CE) were discovered in the excavation. It seems that agricultural activity relating to the production of wine was carried out in this region during the Byzantine period.
Winepress A (Fig. 1). The winepress was hewn in bedrock surface that sloped northward. It consisted of a treading floor, a collecting vat, two settling pits and cupmarks. The rectangular treading floor (L100; $3.4 \times 4.6 \mathrm{~m}$, depth 0.8 m ) had large stones placed along its western and southern sides to prevent alluvium from sweeping inside it. One of the stones was a broken press screw stone in secondary use. The beginning of a hewn square pit for anchoring a press screw ( $0.4 \times 0.4$ m , depth 0.4 m ) was discerned in the southern side of the floor, but for some unclear reason it was never completed. Another pit ( $1 \times 1 \mathrm{~m}$, depth 0.7 m ) was cut in its place, slightly to the north. It is possible that the broken press screw stone was originally placed in this pit. A hewn channel led from the treading floor to a settling pit (L110; $0.58 \times 0.63 \mathrm{~m}$, depth 0.45 m ; Fig. 2), which was coated with gray plaster and paved with white industrial mosaic. Another channel led from the settling pit to the collecting vat (L101; $1.32 \times 1.84 \mathrm{~m}$, depth 1.38 m ; Fig. 3), which was also coated with gray plaster and paved with white industrial mosaic. Three other straight channels extended from the treading floor to the collecting vat; the central one was open and cut in the top of the partition between the treading floor and the vat and the lateral two were hewn deeper in the partition. Two steps in the northern side of the collecting vat led down to its bottom, in which a circular sump was hewn (L102; diam. 0.78 m , depth 0.36 m ; Fig. 4). A cupmark (diam. 0.35 m , depth 0.12 m ) was found on the eastern side of the collecting vat and another cupmark (diam. 0.4 m , depth 0.5 cm ; not marked on plan) was c .1 m west of Settling Pit 110. The cupmarks were probably used to stand jars.

Winepress B (Fig. 5). The winepress was composed of a treading floor and an upper and lower collecting vats. The treading floor sloped northward (L103; $2.3 \times 2.8 \mathrm{~m}$, depth 0.5 m ; Fig. 6). Two channels led from the floor to the upper collecting vat (L104; $0.7 \times 1.4 \mathrm{~m}$, depth 0.25 m ; Fig. 7), in whose floor a round sump was hewn in the center. It seems that the lower collecting vat (L105; $0.6 \times 0.9 \mathrm{~m}$, depth 0.35 ; Fig. 8) was hewn after part of the northern side of Collecting Vat 104 had broken

Winepress C (Fig. 9). The winepress comprised a circular treading floor (L106; $3.3 \times 3.5 \mathrm{~m}$, depth 0.12 m ; Fig. 10) and a quadrangular collecting vat (L108; $1.4 \times 1.4 \mathrm{~m}$, depth 0.92 m ; Fig. 11), linked by a shallow channel. A square hewn pit $(0.32 \times 0.32 \mathrm{~m}$, depth 0.26 m$)$ in the center of the treading floor was used to anchor a press screw. The collecting vat was plastered gray and its floor was paved with white industrial mosaic; three steps were cut in its southern side. A square sump ( $0.45 \times 0.45 \mathrm{~m}$, depth 0.35 m ), also paved with mosaic, was cut in the floor of the collecting vat, to whose east were two hewn cupmarks (diam. 0.2 m , depth 0.15 m ; diam. 0.25 m , depth 0.15 m ) that were apparently used for standing jars. A square rock-hewn vat ( $0.92 \times 1.10 \mathrm{~m}$, depth 0.92 m ), where the grapes were probably placed prior to treading, was exposed c. 1.5 m north of the winepress.

Watchman's Hut (diam. 4.8 m; Figs. 12, 13). The watchman's hut was at the western end of the excavation area. It was built, right above bedrock, of two rows of various size fieldstones and a soil and rubble fill between them; the hut was preserved two courses high (max. height 1.2 m ). The entrance to the hut was set in the northern side and its two large stone doorjambs were preserved in situ (Fig. 14).


1. Winepress A, plan and section.

2. Winepress A, Collecting Vat 101 and Settling Pit 110, looking northeast.

3. Winepress A, collecting vat, looking south.


4. Winepress B, plan and section.

5. Winepress B, the treading floor, looking north.

6. Winepress $B$, upper collecting vat, looking north.

7. Winepress B, lower collecting vat, looking east.

8. Winepress C, plan and section.

9. Winepress C, treading floor, looking south.

10. Winepress $C$, collecting vat, looking north.

11. Watchman's hut, plan and section.

12. Watchman's hut, looking north.

13. Entrance to watchman's hut, looking east.

# (Volume No. HA-ESI 121 (2009 

## Nahf

Final Report


1. Pottery.

2. Pottery.

3. Fragment of a frit-ware plate.

Yoav Lerer
During September 2006, a trial excavation was conducted in the village of Nahf (Permit No. A-4889; map ref. NIG 229892/760051; OIG 179892/260051), prior to the construction of a private residence. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the lot owner, S. Sa'id, was directed by Y. Lerer, with the assistance of Y. Ya'aqobi (administration), R. Abu Raya (surveying and drafting), H. Smithline (studio photography), E.J. Stern (pottery reading), H. Tahan (pottery drawing) and members of the Sa'id family.
A single square was opened in the core of the ancient village, southwest of the center of the tell, where a building from the beginning of the twentieth century CE once stood. Bedrock was discovered close to surface, c. 0.1 m at the eastern end of the square and 0.5 m at its western end. The soil fill (thickness up to 0.4 m ) that covered bedrock included numerous potsherds from the Mamluk period. Above it, in a layer of light-colored soil (thickness up to 0.1 m ) was a small amount of potsherds from the Early Islamic period. It seems that this layer had originated in debris brought over for the purpose of leveling the area prior to the construction of the house.

No building remains were found. A small rock-hewn and non-plastered pit (diam. 1.1 m , depth 0.5 m ) that was sealed with a heap of stones was exposed at the southwestern end of the square. The potsherds recovered from the pit were dated to the Mamluk period and it therefore seems that the pit was both used and blocked up during this period. The ceramic artifacts included local and imported household wares that dated to the fourteenth-fifteenth centuries CE, including bowls and plates (Fig. 1:1-9), cooking pots (Fig. 2:1, 2) and jars (Fig. 2:3, 4), as well as fragments of frit-ware plates, decorated with blue and turquoise patterns below a layer of transparent glaze (Figs. 1:10-12; 3), which are also dated to the Mamluk period.

Although settlement at this site mostly flourished during the Hellenistic and Byzantine periods, no finds from these periods were discovered in the excavation. It therefore seems that this part of the site was uninhabited prior to the Mamluk period.


3. Fragment of a frit-ware plate.

# (Volume No. HA-ESI 121 (2009 

## Nazareth (West)

Preliminary Report

2. General view to the south.

4. Area III, quarry and tower, looking west.

5. Area F, quarry and terrace walls, looking north.

6. Area II, depression in bedrock with farming soil looking west.

8. Wall 116, looking west.

Walid Atrash
During May 2005, a trial excavation was conducted in western Nazareth (Block 16531, Lot 1), along the western bank of Wadi elJuani (Permit No. A-4444; map ref. NIG 22740-50/73405-7; OIG 17740-50/23405-7), prior to the construction of a school. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Nazareth municipality, was directed by W. Atrash, with the assistance of L. Porat (area supervision), Y. Ya‘aqobi (administration), V. Essman (surveying), H. Smithline (photography) and H. Abu 'Uqsa (pottery reading).
The site extends along a precipitous slope in the western part of Nazareth, toward the foot of a hill west of Wadi el-Juani. Outcrops of limestone bedrock, farming terraces and a farmhouse were discerned in the area prior to the excavation (Figs. 1, 2). Seven excavation areas (I-III, C-F) were opened. Remains of three masonry quarries that dated to the Roman period were discovered in Areas I, III and F; three farming terrace walls were excavated in Areas C-F, as well as the remains of two field towers. Fragments of pottery vessels that mostly dated to the Roman, Byzantine, Mamluk and Ottoman periods were found scattered on surface in each of the excavation areas. It seems that the remains belonged to a farmstead (farmhouse was not excavated), which was established in the Roman period, continued to exist in the Byzantine period and used again during the Mamluk and Ottoman periods.

Quarries. Three step quarries were exposed on the limestone surfaces. The rock-cutting was undertaken to extract building stones for the construction of the farmhouse and to level the area prior to the building of farming terraces over the quarries.
A leveled bedrock surface (c. $5 \times 5 \mathrm{~m}$ ) was in Area I. At its southern end were the rock-cutting remains of one large stone $(1.08 \times 1.20 \mathrm{~m}$, height 0.3 m ; Fig. 3). A large quarry ( $7 \times 10 \mathrm{~m}$, depth 1.2 m ) was in Area III. The negatives of detached stones $(0.4-0.8 \times 0.4-0.8 \mathrm{~m}$, height $0.3-0.5 \mathrm{~m}$ ) were clearly visible, as were the grooves that served as severance channels (Fig. 4). Four layers of rock-cuttings that left steps along the northern and western fringes of the quarry were discerned in the middle of this area, which was quarried to depletion. Two parallel severance channels (length 1 m , width 8 cm , height of each 0.2 m ) that extended in a north-south direction were discovered east of the rock-cuttings. After the quarry was no longer in use, it was filled with stone-dressing debris and soil for agricultural use. A quarry ( $6 \times 6 \mathrm{~m}$, depth 1.6 m ) for hewing ashlar stones ( $0.8-1.6 \times 0.5-1.1 \mathrm{~m}$, height $0.3-0.6 \mathrm{~m}$; Fig. 5) was partly exposed in Area F. Its central part was quarried to depletion and remains of six quarrying layers that left steps along the northern, western and southern edges of the quarry were visible. The hewn severance channels (width $5-10 \mathrm{~cm}$, depth $0.25-0.50 \mathrm{~m}$ ) around each stone, to enable its extraction from bedrock, were also apparent. After the quarry was no longer in use, it was filled with stone-dressing debris and was covered with farming soil that contained potsherds from the Roman period. The retaining walls (W118, W129) of the bottom farming terrace were built over the eastern and northern parts of the quarry. A natural, rectangular depression ( $0.7 \times 1.0 \mathrm{~m}$; depth 0.9 m ) was located at the eastern end of the quarry in Area III, in the western part of a bedrock surface. The depression was filled with brown earth mixed with small fieldstones, stonedressing debris and a few potsherds that dated to the Roman and Byzantine periods. A row of four cupmarks (diam. of each $0.15 \times 0.15 \mathrm{~m}$ ), situated c. $0.7-1.2 \mathrm{~m}$ apart, was discovered between and to the east of the two severance channels in the eastern part of the quarry. A similar elliptical depression ( $1.4-1.8 \times 4.7 \mathrm{~m}$, depth c .1 m ; Fig. 6) was discovered in the center of a bedrock surface (c. $8 \times 8 \mathrm{~m}$ ) in Area II. This depression was also filled with brown soil, as well as fieldstones and a few potsherds from the Roman and Byzantine periods.
Farming Terraces and Towers. The site is crossed by three farming terraces that were enclosed within retaining walls (terrace walls). These formed soil surfaces for agricultural crops in places where bedrock was exposed. Retaining walls and the remains of two semicircular towers were uncovered on the bottom and middle farming terraces; the upper farming terrace extended beyond the limits of the excavation. The farming terraces were delimited from the east and northeast by a long wall, aligned southeast-northwest, which continued farther up the slope (Wall 118; length of exposure c. 100 m , width 1.2 m , preserved height $0.8-1.8 \mathrm{~m}$ ). The wall delimited an ancient road that extended to the northeast alongside it. Wall 118, built of soft limestone fieldstones that were quarried locally, was founded on bedrock and its southern part was built over the remains of two quarries (Areas C, F).
The lower terrace had an irregular shape (c. 700 sq m ). It was enclosed on the east and northeast by the road that was built along the wadi and by the southern end of W118. On the west it was delimited by Wall 102 (length 15 m , width $0.7-$ 0.8 m , preserved height $0.6-1.4 \mathrm{~m}$; Fig. 7). This wall was oriented north-south and separated between the lower and middle farming terraces. It was built of soft limestone and founded on bedrock. A limestone collapse at the southern end of the wall originated from a semicircular farming tower (W114; diam. 10 m ; see Fig. 4). The tower, built of dry construction utilizing indigenous limestone, was founded on a bedrock surface that sloped eastward. The eastern part of the tower was preserved 1.8 m high, whereas its western part only survived to the height of ground level. A terrace wal ( W 129 ; length 3.4 m , width 0.6 m , preserved height in east 0.9 m , in west 0.3 m ) built of indigenous limestone was erected above the northern part of the quarry in Area F and on a bedrock surface to its north. The eastern part of the wall was incorporated in W118 and its western part was built up against bedrock.
The middle farming terrace had also an irregular shape (c. 500 sq m ). It was delimited on the northeast by W118, on the east by W102 and on the northwest by W116 (exposed length c. 20 m , width 1.1 m , preserved height 1.9 m ; Fig. 8). Wall 116 was built of soft limestone fieldstones along a northeast-southwest direction. Its northern end abutted W118 and its southern part was abutted by a semicircular field tower (Area E; diam. 10 m , preserved height c .2 .5 m ). Only the eastern side of the tower was uncovered; its western part remained buried beneath a layer of modern fill. The tower, founded on bedrock, was built of dry construction that utilized soft limestone quarried locally (Fig. 9).


2. General view to the south.

3. Area I, quarry and cupmarks, looking north.

4. Area III, quarry and tower, looking west.

5. Area F, quarry and terrace walls, looking north.

6. Area II, depression in bedrock with farming soil, looking west.

7. Wall 102, looking north.

8. Wall 116, looking west.

9. Area E, field tower, looking south.

# (Volume No. HA-ESI 121 (2009 

## Nazareth

Final Report


1. Plan and sections.


The excavation area, looking north.


The excavation area, looking
north.

4. Pottery.

5. Sawn sheep/goat and cattle horns.

Yotam Tepper

During July 2003, a trial excavation was conducted in the Rashidiya School, next to the tomb of Shihab A-Din in Nazareth (Permit No. A-3953; map ref. NIG 228166-83/734058-75; OIG 178166-83/234058-75), prior to the construction of a roundabout. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Construction and Housing, was directed by Y. Tepper, with the assistance of A. Ben-Zioni and Y. Lerer (area supervision), Y. Ya'aqobi (administration), V Essman and V. Pirsky (surveying and drafting), H. Smithline (field and studio photography), N. Zak (plans), L. Kupershmidt (metallurgical laboratory), E.J. Stern (pottery reading), H. Tahan (pottery drawings), Y. Gorin-Rosen (glass), N. Getzov, H. Khalaily and A. Oshri (lithics), D. Syon and A. Berman (numismatics), N. Raban-Gerstel and G. Bar-Oz (archaeozoology) and R. Abu Raya (Arabic).

The Rashidiya School was demolished in 1999, prior to developing the area for the pontifical visit in 2000. While development works for the construction of a roundabout were carried out, the tops of walls and the opening of a cistern were exposed in the area of the school. During the excavation (Figs. 1, 2), the southern part of the school building from the nineteenth and twentieth centuries CE was exposed, as well as the tops of walls and pottery horizons from the Crusader-Mamluk periods (thirteenth-fourteenth centuries CE), soil deposits that contained a ceramic assortment from the Hellenistic to the Mamluk periods and a stratum from the Middle Paleolithic period.

Nineteenth-Twentieth Centuries CE. The Rashidiya Muslim School for Boys was a two-story structure with a tile roof $(14.0 \times 24.5 \mathrm{~m})$ that included a main wing, flanked on either side by two wings. At the time of the excavation only the two southern wings ( $B, C$ ) and the southeastern part of the main wing ( $A$ ) were preserved. The front of the building faced west. Engaged pillars were built in the corners of the wings and smaller pillars were constructed in the western façade (W117, W124). The building's foundations consisted of hard limestone fieldstones, whereas the upper structure was built of dressed limestone; the walls were preserved six courses high. Arches that supported the upper structure were exposed in probe trenches, opened east of the building (L136), in the southern wing (L129) and in the main wing (L131). During the excavation of Wing B, a flagstone floor (Loci 113, 114) and two partition walls (W122, W123) that divided the wing into three rooms, were exposed. Next to the southern wall (W105) in the eastern room of the wing, a built opening of a cistern was uncovered ( $4 \times 7$, depth 6.7 m ; Fig. 3). A service portal at the surface elevation was discovered in the eastern part of the cistern, which was covered with a barrel vault. The cistern was coated with two layers of plaster, the lower was charcoal-rich gray mortar (max. thickness 3 cm ) and the upper-light pink hydraulic plaster; repairs of gray cement were noted. At the bottom of the cistern was modern refuse that included, among other things, an electric pump used for pumping water from the cistern. A probe excavated at the bottom of the cistern revealed a layer of hydraulic plaster overlaying a layer of tamped clay, which was deposited on a layer of stones that superposed gray soil, containing a few potsherds whose dates ranged from the Byzantine to the Ottoman periods. A cement surface ( $1 \times 1 \mathrm{~m}$ ) whose purpose is unclear was discovered outside the building, in the southeastern corner. Layers of fill exposed near the building and in its foundations yielded ceramic finds that dated mostly to the Ottoman period, including a handmade cooking krater of local clay (Fig. 4:19), a glazed bowl decorated with stripes (Fig. 4:20) and a Gaza-type jar (Fig. 4:21), as well as metal and copper objects, fragments of glass vessels, jewelry and beads, tobacco pipes and hookahs and sawn horns and bones (Fig. 5), which evince a bone-tool industry that operated in Nazareth. An Ottoman coin (IAA 106088) from the time of 'Abd al-Majid (1841 CE) was discovered in the building's foundations. Based on the historical sources and the excavation finds, the Rashidiya School was founded in the last third of the nineteenth century CE.

Crusader-Mamluk Periods. Remains of walls (W139, W145), probably the corner of a building, were discovered beneath the southern area of Wing C. The walls, preserved a single course high, were built of small and medium-sized fieldstones that were set on a foundation of stones and earth (L137). It seems that the building was destroyed prior to the construction of the school. Soil levels without building remains were exposed to the east of the building (L136) and contained ceramic finds from the Crusader-Mamluk periods, including handmade kraters (Fig. 4:6, 7), glazed bowls (Fig. $4: 8-10$ ), cooking vessels (Fig. 4:11-14), jars (Fig. 4:15, 16), a jug fragment stamped with round impressions (Fig. 4:17) and a glazed mold-made bowl fragment (Fig. 4:18). Three coins from the reigns of fourteenth-century CE rulers were discovered in these levels, including a coin of En-Nasr Hasan (1347-1351 CE; IAA 106087), AI-Ashraf Sha'aban II (1369 CE; IAA 106085) and En-Nasr Farj (1406-1412 CE; IAA 106084).

Accumulations from the Hellenistic-Mamluk Periods. Among the ceramic finds that were discovered in the foundations of the building were a few potsherds, including a jar (Fig. 4:1) from the Hellenistic period, a jar (Fig. 4:2) from the Roman period, an imported krater (Fig. 4:3) from the Byzantine period and a cooking krater (Fig. $4: 4$ ) and a bowl slipped with paint (Fig. 4:5) from the Crusader-Mamluk periods (thirteenth century CE).

Middle Paleolithic Period. A trench was excavated below the floor of the cistern (L143), revealing a soil level (thickness 0.5 m ) at a depth of 7 m below surface, which was reddish brown in color and rich in small and medium stones, some of which were flint. Ten worked flint artifacts, including cores and tools knapped in the Levallois technique, were recovered from the soil level

Animal Bones. Three-hundred and fifty fragments of animal bones were collected from the Ottoman-period remains of the building and sixty-six fragments of animal bones were recovered from the layer of the Crusader-Mamluk periods. The bones were mostly those of sheep (Ovis aries), goats (Capra hircus) and a few cattle (Bos Taurus). The bones of horses and donkeys (Equus sp.), camels (Camelus dromedaries), dogs (Canis sp.), gazelle (Gazella), chickens (Gallus) and pigs (Sus sp.) were also identified. Cleaving marks visible on the bones indicate slaughter and butchering by man. Signs of gnawing suggest that the bones were devoured by animals, most likely dogs. The assemblage of bones from the Ottoman period included twenty-two worked bones, mostly belonging to sheep/goat/cattle and including sawn horns and bones, some of which were longs, as well as a bone button. These items indicate that some of the animal bones at the site were utilized in the manufacture of bone objects during the nineteenth century CE.



The excavation area, looking north.


The excavation area, looking north.


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4. Pottery.


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## Nein

Final Report
Abdalla Mokary


1. Plan.

2. Pottery.

During August 2004, a salvage excavation was conducted in the village of Nein (Permit No. A-4229; map ref. NIG 233315-22/72633-46; OIG 183315-22/22633-46), in the wake of construction work. The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Mokary (photography), with the assistance of A. Hajian (surveying), E.J. Stern (pottery reading), H. Tahan (pottery drawing) and laborers from Umm el-Fahm.
The excavation area was located in the built-up section of Nein, c. 100 m east of the spring. Building remains from the Late Bronze Age and the Byzantine, Early Islamic and Mamluk periods (Permit No. A-4653) were exposed c. 50 m south of the excavation area, and four winepresses that dated to the Late Byzantine period (HA-ESI 114:110*-111*) were excavated c. 70 m to the northwest.
One excavation square was opened, revealing three strata that included building remains from the Mamluk period (Fig. 1).

The surface layer (thickness c. 0.5 m ) contained ash, gravelly soil and fragments of pottery vessels that ranged in date from the Roman until the Mamluk periods.
Stratum 1. An ash floor was exposed and fragments of glazed bowls (Fig. 2:1, 2) and a cooking bowl (Fig. 2:3) that dated to the Mamluk period were found.
Stratum 2. Sections of poorly preserved walls (W15, W17, W18) were exposed. Wall 17 was severely damaged prior to the excavation. It seems that Walls 17 and 18 formed a corner and that W15 abutted W18. A plastered installation built of fieldstones was adjacent to the eastern face of W15. A tamped earth floor (L13) abutted the walls.
Fragments of a plain unglazed bowl (Fig. 2:4), a bowl decorated with deep incisions (Fig. 2:5), a handmade bowl painted with a geometric pattern (Fig. 2:6), two glazed bowls (Fig. 2:7, 8) and a handmade krater decorated with thumb impressions (Fig. 2:9), which dated to the Mamluk period, were found on the floor. The fill below the floor contained fragments of glazed bowls (Fig. 2:10, 11), a krater (Fig. 2:12) and two cooking bowls (Fig. 2:13, 14), also dating to the Mamluk period.
Stratum 3. A wall (W16), abutted by a tamped and gravely earthen floor (L14), was exposed.
The ceramic artifacts from this stratum, including fragments of two bowls that are glazed a uniform color (Fig. 2:15, 16), a glazed bowl decorated with slipped stripes (Fig. 2:17), a frit-ware-type bowl (Fig. 2:18), a cooking bowl (Fig. 2:19), a cooking pot (Fig. 2:20) and two jugs (Fig. 2:21, 22), were dated to the Mamluk period.
A fragment of a red-slipped bowl, dating to the Late Byzantine period (LRRW; Fig. 2:23) and a body fragment of a jug from the Early Islamic period, were also found.



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2. Pottery.

# (Volume No. HA-ESI 121 (2009 

Nein
Final Report

Abdalla Mokary



1. Plan.

2. Pottery.

3. Brass scale.

During February 2003, an excavation was conducted at Nein (Permit No. A-3843; map ref. NIG 233-4/726-7; OIG 183-4/226-7), prior to construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Mokary, with the assistance of A. Hajian (surveying and drafting), H. Tahan (pottery drawing), C. Amit (studio photography), A. Lester (metal artifacts) and D.T. Ariel (numismatics).
Two excavation squares (each $4 \times 4 \mathrm{~m}$ : Fig. 1) were opened c. 100 m distance from the spring in the center of the village. Building remains from Late Bronze II and the Early Islamic and Mamluk periods, preserved to a maximum of 1 m high, were exposed.

The remains of two walls (W15, W17) of a building that dated to the Mamluk period were uncovered. They were built of roughly hewn limestone and formed a corner that was abutted by a crushed chalk floor (thickness c. 0.1 m ). The finds on the floor included fragments of pottery vessels, mostly green-glazed bowls (Fig. 2:1-8). Soils fill that contained building stones and mixed ceramic finds from the Early Islamic and the Mamluk periods was discovered north of W15. This seems to have been a refuse pit that dated to the Mamluk period.
The Early Islamic period is represented by the remains of a north-south oriented wall (W22) that was adjoined by another wall (W16). The two walls were built of limestone and a floor of tamped earth abutted them. A limestone trough ( $0.65 \times 1.30 \mathrm{~m}$, depth 0.5 m ) was discovered on the floor of the building. Parts of a brass scale, including a rod and pieces of chain (Fig. 3), were uncovered next of the trough. The finds on the floor included mostly fragments of black jars decorated with white stripes (Fig. 2:9, 10) that dated to the Umayyad period (mid seventh-eighth centuries CE) and a lamp fragment decorated with an incised grain stalk design (Fig. 2:11) from the Umayyad period. Two illegible bronze coins were discovered on the floor. A follis of Justin II, minted in Constantinople (570/571 CE; IAA 99753) and numerous body fragments of black jars decorated with white stripes that dated to the seventh-eighth centuries CE were found south of W16.
The remains of two walls of a building (W25, W27) that formed a corner were discovered below the layer from the Umayyad period. Above the earthen floor of the building were large amounts of ash and the remains of a tabun (diam. of opening c. 0.55 m , depth c. 0.5 m ) that contained a red-slipped bowl (Fig. 2:12), dating to Late Bronze II. Fragments of a store jar (Fig. 2:13) from Late Bronze II were discovered above the floor of the building.


## 1-1

1. Plan.


A-3843
123
2. Brass scale.

# (Volume No. HA-ESI 121 (2009 <br> Nein <br> Final Report 

Abdalla Mokary


1. Plan and section.

During February 2002, a salvage excavation was conducted in the southern part of the village Nein (Permit No. A-3600; map ref. NIG 233-4/726-7; OIG 183-4/226-7), after ancient remains were damaged during work by the Electric Company, The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Mokary, with the assistance of A. Hajian (surveying and drafting) and D. Syon (numismatics).

A subterranean complex that was hewn in soft limestone bedrock was exposed (Fig. 1). Two steps (D; width 0.9 $m$ ) descended from the northwest, probably from an opening that was not exposed, to a round cavity ( $\mathrm{C} ; 1.0 \times 1.6$ $\mathrm{m})$. A rock-cut step in the floor of this cavity led to a long tunnel ( $\mathrm{B} ; 1.5 \times 4.0 \mathrm{~m}$, height 1.5 m ), which in turn led to two adjacent cisterns (A). Although the cisterns, which were located beneath a street, were not excavated, their shapes could be discerned, as well as traces of a partition that had once separated them and was removed in antiquity. Numerous fragments of pottery vessels from the Early Islamic period were discovered in the soil fill from the bottom of the system, including barrel-shaped jars with a tall neck, plain rim and a ribbed body, decorated with white-painted lines and a few buff-ware jugs. In addition, two coins were discovered: one, on the steps in the entrance (D), was a silver dirham from the time of Harun al-Rashid (IAA 102662), which was struck in 797 CE at al-Muhammadiyya (Teheran), and the other, discovered in the tunnel, was a Byzantine bronze follis from the second half of the sixth century CE (IAA 102661).


1. Plan and section.

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## Nes Ziyyona

Final Report

2. Channel 111, looking northeast.

3. Channel 112, looking northwest.

4. Channel 113, plan and section.

6. Channels 124 and 125 . looking northeast.

7. Pottery.

Dor Golan
29/11/2009
During July 2007, a salvage excavation was conducted at the western end of Nes Ziyyona (Permit No. A-5161; map ref. NIG 179973-80139/648475-871; OIG 129973-30139/148475-871), prior to paving a road. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Nes Ziyyona municipality, was directed by D. Golan, with the assistance of S. Ya'aqov-Jam (administration), A. Hajian and M. Kunin (surveying), T. Sagiv (field photography), Y. Arnon (pottery reading), M. Shuiskaya (pottery drawing), A. Sasson (consultation), D.T. Ariel (numismatics) and A. Glick (weapons and balistics). Assistance was also provided by the Rahma Brothers Earthmoving Works Company, Ltd.
Previous excavations at the site, c. 300 m northeast of the current excavation area, exposed remains that dated to the Byzantine and Early Islamic periods and the time of the British Mandate (HA-ESI 118). Remains from the Byzantine and Early Islamic periods were also discovered at el-Khirba, c. 1 km southeast of the excavation area (HA-ESI 109:97*-98*). At Sarafand el-Kharab (Yad Eli'ezer neighborhood), c. 2 km east of the site, remains of a settlement that dated from the Byzantine until the Ottoman periods had previously been revealed (ESI 18: 7376; 'Atiqot 46:37*-58*) and remains of channels from the Early Islamic period were exposed c. 50 m east of the site (HA-ES/ 120).

Eight excavations squares were opened along 250 m of the planned route of the road (Fig. 1), in an area where a citrus orchard was planted. Dark soil fill that covered the indigenous $\underline{\text { hamra was found in most of the area; the }}$ ground in Squares 7 and 8 was sandy. The most important feature was a system of water channels, connected to pools and wells that included a pool 30 m north of the excavation area, a pool and a well 140 m to its southwest and a pool and a well near the excavation area, which was utilized by farms in the Late Ottoman period (end of the nineteenth century CE) and at the time of the British Mandate.
Square 1. Two superposed layers of kurkar fieldstones, without a distinct outline (L130; $1.35 \times 1.80 \mathrm{~m}$, overall thickness $0.12 \mathrm{~m} ; 0.63 \mathrm{~m}$ below surface), were exposed in the middle of the square. These stones were probably consolidated into clearance heaps or were the remains of a roadbed or channel. Only a few worn potsherds from the Early Islamic period and modern refuse were found among the stones.

Square 2. A channel (L111; length 4.5 m , inner width 0.2 m , depth 0.22 m ; Fig. 2) that extended from northeast to southwest and continued beyond the boundaries of the square was exposed. The channel, built of roughly dressed kurkar stones, was set on a foundation wall that comprised five coursesof kurkar fieldstones (average dimensions $0.11 \times$ 0.14 m ); the channel and its foundation stood to an overall height of 0.76 m . The interior of the channel was partly coated with two layers of plaster; the bottom layer was of coarse white-gray plaster mixed with gray inclusions and crushed shells and the thin upper layer consisted of fine gray plaster that rendered the bottom of the channel a curved crosssection.

Square 3. A channel (L112; length of 4.24 m , outer width 0.32 m , inner width 0.18 m , depth 0.16 m ; Fig. 3), aligned northwest-southeast and extending beyond the limits of the excavation square, was exposed. The channel was built atop a single course (width 0.68 m ) of fieldstones (average dimensions $0.12 \times 0.14 \mathrm{~m}$ ). Its sides consisted of poured concrete and iron and its bottom was coated with a layer of plaster. It should be associated with a well, utilized until about a decade ago, which is located to the west of the channel and with a large pool, farther along the channel course, situated c. 30 m northwest of the excavation square.

Square 4. A channel (L113; length 5 m , outer width 0.54 m , inner width 0.22 m , depth 8 cm ; Figs. 4,5) that was similar to the one in Square 2 was exposed; it extended along an incline from the southwest, in the vicinity of the pool, to the northeast. The channel, built of plaster and small stones, was set on a foundation wall of four fieldstone courses (average dimensions $0.10 \times 0.17 \mathrm{~m}$ ); the channel and the foundation stood to an overall height of 0.7 m . Fragments of concrete sides of a channel were found above Channel 113 and in its vicinity. Remains of a poured concrete channel that was constructed on top of an extension of Channel 113 were visible on the surface, southwest of the square. Hence, it appears that in a later phase, two concrete channels were built next to each other along the route of Channel 113, for the purpose of expanding it and several of its sections had survived.

Square 5. A section of a wall (W114; exposed length 4 m , width 0.83 m , height 0.28 m ), oriented northeast-southwest and continuing in both directions beyond the limits of the excavation square, was exposed. The wall was built of two fieldstone courses (average dimensions $0.2 \times 0.2 \mathrm{~m}$ ), arranged in three rows. Based on its length and alignment, extending in the direction of the pool, it seems to have served as a foundation wall of a channel.

Square 6. A water channel (L117; outer width 0.75 m ) that had survived by a small section was exposed. It seems that the channel was founded upon a surface that was borne atop a narrower wall (length 4.52 m , width 0.5 m ), which was built of five fieldstone courses (average dimensions $0.20 \times 0.35 \mathrm{~m}$ ) that were larger than those used in the other channel foundation walls. The channel, whose east-west alignment did not lead to a pool or a well, was connected to the channel constructed on top of Wall 114 in Square 5

Squares 7 and 8. The spot where two channels were joined was discovered in the squares (Fig. 6). A channel (L124; length 3.2 m , outer width 0.39 m , inner width 0.23 m ) that descended from northeast to southwest was exposed in Square 8. The channel, set directly upon the sand without any foundation, was built of concrete mixed with shells and its bottom was coated with plaster. Its direction indicates that it was possibly connected to the concrete pool, situated on a hill, c. 30 m to the northeast. Channel 124 was connected to another channel (L125) that extended from north-northwest to the south-southeast. The northeastern side of Channel 125 was broken and low at the joining spot, allowing the water to flow into Channel 124. A concrete slab that was used to regulate the water flow was found east of the channels' juncture. Channel 125 was built on a fieldstone foundation, whose continuation was observed without the channel, west of Square 7 (length 4 m , width 0.49 m , height 0.13 m )

The fill alongside the channels contained a few ceramic fragments, mostly Marseille roof tiles and Gaza-ware vessels, including a bowl (Fig. 7:1) and a jar (Fig. 7: 2), as well as sections of ceramic water pipes (Fig. 7:3-6). A two-mil coin that was struck in 1946 was found in Square 3. A Judean coin of the procurator Valerius Gratus that dated to the time of the emperor Tiberius (IAA No. 111866) was found on the surface in Square 6. It was brought to the site from outside the excavation region, probably due to modern agricultural activity, because no sites from this period are known in the vicinity. A number of discharged rifle cartridges were found in Square 8; one belonged to the type common to the end of the nineteenth century CE and the others bore an Arabic inscription and were probably manufactured in Turkey at the beginning of the twentieth century $C E$.


1. Plan (distances between squares shown only in scale of small plan).

2. Channel 111 , looking northeast.

3. Channel 112, looking northwest.

4. Channel 113, plan and section

5. Channel 113, looking southwest.

6. Channels 124 and 125 , looking northeast.


# (Volume No. HA-ESI 121 (2009 

Netanya
Final Report


1. Location map.

2. Square 1, plan.

3. Pottery.

4. Southern half of Square 3, looking south.

5. Square 2, looking west.

## Uzi 'Ad

15/7/2009
During August 2007, a trial excavation was conducted at the Umm Khalid site in the Ben 'Ami neighborhood of Netanya (Permit No. A-5210; map ref. NIG 18751/69290; OIG 13751/19290; Fig. 1), to evaluate the prospect of constructing residential buildings. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel Lands Administration, was directed by U. 'Ad, with the assistance of D. Masarwa and E. Oren (inspection of the probe trenches), S. Ya'aqov-Jam (administration), A. Hajian, V. Pirsky and D. Porotzky (surveying), L. Yihye (GPS), T. Sagiv (field photography), P. Gendelman (pottery reading), M. Shuiskaya (pottery drawing), N. Katsnelson (glass artifacts) and A. 'Azab of the IAA central district.
The excavation was conducted along the upper part of the kurkar ridge, north of the fort that is ascribed to the Ottoman or the Mamluk periods, which had previously been excavated (ESI 5:85-86; Fig. 2); the fort's southeastern tower still rises to a height of more than 5 m (Fig. 3). Excavations conducted around the fortress in the past had revealed a burial cave that dated to the first century BCE-first century CE and a cistern from the first-sixth centuries CE (ESI 1:94; see Fig. 2) on the lower part of the eastern slope; a pottery kiln from the Byzantine period was exposed at the foot of the southern slope (ESI 6:87-88; see Fig. 2); and a jar from the Late Byzantine period was discovered in situ at the bottom of the northeastern slope (ESI 18:110). Judith Montefiore, wife of Moses Montefiore, first described in her travel diary the Ottoman settlement at Umm Khalid, which was later inspected by the surveyors of the Palestine Exploration Fund.
Three excavation squares ( 55 sq m ), 25-30 m apart (Figs. 2, 4), were opened. Square 1 was located slightly east of the top of the ridge; Square 2 was at the top of the eastern slope; and Square 3-at the top of the northern slope. The squares were excavated to a depth of $2.5-3.0 \mathrm{~m}$ below surface, yet bedrock was only exposed in Squares 2 and 3. Seven settlement strata that dated from the Early Roman period until the modern era were identified (Square 1—Figs. 5, 6; Square 2—Figs. 7, 8; Square 3-Figs. 9, 10). The connection between the architectural units in the three squares could not be determined due to the distance among them. However, since the stratigraphic sequence in each square is clear, it is feasible to correlate the contemporary strata in the three squares. That notwithstanding, the finds did not permit to date the construction phases in Strata III and V. During the course of the excavation, ten probe trenches were dug with the aid of a backhoe along the eastern and northeastern slopes of the ridge, aiming to locate the boundaries of the site in those two directions. It turned out that building remains extended to the bottom of the northern slope and midway down the eastern slope.
Stratum VII (Roman period). This earliest layer in the excavation was exposed in the northern part of Square 3, where the northern side of a foundation course of a very broad wall (W27; width in excess of 0.8 m ) was revealed. The wall, oriented east-west, was built of large well-dressed kurkar masonry stones ( $0.45 \times 0.75$, height 0.35 m ) that were set directly on bedrock. No floor abutted the wall from the north, but just a fill (L139) that covered bedrock and was overlain with collapse of very large stones (L138; up to 1 m long) that extended over W27 as well. Fragments of high-quality frescoes in shades of red, brown, azure and green were discovered in Loci 138 and 139. The size of the masonry stones in the foundation course and in the collapse above it, the quality of their dressing and of the fresco fragments indicate that W27 was part of a very impressive building. In light of the fresco remains and based on the ceramic finds from L139 and above bedrock that included a typical jar (Fig. 11:1), the construction of W27 should be dated to the first century CE. It seems that the building was used until the second or third centuries CE, as evidenced by the fragments of pottery vessels found between the fallen stones (L138), among them a jar that is characteristic of these centuries (Fig. 11:2). It therefore seems that this building should be considered a villa, similar to the one exposed in Caesarea (HA-ESI 112:37*$38^{*}$ ). Additional evidence, testifying to the wealth and opulence of the settlement during this period, can be seen in the rich finds that were recovered from tombs, which had been excavated in the past along the fringes of the hill (ES/ 1:94).

Stratum VI (end of the Byzantine-beginning of the Umayyad periods). A floor (L131) was exposed in the northern part of Square 3, above the collapse of Stratum VII. Due to the limited size of the excavation area, it was not clear if the stones exposed on the western side of the square, below W19, were the side of a wall that the floor abutted. Based on the ceramic artifacts above Floor 131, which included jar fragments (Fig. 11:3), as well as those below the floor (L133), its use should be dated to the sixth-seventh centuries CE.

Stratum V (Umayyad period). Two construction phases of this stratum were discovered in Squares 1 and 2 and only one such phase was in Square 3. It is unclear if each of the construction phases in Squares 1 and 2 are contemporary and to which of the phases should the wall from this stratum in Square 3 be attributed.
A level of light colored tamped earth (L125; thickness $5-10 \mathrm{~cm}$ ) in the western part of Square 1 was ascribed to the first construction phase (Va). Small kurkar stones were incorporated in this lever (thickness $3-5 \mathrm{~cm}$ ). A wall (W22), aligned east-west and preserved a single course high, was built, 0.3 m above Level 125 , of medium-sized fieldstones and ascribed to the second construction phase (Vb). A stone floor (L114) that was only exposed in the center of the square (Fig. 12) abutted W22 from the north.
A rather massive wall (W23; length 4 m , width 0.65 m , preserved height 2.5 m ) that was built of ashlar stones and gray bonding material was revealed in Square 2 and ascribed to Phase Va. The impressive dimensions of W23, which was aligned east-west and founded on bedrock, indicate that it belonged to a large public building. Walls 28 and 29 were built north of W23 in Phase Vb (see Figs. 7, 8); W29 abutted W23 from the north and W28 abutted W29 from the east. Although the walls joined each other, they were not perpendicular to each other and no floor from this phase was found. Dating the walls of Phase Vb was based on the finds recovered from the fill between the walls and between the walls and bedrock (L136, L137).
A poor wall (W25) exposed at the bottom of the excavation in the southern part of Square 3 should be ascribed to this stratum (Fig. 13). Due to the limited excavation area in the square, it is unclear whether the wall was curved or consisted of two walls.
The ceramic artifacts recovered from this layer in Square 1 included a cooking pot (Fig. 11:5) and a jar (Fig. 11:10) from the fill below Layer 125, potsherds above Layer 125 and in the fill overlaying it (L122), a cooking pot (Fig. 11:6), a cooking pot lid (Fig. 11:8), a jug (Fig. 11:9) and a lamp (Fig. 11:13) from Floor 114 and the fill above it (L127). The potsherds in Squares 2 and 3 included a bowl (Fig. 11:3), a cooking pot (Fig. 11:7) and two jars (Fig. 11:11, 12), one of which was a Gaza jar, from the fills alongside the walls (Loci 126, 132, 136, 137). Accordingly, both phases of Stratum V should be dated to the seventh-eighth centuries CE.

Stratum IV (Abbasid period). Floors and walls from this stratum were found in all three squares. Two walls that formed a corner (W11, W12) were built in Square 1, above the remains of Stratum V. The walls were constructed from medium fieldstones on the outer side and small stones on the interior. A floor (L112) of small stones and light colored tamped soil, whose northern part was only preserved, abutted W11 from the south (Fig. 14).
A wall (W26) was built in the eastern part of Square 2, parallel to W23 that continued to be used in this stratum and 0.8 m to its north. Wall 26, preserved a single course high, was built of elongated, roughly dressed stones. A floor of light colored crushed chalk and small stones (L123, L130) abutted W26 from the north. A large elliptical niche (L140; width 1.7 m , depth 0.5 m , height 0.9 m ) that opened to the north was discerned in the northern side of W23, c. 2 m above its base. The niche was built of small ashlar stones, which covered a core of fieldstones and were smaller than the original stones of the wall. The niche was ascribed to Stratum IV on account of its bottom level, which was close to the construction level
of W26 and Floor 130. A stone floor (L124) was exposed in the western part of the square. It abutted the northern side of an entry with two doorjambs that was installed in this stratum in the western part of W23. A fragment of a limestone sarcophagus lid and a round basalt grindstone were incorporated in the floor. The source of the difference in elevations (c. 1 m ) between Floor 124 and the floors that abutted W26 (L123, 130) is unclear, since Wall 15 was erected between them in Stratum III.
A northeast-southwest oriented wall (W24; see Fig. 13) was built above W25 in Square 3. Only a small section of W24, preserved two courses high, was exposed in the southern side of the square; no floor layer that abutted the wall was found.
The recovered potsherds included two bowl fragments (Fig. 11:14, 15) from the fill above Floor 112 in Square 1 and above Floor 130 in Square 2, as well as a jug fragment (Fig. 11:16) from the fill (L120) below W24 in Square 3. Accordingly, this stratum is dated to the ninth-tenth centuries CE.

Stratum III (Ottoman period). A single construction phase was ascribed to this layer in Squares 1 and 3, whereas two phases dating to the Ottoman period were discovered in Square 2. It was not possible to determine if the early phase in Square 2 (IIla) predated Stratum III in Squares 1 and 3 or if it was contemporary with them.
New courses were added to Walls 11 and 12 of Stratum IV (see Fig. 14) in Square 1. The construction in this stratum differed from that of the previous stratum; it was haphazard and used roughly dressed medium-sized kurkar stones, without an inner face of small stones. Walls 11 and 12 were abutted from the north and east by floors (L106a) of crushed and tamped kurkar (thickness 3.5 cm ).
Two rectangular pillars (W17; $08 \times 1.0 \mathrm{~m}$ ), ascribed to the first construction phase (IIIa), were exposed in Square 2 (Fig. 15). The pillars were built on top of stone collapse (L119) that was discovered above a floor from Stratum IV (L123, L130). A stone pavement (L115), in whose center was a drainage channel (?) that sloped to the east, was exposed north of the pillars. The relationship between Floor 115 and the pillars is unclear, because Wall 16 that separated between them was built in the second phase (IIIb). Wall 16 was perpendicular to Wall 15 that was also built in Phase IIIb. Wall 15, founded on Floor 124 of Stratum IV, was abutted from the west by a thin kurkar floor (L113), whose bedding of tamped soil with small stones (total thickness of the floor 0.15 m ) was laid on top of Floor 124. Floor 113 abutted from the north an opening that was installed in Stratum IV in the western part of W23. During this phase the opening was slightly raised and made narrower. A stone socket of a door hinge was found west of the opening.
Three walls that formed two rooms were built in Square 3. Walls 18 and 19 formed a corner and the eastern part of Wall 30 was located to their south (Fig. 16); the western part of W30 was destroyed during the construction of W21 in Stratum II. Floor 128, which abutted Walls 18 and 19 from the northeast, was founded on the fill (thickness 0.15 m ) that was deposited on Floor 131 of Stratum VI. Floor 111, which sealed W24 of Stratum IV, abutted W18 from the south and W30 from the north. It is unclear where was the opening that connected the two rooms, if there was one, because W18 was raised in Phase II and a staircase was built to its north.
The potsherds and glass fragments that were retrieved from the fills above and below the floors of the two phases of this stratum in Square 2 (L113, L115), including fragments of a jar (Fig. 11:17) and a pipe (Fig. 11:18), indicate that the stratum should be dated to the eighteenth-nineteenth centuries $C E$.
Stratum II (end of the Ottoman period-British Mandate era). Floors and walls from this stratum were found in all three squares.
The floors of Stratum III in Square 1, which abutted W11 and W12, were raised by means of a thin concrete layer (L106). A well-dressed rectangular stone that was probably a pillar base was also placed north of, and next to, the eastern end of W11 (see Figs. 12, 14).
Two walls (W13, W14) that formed a corner were built in Square 2 (Figs. 15, 17). Wall 13 (exposed length 5.5 m ) was founded on W15 of Stratum III and extended to the south and north, beyond the boundaries of the square. Walls 13 and 14 were abutted on the east and north by Floor 105, which superposed W16 of Stratum III and was composed of gray bedding, overlain with a thin layer of concrete. Remains of a similar floor that abutted W13 from the west were exposed in the southwestern corner of the square.
Two walls, Wall 20 in the north and Wall 21 in the south, were built in Square 3. Wall 20 abutted on W19, which belonged to Stratum III, from the east. The two walls together with W18, also from Stratum III, formed a room whose floor consisted of a light colored foundation covered with a thin layer of concrete (L110). Two steps were built in W19 and ascended westward from Room 110 to Room 104, whose floor was also a light colored bedding covered with a thin layer of concrete (see Fig. 16). A staircase was built north of W18, which was abutted from the south by W21. Bold colors, including blue, azure and yellow, were used to paint the walls of the room in this stratum.
According to the ceramic finds that included a glazed bowl (Fig. 11:19), a cup (?) fragment (Fig. 11:20) a jug (Fig. 11:21) and a pipe (Fig. 11:22) and based on the fragments of glass vessels (not drawn) found below the floors and the foundations, Stratum II should be dated to the end of the Ottoman period and the beginning of the British Mandate era.

Stratum I (1948 onward). Some of the buildings were reused after the village of Umm Khalid was abandoned in 1948. Wall 11 in Square 1 was made thicker west of the pillar that was built in Stratum II and had survived by a stone base. A sewage conduit was installed in the center of the square and a refuse pit was dug in the square's southeastern corner (see Fig. 5, marked by dotted line). A concrete sewer pipe in Square 3 was laid in the southern room next to W18 and a round iron installation was built on Floor 110 of the northern room.

Seven settlement strata were exposed in the excavation, the earliest dating to the Early Roman period and the latest to the middle of the twentieth century CE. However, the large number of potsherds from the Persian and Hellenistic periods that were discovered in the excavation, including a typical cooking pot (Fig. 11:23), indicate that the site was occupied in these periods, although no remains were discovered, probably due to the limited excavation area. The excavation findings were insufficient to determine when the fort was founded. Nevertheless, it was possible to establish with some degree of certainty that the fort was not built during the Middle Ages, since the excavation yielded only one fragment of a lamp from this period, 10-15 m from it (Fig. 11:24). The finds from the excavation, along with the results of the probe trenches, show that the site was a multi-layered tell, first settled in the Persian period. Remains of this settlement were found at a depth of c. 3 m and extended along the top of the ridge and its northern and eastern slopes, possibly even beyond them.


1. Location map.

2. Site map.

3. The fortress' southeastern tower, looking northwest.


Square 1 תיבוע





10. Square 3 , section.




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12. Square 1 , looking east

13. Southern half of Square 3, looking south.

14. Square 1, looking west.

15. Square 2, looking west.

16. Square 3, looking south.

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## Netanya (South)

## Final Report



1. Location map.

2. Flint artifacts.

During May 2006, a systematic gathering of flint artifacts was conducted at prehistoric sites in the southern part of Netanya (Permit No. A-4692; map ref. NIG 18469-516/68657-704; OIG 13469-516/18657-704), which were identified during the course of a survey
prior to construction. The gathering, on behalf of the Israel Antiquities Authority, was done by P. Spivak, with the assistance of O. Marder (scientific guidance), M. Smilanski (flint drawings) and A. 'Azab.
Over the course of the 1940s and 1950s, prehistoric sites were documented on both banks of Nahal Poleg (Burian and Friedman 1964-1965, Mitiqufat Ha-Even 6-7:1-34, Sites 18M-18MII, 18CH, 18N, 18T; Barkai et al. 1994-1995. 18X-An Epi-palaeolithic Collection from the Nahal Poleg Area. Journal of the Israel Prehistoric Society $26: 64-73$ ). Following damage that was caused to several of the sites during the construction of a new neighborhood, a survey prior to development was conducted by O. Marder and A. 'Azab (IAA). Six concentrations of flint artifacts, which were probably remains of sites on the banks of Nahal Poleg (18MII, 18M 18 X ), were identified in the survey (Fig. 1; Concentrations 2-7). Subsequent to the survey, a systematic gathering of the flint artifacts from Concentrations 2-6 was carried out.
Concentrations $2-6$ were located at the top of a hamra layer (Netanya hamra) that was partly covered with sand dunes and vegetation. The artifact density in the concentrations was low and no relation between their location and archaeological sites was evinced. Approximately a thousand flint artifacts from the Epi-palaeolithic period were gathered, representing all the stone- knapping phases from cores to finished tools. All the artifacts were covered with patina, ranging in color from yellow to white, which is characteristic of many sites from the Epi-palaeolithic period in the coastal plain. The collected artifacts included 37 tools, 31 cores, 474 waste flakes and several hundred chips of various sizes. Noteworthy among the tools are the scrapers on retouched flakes and blades (Fig. 2:1-3), retouched bladelets (Fig. 2:47) and diagonally truncated backed bladelets (Kabaran points; Fig. 2:8, 9). Most of the cores are pyramidal bladelet cores that have one striking platform. The most common elements in the debitage are the flakes (314), whereas the number of blades, bladelets and core debitage is considerably lower
It seems that the concentrations of flint artifacts were partial remains of sites, which were destroyed due to dune movement and erosion, as well as development work and construction. The multitude of retouched bladelets that are non-geometric (38\%) and especially the Kabaran points (11\%) indicates that the assemblage belonged to the Kabaran culture ( $18,000-15,000$ BCE.). A similar proportion of tool ratio is known from other sites in the region that belong to the Kabaran culture, among them Nahal Hadera V, Hefzzibah, Umm Khaled and Poleg 18X.


1. Location map.

(Volume No. HA-ESI 121 (2009
Natofa Junction, Survey of Highway 65
Final Report

2. Survey map.

3. Stone weight in cave opening (Site 14), looking west.

23/8/2009
During June 2007 a survey preceding development was conducted along Highway 65, from Golani to 'Eilabun Junctions (Permit No. A-5061; map ref. NIG 2381-6/7423-70; OIG 1881-6/2423-70), prior to widening the road. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Department of Public Works, was directed by A. Mokary, with the assistance of A. Shapiro (GPS).
Nineteen sites with antiquities were discovered in the survey (Fig. 1), including stone clearance heaps, a Roman-period road, pits, rock-cuttings, a rock-hewn winepress and caves.

Sites 1, 8, 19. Potsherds dating to the Roman period were collected.
Site 2. A stone clearance heap.
Site 3. A Roman-period road that crosses Highway 65 from west to east.
Sites 4, 5, 16. Pits hewn in limestone bedrock.
Site 6. A terrace wall (length c. 4 m ).
Sites 7, 9, 10, 11, 15. Rock-cuttings.
Site 12. A cave hewn in limestone bedrock.
Site 13. A square, rock-hewn winepress.
Sites 14, 17, 18. Cave openings. In front of one cave (14) was a weight that belonged to an olive press (Fig. 2), which was probably located within the cave.


1. Survey map.


# (Volume No. HA-ESI 121 (2009 

Nuris, Survey
Final Report
Yotam Tepper


1. Survey map.

2. Cist graves along edge of quarry, looking north.

3. Built corner of field tower, looking west.

During September 2006, a survey prior to development was conducted at the 'En Harod quarry on the Gilboa (Nuris), east of Gide'ona (Permit No. A-4892; map ref. NIG 23425-500/71550-625; OIG 18425-500/21550-625). The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Lime \& Stone Production Company, Ltd., was directed by Y. Tepper, with the assistance of A. Shapiro (GPS) and Y. Finkelstein.
The 'En Harod quarry is located in the Yehonatan stream channel, which descends from Mount Sha'ul to the Harod Valley. A burial cave was discovered in the past within the confines of the quarry (ESI 14:73).
The survey was carried out along the eastern and western slopes of the stream where field walls, stone clearance heaps, dams, installations, quarries, caves and a field tower were documented (Fig. 1). Potsherds could not be gathered because the ground was covered with pine needles and therefore, it was not possible to date the remains.

Walls that delimited cultivation plots and a few farming terrace walls were on the slopes of the stream and it was readily apparent that the area was divided into small plots. The walls were haphazardly built of fieldstones and large rocks. Three dams were located in the stream channel and c. 10 large stone clearance heaps on the eastern side of the channel attested to intensive agricultural activity in the area.
Most of the remains were on the western slopes. Two winepresses with a treading floor and a settling pit (110, 114) and another installation (101), which was probably a winepress that was partitioned into two cells whose surfaces were smoothed, were documented. Cupmarks were found on another bedrock surface (62). Five square shafts (average dimensions $2 \times 2 \mathrm{~m}$ ) filled with alluvium were identified and a hewn step was noted in one of them (57-59, 72, 97). Eight cist graves were recorded; three were located at Site 53 (Fig. 2) and the rest were distant from each other (78, 91, 92, $96,108)$. Twenty-seven cave openings were found, mostly blocked and sealed. Quarries and installations were located next to some of the caves $(7,71,84,86,88,93,95,111,121)$ and therefore, it is reasonable to assume that they were used for human activity. On the western slope was a single structure, built of large stones and preserved three courses high (Field Tower 100; $3 \times 3 \mathrm{~m}$; Fig. 3). A dozen quarrying sites, used mostly for the extraction of ashlar stones, including quarries that consisted of several rock-cutting terraces $(11,52,56,60,69,70,81,87,89,94,112,113)$, were identified.
The survey findings show a rural, farming region on the slopes of the Gilbo'a. It seems that in antiquity the region was used for agriculture, burial and stone quarrying, most likely by the inhabitants of the abandoned village of Nuris, located to the southwest of the quarry, where remains from the Bronze Age until the Ottoman period were discerned (N. Tsori, 1977, Nahalat Issahar, p. 5) or by the residents of other nearby villages.


1. Survey map.

2. Cist graves along edge of quarry, looking north.

3. Built corner of field tower, looking west.

## (Volume No. HA-ESI 121 (2009

Or 'Akiva
Final Report
Amit Shadman
During November 2003, a trial excavation was conducted in the Or 'Akiva industrial zone (Permit No. A-4044; map ref. NIG 19225-9/71413-7; OIG 14225-9/21413-7), prior to the construction of a new neighborhood. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Housing and Construction, was directed by A. Shadman.

The excavation extended across a flat sandy area ( 20 m sq ). Remains of a mosaic and a few potsherds that dated to the Hellenistic and Late Roman periods were found. It was ascertained that the archaeological finds were not in situ, but were probably brought to the site by mechanical equipment that had worked in the area.

## (Volume No. HA-ESI 121 (2009

## Parod <br> Final Report

Emanuel Damati


1. The upper part of the aqueduct, plan and section.

2. The concrete covering slabs atop the concrete Mandatory aqueduct, looking north.

3. The concrete Mandatory aqueduct above the ancien aqueduct's wall, looking north.

4. The bottom of the ancient aqueduct beneath the concrete Mandatory aqueduct, looking north.

During September-November 2000, the 'En Parod aqueduct was documented and cleaned (Permit No. A-3304; central map ref. NIG 2404/7604; OIG 1904/2604), prior to widening the road. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Department of Public Works, was directed by E. Damati (photography), with the assistance of V. Essman and V. Pirsky (surveying).

The beginning of the aqueduct is located at the spring that flows behind the trough (Fig. 1:1), which was built west of the road in the 1950s, at the initiative of Y. Ben-Zvi, the president of the State of Israel. The aqueduct (Fig. 1:2; height c. 1.5 m ) extended for a distance of 25 m and terminated at a ruinous, ancient flour mill (Fig. $1: 3)$. The walls of the aqueduct's channel did not survive in Section 2, yet its bottom can be discerned on top of the aqueduct's wall. A long winding aqueduct emerged from the base of the mill and conveyed water to several flour mills along the slope, which descends to the west of Qibbuz Parod, toward the site of Kefar Hananya. The road to Zefat was paved on top of this aqueduct and to its east, the continuation of the aqueduct that was renovated during the British Mandate, is visible (Fig. 1:4). It was built of concrete (width 0.25 m , height $0.2-0.3$ m ) on the remains of the ancient aqueduct's wall and was covered with concrete slabs that were affixed with cement to the sides of the aqueduct's channel (Fig. 2). The aqueduct continued for a distance of 36.5 m until its destruction by mechanical equipment (Figs. 1:5; 3). Plaster remains of the ancient aqueduct bottom (length c. 2.5 m , width 0.4 m ; Figs. 1: A; 4) were discovered next to the end of the concrete Mandatory aqueduct, which emerged again south of the approach road to Qibbuz Parod. Two piles of large sections of the ruinous aqueduct wall were overlain in the field near where the aqueduct was severed north of the road; these allowed reconstructing the route of the missing aqueduct sections. The continuation of the aqueduct south of the approach road began at a concrete culvert (Fig. 1:6; length c. 2.5 m ), built below the road that led to the village of Farradiya. The aqueduct turns in a sharp angle to the southeast and continues for a distance of c. 300 m in several waterfalls, to overcome the steep descent. The aqueduct wall in this section is well preserved and stands more than 3 m high in one of the waterfalls.

It is difficult to determine the precise date when the aqueduct was built, as it was only cleaned; yet it seems that its beginnings were ancient. The Jewish traveler, Rabbi Moshe Basula, who visited Kefar 'Anan (Kefar Hananya) in the 1520 s, tells of a dispute over rights to use the water from 'En Parod between the residents of Kefar Hananya, who claimed that theirs were from time immemorial, and those of the adjacent village of Farradiya. It seems that the spring water was divided between the two villages by means of a common water system. Since the residents of Kefar Hananya required large quantities of water for their ceramic production during the period of the Mishnah and Talmud, it is possible that the water system shared by the two villages was already in use during the Early Roman period.


1. The upper part of the aqueduct, plan and section.



2. The bottom of the ancient aqueduct beneath the concrete Mandatory aqueduct, looking north.
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Peqi'in Ha-Hadasha, Survey
Final Archive Report
Yoav Lerer
14/2/2009
During October 2004, a survey preceding development was conducted west of Moshav Peqiit Ha-Hadasha (Permit No. A4260; map ref. NIG 2298-302/7652-7; OIG 1798-802/2652-7), prior to enlarging the settlement. The survey, on behalf of the Israel Antiquities Authority, was directed by Y. Lerer, with the assistance of A. Shapiro (GPS), H. Abu 'Uqsa, R. Abu Raya and E. Stern.

The surveyed area extended across a rocky hill, 529 m above sea level; part of it was planted with olive trees and part was meager fallow farmland. No antiquities were found.

# (Volume No. HA-ESI 121 (2009 

## Petah Tiqwa

Final Report
Elie Haddad

2. The excavation area,
looking west.

3. Floor 107, looking west.

4. Pottery from below Floor 107.

5. Floor 127, looking north.

6. Pottery from refuse pit.

During September-October 2006, a salvage excavation was conducted in the Feja neighborhood of Petah Tiqwa (Permit No. A4912; map ref. NIG 19102-7/66585-9; OIG 14102-7/16585-9), after antiquities were damaged during construction. The excavation undertaken on behalf of the Israel Antiquities Authority and underwritten by the Petah Tiqwa municipality, was directed by E . Haddad, with the assistance of E. Bachar (administration), A. Hajian (surveying and drafting), Y. Nagar (physical anthropology), C. Amit (studio photography), E.J. Stern (identification of a lamp fragment), O. Shorr (restoration), M. Shuiskaya (pottery drawing) and N. Katznelson (glass)

Two adjacent squares (R1, R2; Figs. 1, 2) were excavated next to 31 David Remez Street, located to the east. Building remains that dated to the Early Islamic period were exposed

Remains of a floor that consisted of large fieldstones (L107; $2.0 \times 3.5 \mathrm{~m}$; Fig. 3) were found in the southern square (R1). The western side of Floor 107 was delimited by large stones. The floor continued eastward, beyond the limits of the excavation. Sealed potsherds and fragments of glass vessels were discovered beneath Floor 107 (L122). The potsherds, the latest of which dated to the Early Islamic period (eighth-tenth centuries CE), included a bowl from the Late Roman period (Fig. 4:1), a yellow glazed bowl with green and brown splashes (Fig. 4:2), a bag-shaped jar with a slight thickening on the neck from the Byzantine period (Fig. 4:3), a jug of buff ware (Fig. 4:4) and a mold-made jug fragment of buffcolored clay (Fig. 4:5), all dating to the Abbasid period. The meager glass artifacts mostly dated to the end of the Byzantine and the beginning of the Umayyad periods, including two small loop handles, several rims of small bottles and the neck of a bottle decorated with a thick, wavy trail, which was characteristic of the seventh-eighth centuries CE. Floor remains of small and medium-sized stones (L127; $1.2 \times 1.5 \mathrm{~m}$; Fig. 5) were exposed c. 0.7 m west of Floor 107 and 0.4 m lower than its level. A square installation (?; $0.6 \times 0.6 \mathrm{~m}$; not marked on plan) was discovered c. 10 cm above Floor 127. It was built of several fieldstones placed at one level and enclosed a square earthen niche $(0.3 \times 0.3 \mathrm{~m})$. It seems that no connection existed between Floor 127 and the installation, whose function is unclear. A wall stump (W113), oriented northwest-southeast, was exposed in the northwestern part of the square. It was survived by two building stones and a row of small fieldstones to their south. Wall 113 was abutted from the north by a bedding of stream pebbles that apparently extended farther to the north and west and from the south by a bedding of small fieldstones (width c. 0.7 m ).

The bottom part of a refuse pit that dated to the Ottoman period was exposed in the northern square (R2). The pit's outline was unclear. Light gray sandy soil, which contained potsherds and a few animal bones, was excavated in the pit. The ceramic artifacts included bowls from the Early Islamic period (Fig. 6:1, 2), vessels from the twelfth-thirteenth centuries CE, including a glazed yellow bowl with an incised decoration that may represent a Latin letter (Fig. 6:3), cooking pots (Fig. 6:4, 5), a fragment of a glazed lamp with a long nozzle decorated with painted stripes (Fig. 6:6) and a rim fragment of a Gaza-type krater dating to the Ottoman period (Fig. 6:7). A segment of a wall (W125) below the sandy soil in the pit was oriented northeast-southwest. A probe trench excavated north of W125 contained stone collapse and potsherds from the end of the Byzantine period and the Early Islamic period. Virgin soil was discovered beneath the stone collapse.


2. The excavation area, looking west.

3. Floor 107, looking west.

4. Pottery from below Floor 107.

5. Floor 127, looking north.

6. Pottery from refuse pit.

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Petah Tikwa-Rishon Le-ZZiyyon, Survey
Final Report
Yehuda Dagan and Dor Golan
During August 2004, a survey was conducted along the route of the wastewater pipeline from the industrial zone in Petah Tikwa to the Rishon Le-Ziyyon sand dunes (Permit No. A-4242; map ref. NIG 1860-5/6565-680; OIG 1360-5/1565-680), prior to the installation of sewers. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Union of Dan Region Cities Sewage Authority (Shafdan), was directed by Y. Dagan and D. Golan

The survey was conducted parallel to Highway 4 (length c. 16 km ), in a densely built-up urban area, where no ancient remains were visible. Eleven declared archaeological sites were examined in this survey from north to south.
(1) Map ref. NIG 18660/66785. No ancient remains were discerned on the surface at the beginning of the pipeline.
(2) Map ref. NIG 18620/66520. Several unidentified flint flakes were noted in an open field.
(3) Map ref. NIG 18500/66085. No ancient remains were discerned in an open field, where orchards were planted during the Ottoman period.
(4) Map ref. NIG 18445/65945. No ancient remains were observed in an open field along the southern bank of Nahal Ayyalon; however, it is possible that these are covered by alluvium.
(5) Map ref. NIG 18300/65700. A declared site (El-Sitt Nafisa) near the Meteorological Service, where rock-hewn tombs had been documented in the past. No ancient remains were noted during the survey.
(6) Map ref. NIG 18182/65342. No ancient remains were observed on the surface in an open field north of Nahalat Yehuda.
(7) Map ref. NIG 18130/65475. No ancient remains were discerned on the surface next to the declared antiquities site of Nahalat Yehuda.
(8) Map ref. NIG 18023/65285. A declared antiquities site at the Gan Rave Interchange; two large winepresses, installations, floors and the foundations of buildings from the Byzantine period had been exposed in the past (ES/ 13:57). No ancient remains were discerned on the surface in the survey.
(9) Map ref. NIG 17835/65170. A declared antiquities site; prehistoric artifacts and potsherds had been documented in the past in a survey. No ancient remains were noted on the surface in the current survey.
(10) Map ref. NIG 17765/65147. A declared antiquities site in the area of the sand dunes. No ancient remains were discerned on the surface in the survey, where development work had been conducted in the past.
(11) Map ref. NIG 17724/65118. A declared antiquities site in the region of the sand dunes. No ancient remains were noted on the surface in the survey, where development work had been conducted in the past.

## (Volume No. HA-ESI 121 (2009

## Qazrin

Final Report


1. Survey map.

2. Dolmen 12, looking east.


Oren Zingboym

In May 2006 a development survey was conducted in Qazrin (Permit No. A-4784; map ref. NIG 26355-440/76575-648; OIG 21355-440/26575-648), prior to enlarging one of the city's quarters. The survey, undertaken on behalf of the Antiquities Authority with the financial backing of the Ministry of Housing, was directed by O. Zingboym, with the participation of A. Shapira.
Seventeen sites were documented in the survey; most of them were identified as dolmens and several others may also be dolmens (Fig. 1)

1. A large dolmen with a burial chamber is located in a stone heap (diam. 25 m ), next to a number of trees. The dolmen is exceptionally large and well-preserved
2. A pile of stones (c. 9 m ) that is probably a stone clearance heap.
3. A pile of stones (c. 4 m ) that is probably a stone clearance heap.
4. A small dolmen with an in situ stone cover $(1.0 \times 1.3 \mathrm{~m})$, without a stone heap.
5. A large stone heap delimited by a constructed perimeter wall; parts of three courses of the wall have survived (diam. 17-20 m, height c. 1.5 m ). This is probably a dolmen.
6. A large stone heap (diam. c. 12 m ) that is probably a dolmen.
7. A stone heap (diam. c. 5 m ) with a hollow in its center that may be the burial chamber of a dolmen. Two other similar stone heaps were identified next to it.
8. A stone heap enclosed within a perimeter wall (diam. $7-8 \mathrm{~m}$, height 1.2 m ) part of which is built of two courses.
9. A square of stones located next to a farming terrace. No potsherds were noted. This is probably the remains of a building.
10. A dolmen (diam. 6 m ). The burial chamber is visible and has an in situ stone cover $(1.0 \times 1.1 \mathrm{~m})$; it was robbed in the past.
11. A dolmen (diam. c. 4 m ). The burial chamber is visible and has an in situ stone cover ( $1.0 \times 1.6 \mathrm{~m}$ ); it was robbed in the past.
12. A dolmen (diam. c. 14 m ; Fig. 2). The burial chamber is visible and raised. It has an in situ stone cover $(2.0 \times 2.5$ $\times 0.8 \mathrm{~m}$ ) and was robbed in the past.
13. A dolmen. This is probably just a stone cover.
14. A large stone heap (diam. c. 15 m ). A dolmen with a large visible burial chamber; only one stone cover survived in situ. An entrance corridor is evident and the sides of the chamber which were robbed in the past are apparent (Fig. 3). Two similar stone heaps were identified next to it (Dolmen 14b, Dolmen 14c).
15. A large stone heap (diam. c. 14 m ) that is similar to Dolmen 14.
16. A dolmen (diam. 7-9 m) that includes a visible burial chamber that is raised, which has an in situ stone cover (1.2 $\times 2.0 \times 1.0 \mathrm{~m}$ ); it was robbed in the past.
17. Four adjacent stone heaps (each c. 10 m in diam.) located in a eucalyptus grove.

In the area that was surveyed a number of dolmens and other stone heaps which may also be dolmens were identified. They are part of a larger dolmen field which extends from the vicinity of Qazrin in the north to the slopes of the Golan Heights in the south and from the Jordan/Korazim line in the west to Merhav Yonatan in the east; several dolmens were excavated in this field in the past.


1. Survey map.

2. Dolmen 12, looking east.

3. Dolmen 14, looking north.

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Qazrin
Final Report
Howard Smithline
9/2/2009


1. Location map

2. Stone heap with large unexcavated Dolmen 18 in background, looking east.

3. Dolmen 19, interior with single closing stone, looking southwest.

4. Dolmen 11 at end of excavation, looking south.

5. Dolmen 11 at end of excavation, looking northeast.

During January 2006, an excavation was conducted immediately southwest of Zavitan Street in Qazrin (Permit No. A-4673; map ref. NIG 2134-9/7665-8; OIG 1634-9/2665-8; Fig. 1), prior to the expansion of the town (Rova 10). The excavation, undertaken on behalf of the Israel Antiquities Authority and funded by the Ministry of Housing and Construction, was directed by H. Smithline (photography), with the assistance of A. Shapiro and H. Tahan (preliminary surveying and drafting under extremely trying conditions), V. Essman and V. Pirsky (surveying), M. Kipnis (drafting) and workers from Hazor Ha-Gelilit.
The expansion area was surveyed in 2005 (HA-ESI 120), revealing four dolmens and several suspected dolmens, numerous tumuli and low stone walls that served as field dividers. The dolmens are located in an undeveloped rectangular area (c. 25 dunams) that lies on a plateau west and southwest of, and contiguous to Qazrin.
The designated area is part of a large field of dolmens, five of which were excavated by C. Epstein (HA 61-62:1 [Hebrew]; 'Atiqot 17 [ES]:20-58), who dated them to Middle Bronze I (IBA). The four dolmens and an additional small dolmen at the intersection of three field walls, which was discovered after the survey was completed, were excavated

Aside from the five dolmens examined in the current excavation, the area is also strewn with many dozens of stone heaps and tumuli of varying sizes (Figs. 2, 3) that were suspected of concealing dolmens. Eighteen of them were cleared either by hand or by mechanical means. None of the stone heaps proved to be of any archaeological significance, as no antiquities in primary deposition were found. Throughout the plateau, a few scattered small and extremely worn Roman and Byzantine potsherds were collected. No skeletal remains were evident in any of the stone heaps or dolmens.

Two dolmens (Nos. 19 and 20) were found c. 42 m apart and closest to Qazrin's circumference road. Both were oriented northwest-southeast and found to have been disturbed. Dolmen 20 (length 3.1 m , width $0.60-0.75 \mathrm{~m}$, max. depth 1.26 m Fig. 4) was the better preserved. Its large capstone (c. $0.65 \times 1.8 \times 2.6 \mathrm{~m}$ ) was found, ex situ,covering only the southeastern end of the dolmen. The long walls consisted of two parallel rows of large basalt orthostatic boulders, carefully smoothed on their inner face, which were placed into a trench. A second course of basalt stones was laid upon the better worked lower course. Many of the boulders were well fitted but, where necessary, a fill of small stones was deposited (Fig. 5). Small flat basalt stones were placed beneath the orthostats for leveling and the capstone was also leveled by the laying of flat basalt platters beneath it. The northwestern end of the dolmen, which was left open for entry, consisted of small to medium-sized basalt stone walls, contrasting greatly with the adjoining orthostatic construction (Fig. 6 ). The opposite closed end comprised a single orthostat $(0.9 \times 1.5 \mathrm{~m})$. Only a remnant of the basalt floor was found in situ.

The dolmen precinct was surrounded by a poorly preserved circle of unworked basalt boulders that probably formed the outer wall of an encompassing tumulus $(6.85 \times 8.20 \mathrm{~m})$. The dolmen was devoid of finds that could assist in its dating.

Dolmen 19 (Fig. 7) was similar in construction but only partially preserved (length 2.04 m ), due to destruction of its northwestern end, possibly by modern activity. On its southwest were accumulations of recently collected small to medium-sized stones but on its northern and northeastern flank were numerous stones, which were apparently the remains of a tumulus that had covered the dolmen. The dolmen cist was relatively wide (width 0.96 m , depth 0.8 m ) and its large capstone (c. $0.7 \times 1.6 \times 2.3 \mathrm{~m}$ ) had been previously removed. A boulder, possibly from the roof, was found collapsed into the cist. All that survived of the floor were three flat basalt stones (Fig. 8). As in Dolmen 20, this dolmen had a single orthostat ( $0.85 \times 1.05 \mathrm{~m}$ ) on its closed end and was open on its northwestern end (Fig. 9). No finds were present to assist in dating the dolmen.
Dolmen No. 21, c. 500 m to the west of Dolmens 19 and 20, was similar and also partially destroyed (Fig. 10). This dolmen utilized stones larger than those incorporated in Dolmens 19 and 20. The single course of the western long wall reached a depth of 1.26 m . The capstone was found removed and the floor was completely missing. Basalt boulders were visible below the base of the parallel long walls and the floor.
This dolmen is differentiated from Dolmens 19 and 20 by the location of its closed end in the northwest and its open end in the southeast. This would appear to indicate that no special importance was attributed to the direction of the final position of the deceased. The encircling wall of significantly large boulders and the tumulus ( $5.2 \times 6.5 \mathrm{~m}$ ) that reached the height of the dolmen's top were unusually well-preserved. Once again, no finds that could be assigned to this dolmen were revealed.
The largest and best preserved dolmen was No. 11 (Fig. 11), located c. 400 m southwest of Dolmens 19 and 20 and 450 m southeast of Dolmen 21. It was situated on a low rise on the western edge of the tumulus-strewn plateau where it begins to gradually descend westward (Fig. 12). This was the only dolmen and its precinct excavated in this dolmen field that exhibited the intricate nature of an entire dolmen and tumulus complex. The complex included the large dolmen with the in situ capstone, three concentric walls and circular lines of stones and apparently, a paved strip. The entire complex was later incorporated into a series of undatable field walls that radiated from it in several directions, thereby damaging the eastern side and the southwestern corner of the tumulus.

Dolmen 11, unlike the other excavated dolmens, was built on a north-south axis with the entry in the north. Its construction was similar to the previous dolmens, although it is a more massive and impressive structure. The large in situ capstone ( $1.5 \times 2.8 \mathrm{~m}$ ), covered the entire cist and was necessarily removed by mechanical means (Fig. 13). It was placed on the long walls (length $2.30-2.45 \mathrm{~m}$ ) and on an elongated basalt lintel that bridged the gap between the two long walls above the entrance in the north. A more ordered and formal entrance was thereby created. It was built of smaller stones, as has been seen in the other dolmens, while the parallel long walls were constructed from basalt orthostats. The floor consisted of packed earth with small embedded basalt stones with no remains of flat basalt pavers.

It appears that this dolmen was covered with a tumulus that left the dolmen's top and its capstone exposed in a sort of crater. The tumulus exhibited careful planning rather than being a random pile of stones. The three concentric walls and partial circular rows of stones were technical elements that served to support and strengthen the structure of the tumulus. Wall 1103, the innermost circumference wall (diam. c. 3.5 m ) was visible, although not all the walls were intended to be seen. Wall 1114 and W1115 in the south had no exposed superstructure and were buried in the earth, creating a terracelike construction upon which stones were heaped. Wall 1104 (north-south diam. 5.4 m ) was the highest of the walls that perhaps represented the maximum height of the tumulus. It consisted of a jumble of large and medium-sized basalt stones in random courses. It also functioned as a terrace wall that supported the northern flank of the dolmen by being constructed on the only bedrock exposed in Dolmen 11. None of the other walls stood to any significant height and were mostly one-two courses high. The space between the concentric walls was occupied either by medium to large-sized stone fills or by stone and earth fills. Between the northernmost outer walls, W1104 and W1105 (max. diam. east-west 8.5 m , north-south 10.5 m ), the space was filled with tightly packed small stones (L1113) that are reminiscent of paving and possibly served as a draining channel, since the area sloped down westward. Between W1103 and the cist in the northeast of the tumulus was relatively leveled earth surface (L1108) that was perhaps intentionally created to enable convenient entrance to the dolmen (Figs. 14, 15).
Many of the stones missing from the tumulus were probably removed to be used in the numerous field walls that meander across the plateau. Three of these walls that linked with the northeast, the southwest and the southeast
sections of the tumulus damaged them. Wall 1116 ran in a general southeast direction for c. $80-85 \mathrm{~m}$, at which point it intersected with two additional field walls. The intersection of these walls was the location of a small dolmen (No. 25; Fig 16), which was a variant of the trilithon dolmens. Dolmen 25 was aligned east-west with the entrance in the east. It was freestanding on bedrock (interior width $0.4-0.5 \mathrm{~m}$ ), with walls of two-three courses high ( 1 m ; Fig. 17), reaching up to the capstone (length 1.1 m ). This is in contrast with most trilithon dolmens whose walls consist of a single large stone course. No further elements adjoining or relating to the dolmen, such as a circumference wall or tumulus, were identified. The clearing of the dolmen revealed no archaeologically significant material. A single Ottoman-period tobacco pipe fragment was found on the west side of the dolmen.
It should be mentioned that an outstanding dolmen (No. 18; Fig. 18) of extremely large dimensions was discovered during the survey on a small hillock overlooking the plateau, but it was located outside of the present designated development area and thus beyond the mandate of the present excavation. This dolmen was completely subsumed within an immense tumulus (diam. 22 m ), leaving its capstone partially exposed.

In addition to the five excavated dolmens, eighteen stone heaps of varying diameters and heights were dismantled and excavated-ten by hand and eight by mechanical means. None of the heaps yielded any indication that it was utilized for any function other than a depository for cleared stones.

Several well-known concentrations of dolmens exist in the north of Israel and the Golan Heights, namely the Korazim Plateau in the eastern Galilee, the vicinity of Qibbuz Shamir in the upper Galilee and the northern and central Golan Heights. Due to the sparse finds in and associated with dolmens, their dating has been a subject of discussion and debate for ever since the inception of dolmen research.
Current dolmen research focuses on two periods for dolmen chronology: Early Bronze II-III (EB II-III) and the Intermediate Bronze Age (IBA). The EB II dating of the Golan dolmens is essentially based on settlement patterns and dynamics and not on rarely found artifacts in primary deposition within dolmens that may have experienced several periods of utilization. This theory posits that the relatively close proximity of EB settlements to dolmen fields supports dating the dolmens to this period (Vinitzky L. 1992. The Date of the Dolmens in the Golan and the Galilee: a Reassessment. Tel Aviv 19:100-112). The dating of the Golan dolmens to the IBA is determined by the finds, no matter how sparse, which have been retrieved from dolmens during excavations or surveys. The most common early pottery associated with the Golan dolmens is dated to IBA. This theory does not accord EB II-III settlement patterns any decisive significance in the determination of the dolmens' dating.
Unfortunately, the dolmens reported on here do not add any new insights to this chronological dichotomy.
Antiquities in primary deposition were not found in any of the excavated dolmens or in the clearing of stones. The lack of datable finds was quite out of the ordinary as only a few worn potsherds from the Roman and Byzantine periods were recovered.
The lack of a common construction axis in the five excavated dolmens, as well as the absence of a common direction for the entrance, indicate that these assumed ritual aspects of burial were of no importance. It further emphasizes the secondary burial aspect of these tombs, involving the interment of bones rather than the interment of complete articulated individuals.
The many low stone walls dispersed across the landscape date to a time of increased agricultural productivity and should be accredited to the Roman and Byzantine periods, when the population of the Golan Heights was possibly at its highest. Supporting this dating is the near monopoly of potsherds from the Roman and Byzantine periods that were present on the plateau.


1. Location map

2. Stone heap with large unexcavated Dolmen 18 in background, looking east.

3. Stone heap with large Dolmen 18 in right background, looking east.

4. Dolmen 20, plan and sections.

5. Dolmen 20, interior, looking southeast.

6. Dolmen 20, view toward entrance, looking northwest.

7. Dolmen 19, plan and sections.

8. Dolmen 19, interior with remnant of stone floor, looking northeast.

9. Dolmen 19, interior with single closing stone, looking southwest.



10. Dolmen 11, looking southwest.

11. Dolmen 11 before removal of capstone, looking southeast.

12. Dolmen 11 at end of excavation, looking south

13. Dolmen 11 at end of excavation, looking northeast.

14. Dolmen 25, plan and sections.

15. Dolmen 25, looking west.

16. Unexcavated Dolmen 18, looking southeast.

## (Volume No. HA-ESI 121 (2009

Qazrin
Final Report


1. Plan and section.

2. General view to the southeast.

3. Floor 104 and Sounding 105, looking northwest.

Oren Zingboym

During September 2005, a trial excavation was conducted near the entrance to Qazrin Park (Permit No. A-4600; NIG 26606/76597; OIG 21606/26597), prior to the construction of a new service path in the park. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Qazrin Local Council and the Jewish National Fund, was directed by O. Zingboym, with the assistance of Y. Ya'aqoby (administration), V. Essman (surveying), L. Kupershmidt (metallurgical laboratory), H. Tahan (pottery drawing), Y. Gorin-Rosen (glass), and D.T. Ariel (numismatics).
The site had been surveyed in the past (Judaea, Samaria and the Golan: Archaeological Survey 1967-1968, Site 84) and excavations at the site revealed 10 habitation levels, mostly dating to the Byzantine (fifth-eighth centuries CE) and Mamluk (thirteenth-fifteenth centuries CE) periods, as well as a synagogue and adjacent buildings that were dated to the Byzantine period (ESI 4:90-94; Biblical Archaeology 51 [1988]:44-56).
The excavation ( $4 \times 6 \mathrm{~m}$ ) was carried out along the southwestern fringes of the site, in a flat area that gently descends to the west, toward a wadi that separates the settlement site from the ancient cemetery. The remains of two buildings (Figs. 1,2 ) were exposed 0.1 m below surface. A wall in the eastern part of the area (W1) was oriented north-northeast-southsouthwest. It was probably the outer wall of a building in which an opening (width 0.6 m ) was set. The eastern corner of another structure (W2, W3) in the western part of the area was preserved three courses high. It was founded on bedrock and built of fieldstones and roughly hewn stones in dry construction. A plaster floor (L104) that overlaid a bedding of tamped earth and abutted W1, was discovered in a sounding (L105; Fig. 3). The plaster layer may have served as a foundation for a small-stone pavement, as evidenced by several stones that survived at this level. It seems that this floor extended across the area between the buildings.

The fragments of pottery vessels discovered beneath the floor level (L105) belonged to Kefar Hananya ware (third-fourth centuries CE) and included bowls (Fig. 4:1-3), a cooking pot (Fig. 4:4) and a jar that was very common to sites from the fourth century CE in the Galilee (Fig. 4:5). Other artifacts from this locus included a few fragments of glass vessels that dated to the third-fourth centuries CE and six coins (IAA Nos. 111582-111587) from the third-fourth centuries CE, the latest of which was minted in the year 383 CE (IAA No. 111587). It therefore seems that the buildings were founded in the Late Roman period (latter part of third century CE) and were in use until the beginning of the Byzantine period (end of fourth-beginning of fifth centuries CE). The location of the buildings indicates that the settlement extended across an extensive area at the beginning of the Byzantine period (fourth century CE ) and not just in the fifth-sixth centuries CE , as the excavators of the site had previously thought; it reached at least as far as the excavation area and possibly even south of it.

4. Pottery.

2. General view to the southeast.

3. Floor 104 and Sounding 105, looking northwest.

4. Pottery.

## (Volume No. HA-ESI 121 (2009

## Ramat Gan

Final Report
Felix Volynsky 20/9/2009

3. Tabun (L133), looking east.

8. Pottery.

10. Bronze handle.

11. Decorated iron knife.

During August-September 2005, a salvage excavation was conducted on Ha-Tayyasim Road in Ramat Gan (Permit No. A-4571; map ref. NIG 18259-63/66160-3; OIG 13259-63/16160-3), prior to the construction of a community center. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ramat Gan municipality, was directed by F. Volynsky, with the assistance of E. Bachar (administration), A. Hajian (surveying), T. Sagiv (field photography), C. Amit (studio photography), P. Gendelman (pottery reading), C. Hersch (pottery drawing), D.T. Ariel (numismatics), and M. Ajami, D. Barkan and E. Yannai (IAA Central district) and workmen from Tel Aviv.

The excavation was carried out along the lower eastern slope of a kurkar hill where previous excavations that reveled building remains and installations from the Byzantine and Early Islamic period had been carried out (ESI 13:48-50; HA-ESI 111:38*-39*; Permit No. A-3764).
Seven excavation squares were opened and excavated to a depth of 1.5 m . Building remains, which belonged to one or more structures that dated to the latter Byzantine and the Early Islamic periods, were exposed (Fig. 1). The general plan of the buildings is unclear due to the scattered setting of the excavation squares.

The remains are herewith described from north to south and east to west.
The northern walls of the building (W9, W10) were built of various sized fieldstones, without bonding material. A stone collapse (L146) in Sq A1, south of W10, probably originated from this wall. Poorly preserved walls below the collapse (W1, W2, W17, W18; Fig. 2) and south of it (W11) were apparently part of partition walls that separated between the rooms of the building. A fieldstone floor (L107) abutted W1 on the south. East of this floor and west of W11 was a section of a plastered floor (L127) that did not abut any of the walls, although its elevation corresponded to that of Floor 107 and the two floors were apparently contemporary.

A wall (W3), perpendicular to W9, was exposed in Sqs B1-B2. A doorway in this wall (width 1 m ) led to a room (L120; $4 \times$ 10 m ). Room 120 was enclosed by Wall 5 on the south, Wall 4 on the east and a small section of Wall 6 in the north, which could have been a partition. Wall 4 was built of mud bricks ( $0.3 \times 0.6 \mathrm{~m}$ ) and additional wall sections (W7, W8), which did not connect to a coherent plan, were exposed to its east. A tabun (L133; diam. 0.9 m , height 6 cm ; Fig. 3) was discovered to the south of W8.
Another room (L143; $3 \times 3 \mathrm{~m}$; Fig. 4), enclosed by four walls (W13-W16), was exposed in the southern part of the area. It is possible that W14 was the southern extension of W3. The floor of the room that comprised stone slabs of various sizes abutted the walls, except for W16.
Another wall (W12), to the east of this room, did not connect to any plan and was probably part of another room. An installation, built of debesh with a plaster floor (L144; Fig. 5) was exposed east of W12. A clay basin (L148), probably used in processing liquids, was discovered on top of the floor.

Fill beneath the building's floors (L142, L145, L149-151) contained various pottery vessels, including a cooking krater (Fig. 6:1), a lid (Fig. 6:2), bag-shaped jars (Fig. 6:3, 4) and globular jars (Fig. 6:5, 6) that dated to the end of the Byzantine and the beginning of the Umayyad periods. The ceramic assemblage on the floors of the building (L120, L126, L135, L138, L143) was richer and included bowls (Fig. 7:1, 2), kraters (Fig. 7:3, 4), cooking pots (Fig 7:5-9), lids (Fig. 7:10-12), jars (Fig. 7:13, 14), a bowl/lid (Fig. 7:15) and a jug (Fig. 7:16) that dated to the Umayyad and Abbasid periods (eighth-ninth centuries CE). The pottery vessels in the fills that covered the building remains (L101, L105, L108) included bowls (Fig. 8:1-3, 7, 8) and a cooking pot (Fig. 8:9) that mostly dated to the end of the Crusader-beginning of the Mamluk periods (thirteenth century CE). A few bowls (Fig. 8:4-6) probably originated in earlier strata.
Noteworthy among the metal artifacts recovered from the excavation was a bronze funnel in an excellent state of preservation that filled oil into lamps (Fig. 9). Similar lamp filler from the Early Islamic period had been discovered in the previous excavation (ES/ 13: Fig. 45). A bronze handle (Fig. 10) among the finds most likely belonged to a large bronze vessel; a similar handle, dated to the Early Islamic period, was discovered in an excavation at Mazliah (Permit No. A5331). An iron knife, decorated with a bronze strip that separated the blade from the handle was another exclusive find (Fig. 11). A similar knife from the Early Islamic period, but without the strip decoration, was discovered in the excavations at Holot Yavne (HA-ESI 118).
A coin that is dated to the Umayyad period (698-750 CE; mint of Ramla; IAA No. 109629) was found above W3 (L117); two more coins from this period (IAA Nos. 109630, 109631) were discovered in the excavation.

It is estimated that the building was erected in the second half of the seventh century CE and continued in use during the Umayyad and Abbasid periods (eighth-ninth centuries CE). It was probably part of the nearby site that dated to the same periods.

2. Square A1, looking south.

3. Iabun (L133), looking east.

4. Building corner (L143), looking north.

5. Installation (L144), looking south.

6. Pottery.




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7. Pottery.


F/B/




7 $\overbrace{9}$
8. Pottery.


11. Decorated iron knife.


1. Map of the survey.

During July 2007, a one-day survey was conducted at the Morasha Interchange (Permit No. A-5187; map ref. NIG 18500-737/66975-7094; OIG 13500-737/16975-7094), prior to its expansion. The survey, on behalf of the Israel Antiquities Authority, was directed by U. 'Ad, D. Barkan and E. Jakoel, with the assistance of A. Dagot (GPS).

The survey was conducted along routes of future-paved roads and their environs (Fig. 1). The survey area was located in a region of hamra hills, whose tops have sandy soil and along their fringes the soil is heavier. Part of the survey area was covered with vegetation or refuse, which hindered the field work. Most of the area lies along the southeastern fringes of the Herzliyya survey map (R. Gophna and E. Ayalon, 1998, Map of Herzliyya [69]). A cemetery with stone coffins, remains of kilns for the manufacture of glass, remains of a bathhouse and numerous ceramic artifacts from the Late Roman, Byzantine, Early Islamic, Crusader and Ottoman periods were documented in this region of the Map of Herzliyya (Site 95, Skeikh esh-Sa'ad). North of the documented cemetery, settlement remains from the Ottoman period and a Bedouin cemetery were recorded.
The survey area was divided into 15 sub-areas. Areas $1,3,5$ and 14 were characterized by hamra soil that was often sandy and included a few fragments of pottery vessels from the Ottoman period and the British Mandate time. Area 2 was difficult to survey because of its high vegetation cover. Areas $4,9,10,12$ and 15 were overlaid with large quantities of modern refuse. Areas 6,11 and 13 were characterized by hamra soil that was often sandy and devoid of potsherds. Area 7 had citrus orchards and vegetation that was difficult to survey. Area 8 consisted of sandy hamra soil, covered with citrus orchards and lacking potsherds. Three sites (A-C) were documented in the survey. At Site A (map ref. NIG 18551/67058; OIG 13551/17058) a dense scattering of potsherds (diam. in excess of 10 m ) that dated from the Roman until the Early Islamic periods was documented. At Site B (map ref. NIG 18575/67051; OIG 13575/17051), several roughly dressed kurkar masonry stones, scattered across a small area, were documented. At Site C (map ref. NIG 18567/67054; OIG 13567/17054) was a scant scattering of potsherds and fragments of sandstone were discerned in an area (diam. 3-5 m).


1. Map of the survey.
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Ramat Yishay
Final Report

2. Plan.

3. Pottery.

Aviram Oshri

/7347: OIG
During May 1998, a salvage excavation was conducted at Ramat Yishay (Permit No. A-2866; map ref. NIG 2164/7347, OIG $1664 / 2347$ ), prior to construction work. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by
Y. Cohen, was directed by A. Oshri (photography and archaeozoology), with the assistance of Z. Gal (surveying and drafting), E.J. Stern (pottery reading) and G. Midbari (pottery drawing).
Two strata were exposed in the opened area ( 50 sq m ). The early stratum dated to the Early Islamic period and the later one, which consisted of three architectural phases, was from Mamluk period.

Several fragments of bowls (Fig. 2:1, 2) from the Byzantine period, without architecture, were found on bedrock.
The earliest architectural feature was a cylindrical rock-hewn pit, not plastered (L8; diam. and depth 1.7 m ; Fig. 1); its sides were cracked and it may have been used as an underground granary. Sealed in the pit were potsherds from the Umayyad period, including three black burnished bowls decorated with incising (Fig. 2:3-5), jugs (Fig. 2:6-8) and juglets (Fig. 2:9, 10).
Three separate architectural units that may attest to three phases from the thirteenth and fourteenth centuries CE were identified on bedrock. Building I (L4; W5, W9, W10) was the earliest of the structures and a built installation was found in it. Building II (L7) had a wall (W1) and a plaster floor that abutted it from the south; below the floor was a table amphora from the Mamluk period (Fig. 2:12). Building III (L6) included Walls 3 and 4. South of Wall 4 (L5) and above the opening to Pit 8 was a concentration of bones and complete vessels, in situ, including a brown-glazed bowl (Fig. 2:11) and a cooking pot with horizontally set loop handles from the Mamluk period (Fig. 2:13). A few glass fragments were also collected. The animal bones included goat, cattle and non-diagnostic fowl from the Early Islamic period and horse, cattle, two upper jaw bones of swine, fowl, and pieces of turtle shell from the Mamluk level.


1. Plan.


# (Volume No. HA-ESI 121 (2009 

Ramla
Final Report

Hagit Torge

17/12/2008


1. Plan and sections.

2. Pottery: bowls, kraters and jars.

3. Pottery: jugs, flasks and a

NIG 188564
During August 2003, a trial excavation was conducted in the Ramla military cemetery (Permit No. A-3973; map ref. NiG 188564-790/198680-90; OIG 138564-790/148680-90), prior to expansion work. The excavation, on behalf of the Israel Antiquities
Authority, was directed by H. Torge, with the assistance of V. Essman and V. Pirsky (surveying), T. Sagiv (field photography), Y. Authority, was directed by H. Torge, with the assistance of V. Essman and V. Pirsky (survey
Arbel (backhoe inspections), M. Avissar (pottery reading) and M. Shuiskaya (drawing of finds).
Excavations in the vicinity of the site, which is located west of the White Mosque and east of and adjacent to Weitzmann Street, had been conducted in the past ('Atiqot 2:96-103; HA-ESI 109:65*-66'; HA-ESI 120; HA-ESI 120; Permit No. A-3459).
Two adjacent squares were excavated and three settlement phases that consisted of plaster floors and robber trenches were discovered (Fig. 1).

Phase 3. Remains of walls (W1, W2), robber trenches and plaster floors (Loci 105-107; average elevation 79.64 m) were exposed. Most of the walls were dismantled and robbed in later periods and the shape of a building can only be discerned by the outline of the remaining trenches. Fragments of pottery vessels, mostly from the Abbasid period, were found, including bowls (Fig. 2:1, 2, 4, 5), jars (Fig. 2:13, 14, 16), jugs (Fig. 3:3, 6) and a flask (Fig. 3:11). Below this phase were levels of tamped soil (Loci 108, 109, 113), which were used as floor beddings and also dated to the Abbasid period. The ceramics in these levels included bowls (Fig. 2:3, 6-10), jars (Fig. 2:15, 17), jugs (Fig. 3:4, 7, 8), a flask (Fig. 3:9) and a lid (Fig. 3:12). The transition from Phase 3 to the layer of natural sand (L112) included part of a pale white, buff jug (Fig. 3:2) and a flask (Fig. 3:10).

Phase 2 was a meager habitation level that consisted of chalk floors mixed with tamped earth (Loci 103, 104; average elevation 79.87 m ). Wall 2 from Phase 3 was negated and the tops of the stones were used as pavement. A septic pit whose borders were indistinct (L110) was found. This phase was also dated to the Abbasid period and it contained pottery fragments that included bowls (Fig. 2:11, 12) and jugs (Fig. 3:1, 5).

Phase 1. Part of a residential building (elevation $80.44-80.54 \mathrm{~m}$ ) whose walls were robbed was exposed. However, it was possible to trace the foundations and the robber trenches of the walls (RT10-RT12). Plaster floors (Loci 101, 102) were exposed between the walls. The eastern half of a tabun foundation (L101A) was discovered on top of Floor 101.

The limited scope of the excavation and the robbery of the stones made it impossible to determine the plan of the remains; yet, the variety of vessels that dated to the Abbasid period seems to suggest that this was a short-lived residential area




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3. Pottery: jugs, flasks and a lid.

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Final Report


1. Location map.

2. Square 1, pottery (cont.).

3. Square 2, pottery

4. Head of a zoomorphic vessel.

5. The fabric piece

Yossi Elisha
During June 2004, a trial excavation was conducted on Danny Mass Street in Ramla (Permit No. A-4198; map ref. NIG 18775-85/6484-5; OIG 13775-85/1484-5). The excavation, undertaken on behalf of the Antiquities Authority and underwritten by the Israel Postal Authority, was directed by Y. Elisha, with the assistance of E. Bachar (administration), A. Hajian (surveying), T. Sagiv (field photography), A. Re'em (antiquities inspection prior to excavation), C. Amit (studio photography), R. Vinitsky (metallurgical laboratory and organic material), Y. Bukengolts (pottery restoration), M. Shuiskaya (pottery drawing), O. Raviv (stone laboratory), I. Lidski-Reznikov (drawing of stone artifacts) and G. Bijovsky (numismatics). A. Lester will separately publish the special finds from this excavation.

Two squares ( $1-4 \times 4 \mathrm{~m} ; 2-3 \times 4 \mathrm{~m}$ ) were opened in an area adjacent to the post office building (Fig. 1), c. 250 m east of the excavation by O. Shmueli (Permit No. A-3897) and c. 500 m east of the White Tower.

Square 1. A section of a floor ( $\mathrm{L} 19 ; 0.1 \times 0.1 \mathrm{~m}$ ), composed of gray bonding material, was exposed in the southern balk of the square (Fig. 2). Several small fieldstones (L10) that probably belonged to the floor bedding were found about half a meter to the west. Below the floor was an occupation level (L20) that included the remains of another floor and a burnt area. East of this floor was a section of a wall (W18), founded on a layer of sand. The wall, which extended to the northern side of the square, was built of fieldstones ( $0.10 \times 0.15 \mathrm{~m}$, height 0.5 m ). A Byzanto-Arab coin (IAA 75805) that dated to the middle of the seventh century was recovered from this layer (L14).
Square 2. A floor of gray bonding material (L16; $0.6 \times 1.0 \mathrm{~m}$ ) was exposed and below it was a thin layer of tamped chalk (L17) that may also have been used as a floor. Below the chalk layer was a fill (L15) that contained a wide variety of potsherds and stone and metal artifacts, all of which dated to the Early Islamic period-the ninth and tenth centuries CE.

## The Pottery

Miriam Avissar

Square 1. The small assemblage of typical Early Islamic pottery in this square consisted of glazed bowls, plain unglazed bowls, bowls of Fine Byzantine Ware, basins, small kraters, cooking bowls, storage jars, jugs, flasks, bottles and Antiliya jars.
Most of the glazed bowls (Fig. 3:1, 2, 4, 5) could be identified by their fabric as Common Glazed Ware (Avissar M. 1996. The Medieval Pottery. In A. Ben-Tor, M. Avissar and Y. Portugali. Yoqne'am I: The Late Periods [Qedem Reports 3]. Jerusalem. Pp. 75-78). The small bowl with scalloped rim (Fig. $3: 2$ ) is an uncommon form in this ware. The bowl in Fig. 3:3 could be identified as the imported Coptic Glazed Ware. The unglazed bowls (Fig. 3:6-9) are of known forms in the Ramla district and probably of local production. The many bowls of the so-called Fine Byzantine Ware (Fig. 3:10-16) were mostly decorated with red, black and white painted patterns. The main forms belong to Magness' forms 1D, 1E, 2A and 2B, all dating from the late seventh-early eighth centuries to the ninth-tenth centuries CE (Magness J. 1993. Jerusalem Ceramic Chronology, circa 200-800 CE. Sheffield. Pp. 193-201). The large basin with combed decoration (Fig. $3: 17$ ) is a well-known and long-lived form already in Late Byzantine assemblages. It continued nearly unchanged until the tenth century CE, if not later. The small kraters (Fig. 3:18-20) are a typical form in ceramic assemblages from Ramla and its vicinity. The sole cooking vessels in this assemblage are the cooking bowls (Fig. 3:21), which is another long-lived form. These large thin-walled pots with handles placed well below the rim are typical of the Early Islamic period. Storage jars with plain necks (Fig. 4:1, 2) are common during the Early Islamic period (Avissar 1996:147-149, Storage Jar Types 4 and 5). Jugs made of buff clay (Fig. 4:3, 4) are the hallmark of the Early Islamic period. Jugs with plain neck, as well as the molded jugs, are a product of the Ramla workshops. The flask with a ridged cup-like neck (Fig 4:5) can be found in post-Umayyad assemblages. Small grenade-shaped bottles (Fig. 4:6, 7) are common and used for storing various liquids. The very popular Antiliya vessels (Fig. 4:8) were used for drawing water from the small cisterns that abound in Ramla.

The modest assemblage from Square 1 seems to be rather restricted chronologically, since fine glazed wares and glazed cooking wares are still absent. Some of the vessel types, such as the Fine Byzantine Ware, may appear during the first half of the eighth century CE, while the glazed ware and most of the buff ware vessels begin to appear only during the second half of the eighth century CE. A time span from about the middle of the eighth century CE or slightly earlier to the middle of the ninth century CE at the latest, seems to be adequate for this assemblage.

Square 2. The assemblage from this square seems to be slightly later, as it contained forms that were not found in Square 1. Besides common glazed bowls (Fig. 5:1-3), it also yielded fine glazed bowls (Fig. 5:4, 5; see Avissar 1996:7882), a luster-ware bowl (Fig. 5:6; see Philon H. 1980. Benaki Museum Athens, Early Islamic Ceramics, Ninth to late Twelfth Centuries. London.
Pp. 163-181, No. 454), imported Chinese celadon (Fig. 5:7, 8; see Medley M. 1989. The Chinese Potter. A Practical History of Chinese Ceramics [Third edition]. Oxford. Pp. 115-118), as well as local Fatimid glaze ware (Fig. 5:9; see Avissar 1996:87-90), all datable to the tenth and eleventh centuries CE. The plain, unglazed bowls of buff clay (Fig $5: 10-12$ ) are a common product of the Ramla workshops. Fine Byzantine Ware bowls(Fig. 5:13, 14)were less popular in this square. Glazed cooking ware, such as the glazed frying pan (Fig. 5:15) only appeared toward the end of the ninth century CE. The storage jar with plain rim and combed shoulder (Fig. $5: 16$ ) seems to be a local product of the Ramla area, while the storage jar with heavy ridged rim (Fig. $5: 17$ ) seems to originate from Jerusalem or its vicinity (Magness 1993:230-231, Storage Jars Form 7). The buff-ware jugs (Fig. 5:18, 19) occur from the second half of the eighth until the end of the eleventh centuries CE; triple-strand handles with an elaborate thumb-rest seem to be a rather late fashion. So are the table jars with cut decoration (Fig. 5:20). The buff potsherds with impressed and gouged decoration (Fig. 5:21), or with incised and pin-pricked design (Fig. 5:22) appear to be residual. Vessels with such decoration were already extinct in the Fatimid period. The fragmentary head of a zoomorphic vessel (Fig. 6) represents a class that is known as early as the Umayyad period, yet it is unclear until when these vessels were in use.

The small assemblage from Square 2 seems to date mainly to the tenth-eleventh centuries CE, whereas some of the vessels are probably residual.

## A Textile Fragment

Orit Shamir
A few pieces of the same textile that adhered to a bronze artifact were found at the site, which is dated by the excavator to the ninth-tenth centuries CE. The pieces (biggest $4.5 \times 4.5 \mathrm{~cm}$; Fig. 7) were preserved due to the bronze's corrosion. A plain weave technique was employed for the linen warp and the cotton weft, both having a density of 19 threads per cm. The warp is S-spun medium and its threads are thinner than those of the Z-spun (clockwise) weft. The threads were probably undyed, although due to the bronze corrosion, they were colored light green.

This textile is unique to the site and only a few such textileswere discovered in the country, e.g., at Qarantal Cave 38(A. Baginski and O. Shamir. 2001. The Textiles, Basketry and cordage from Qarantal - Cave 38: the First Medieval Assemblage Discovered in Palestine. Archaeological Textiles newsletter 32, 2001, pp. 19-21). The use of cotton and
linen in the textile produced both soft and strong weavings. The linen fibers were longer, stronger and smoother than the cotton ones, hence their use for the weft. Linen and cotton were both available to the local weavers, yet the cessation of cultivating linen in Palestine prompted the weavers to use cotton to a greater extant, although linen was stil appreciatedby the weavers and their customers

The traditional weaving direction in Israel, from the Neolithic period to Medieval times, was S-spun (anti-clockwise) unlike cotton from India, South Arabia, Iran and Iraq that was generally Z-spun (Mackie L.W. 1989. Textiles. In W. Kubiak and G.T. Scanlon. Fustat Expedition Final Reports 2, Fustat C. Winona Lake. Pp. 88-89).


1. Location map


תיבוע 2 Square



4. Square 1, pottery (cont.).


$\frac{\text { 6. Head of a zoomorphic vessel. }}{0}$

7. The fabric piece
(Volume No. HA-ESI 121 (2009

## Ramla, Smolenskin Street

## Final Report

Ronit Korin


1. Plan.

2. Pottery.

During October-November 2007, a salvage excavation was conducted on Smolenskin Street in Ramla (Permit No. A-5283; map ref. NIG 187448-76/649176-209; OIG 137448-76/149176-209), in the wake of construction work. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by H. Mu'alem, was directed by R. Korin, with the assistance of E. Bachar (administration), M. Kunin (surveying and drafting) and T. Sagiv (field photography).
Ancient remains of the city of Ramla that dated to the Abbasid period had previously been exposed nearby (Permit Nos. A-4774, A-4814, A-4929; HA-ESI 117, HA-ESI 117, HA-ESI 117, HA-ESI 120).
Two half squares were opened, revealing meager architectural remains that attest to settlement or agricultural activities along the southeastern fringes of the city of Ramla in the Abbasid period (Fig. 1).
A north-south oriented wall (W105; length c. 2.5 m , width c. 0.5 m ) that had survived by a single course of small fieldstones (size up to 9 cm ) was exposed in Square A. Northwest of the wall, a habitation level (L104), which contained a few lumps of charcoal and fragments of pottery vessels from the ninth century CE, including a krater (Fig. 2:6) and juglet (Fig. 2:10), was exposed. The layer of fill (L107) beneath Level 104 contained a number of pottery fragments, including a cooking pot (Fig. 2:5) that dated to the ninth century CE.
A north-south oriented wall (W102; length c. 1.2 m , width c. 1 m , height 0.5 m ), built of medium-sized fieldstones (length c. 15 cm ) and preserved five courses high, was exposed in Square B. The wall was probably a terrace wall. The layers of fill (Loci 103, 106) to the south of the wall contained fragments of bowls (Fig. 2:1, 3).
Mixed ceramic finds were discovered on surface (Loci 100, 101), including bowls (Fig. 2:2, 4), a jar (Fig. 2:7), a jug (Fig 2:8) and a lamp fragment (Fig. 2:9) that dated to the ninth-tenth centuries CE.



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2. Pottery.

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 Ramla, Yehoshu‘a Ben-Nun Street Final Report

1. Location map.

2. Plan and section.

3. Drainage pit and pipes leading to it, looking northwest.

4. Pottery and glass vessels.

During September-October 2006, a salvage excavation was conducted at 3 Yehoshu'a Ben-Nun Street in Ramla (Permit No. A4914; map ref. NIG 187657-78/648015-40; OIG 137657-78/148015-40), prior to construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and funded by H. Danaf, was directed by E. Kogan-Zehavi, with the assistance of E. Bachar (administration), A. Hajian (surveying), A. Dagot (GPS), R. Lupu (preliminary probes), L. Belashov (drafting), N. Katsnelston (glass) and C. Hersch (pottery and glass drawing).
The excavation was carried out in the western part of a lot (c. 300 sq m ; Fig. 1). A single square (c. $3 \times 6 \mathrm{~m}$ ) was opened, revealing the remains of three floors and a drainage system of a building from the Abbasid and Fatimid periods.

Phase I. A white lime floor, in which a ceramic pipe was incorporated, was exposed in the eastern end of the square (L108; Pipe C; Fig. 2). The pipe extended from north to south and emptied into a drainage pit, built of rectangular ashlar stones and located at the southern end of the square (Fig. 3). Due to safety constraints and time limitations the pit was not excavated and only its square opening was exposed. Potsherds overlaying the floor included bowls (Fig. 4:1, 2), a krater (Fig. 4:3), jugs (Fig. 4:4,5) and a complete juglet (Fig. 4:6), all dating to the Abbasid period.
Phase II. A gray plaster floor (L106) was laid above the first phase. Part of the floor was exposed on the western side of the area. A ceramic pipe (Pipe B) that ran from northwest to southeast and emptied into the drainage pit was incorporated into the floor, which was overlain with pottery vessels, including a bowl (Fig. 4:7), jugs (Fig. 4:9, 10) and a glass lamp and beaker (Fig. 4:11, 12), all from the Abbasid period.
A thin wall (W1; thickness c. 0.1 m ), oriented northeast-southwest, was exposed in the western side of the square. It was built of small stones and coated with gray plaster. Gray plaster floors (Loci 113, 114) abutted both sides of the top of the wall from the north and south. The meager amount of ceramic finds found on Floor 113 included a bowl (Fig. 4:8) that dated to the beginning of the Abbasid period. This was probably part of an installation, maybe the drainage system that was discovered in the southern part of the square. Floors 114 and 106 may have been connected, although the limited excavation precluded confirmation.
Phase III. Overlaying the Phase 2 remains was a floor that had a bedding of small stones, bonding material and a layer of white plaster (Loci 101, 102). A stone pavement, survived by a single fragment in situ, was laid on top of the white plaster. A pipe that consisted of ceramic sections (Pipe C), which emptied into the drainage pit, was incorporated into the bedding of the floor, along a route identical to Pipe B. The finds on the floor and in the bedding included bowls (Fig. 4:1315), a krater (Fig. 4:16) and a jar (Fig. 4:17), all dating to the Fatimid period.


1. Location map.




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4. Pottery and glass vessels.

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## Ramla, Herzl Street

Final Report

2. Plan and section.

3. Pit 103, looking north.

5. Installation 108, looking north.

7. Pottery and stone artifacts

11. Fragments of deformed glass vessels and lumps of raw glass.

## Hagit Torge

During February 2006, a trial excavation was conducted in a private lot on 53 Herzl Street in Ramla (Permit No. A-4714; map ref. NIG 187840-56/648670-93; OIG 137840-56/148670-93; Fig. 1). The excavation, on behalf of the Israel Antiquities Authority, was directed by H. Torge, with the assistance of E. Bachar (administration), V. Essman and V. Pirsky (surveying), A. Dagot (GPS), C. Amit (studio photography), M. Shuiskaya (pottery drawing), N. Katsnelson (glass reading), O. Shorr (glass restoration) and C Hersch (glass drawing).
The excavation area was located northeast of the Ramla police station. Nearby, to the southwest of the station, extensive areas had previously been excavated by O. Gutfeld, on behalf of the Hebrew University (HA-ESI $109: 65^{*}-66^{*}$ ) and R. Toueg, on behalf of the University of Haifa (HA-ESI 118). An excavation was also conducted next the Pool of the Arches, c. 50 m northeast of the current excavation area (HA-ESI 117). These excavations revealed building remains and artifacts that dated to the Early Islamic period.
Three squares were opened (Fig. 2), although the two northern squares were only partially excavated due to disturbance of modern sewage infrastructures along their western side. Five occupation levels, which may be the remains of a residential building whose plan is unclear, were exposed. The remains dated to the Abbasid period, from the second half of the eighth to the first half of the ninth centuries CE.
The excavation squares are described from north to south:
Square 1. Three occupation levels were discovered.
The upper level (L100) was a tamped earth surface, overlain with artifacts from the Abbasid period mixed with modern material.
The intermediate and lower levels were white friable plaster floors (Loci 106, 109).

## Square 2. Five occupation levels were revealed.

The upper level was a friable plaster floor mixed with chalk and a small amount of gravel (L101). A circular pit (L103; Fig. 3) that contained fragments of a large baggy-shaped jar was discovered in the southeastern corner of the square. It seems that the jar, probably used for storing water, was embedded in the pit so that its upper half protruded above Floor 101. Other fragments of pottery vessels in Pit 103 included a bowl (Fig. 6:10), a jug (Fig. 7:3) and a steatite vessel (Fig 7:10).
The second level was a thin plaster floor (L104), overlain with a pavement of dressed stones. Floor 104 probably served as bedding for the stone pavement, which mostly had been robbed.
The three bottom levels were plaster floors mixed with chalk (Loci 105, 107, 110).
The chronological differences between the levels seem negligible. They probably represent the raising of floors in a single building.

Square 3. Two occupation levels were exposed:
The upper level was a pale white plaster floor mixed with chalk (L102) and overlain with part of an arch-shaped installation built of small stones, whose nature is unclear (Fig. 4). A robber trench (RT1) of a wall was exposed in the southeastern part of the square; two of the wall's ashlar stones had survived in situ. The thickness of the wall did not enable us to determine if this was an interior or an exterior wall of the building.
The lower level was a white plaster floor (L108), overlain with the top of an ashlar stone that had an elongated notch, whose purpose is unclear (Fig. 5). This stone was resting on a number of small stones and it was probably placed there, in secondary use, as a base of a column.

The ceramic finds above and below the plaster floors consisted mostly of household pottery vessels, including bowls (Fig. 6:1-9, 11-14), kraters (Fig. 6:15, 16), a jar (Fig. 7:1), jugs (Fig. 7:2, 4), colander jugs (Fig. 7:5, 6), a cup (Fig. 7:7) and a small bottle (Fig. 7:8), as well as a lamp fragment that was discovered on top of the bottom level in Square 1 (Fig. 7:9). Fragments of cone bars from a pottery kiln (Fig. 7:11-13) seem to suggest the presence of a workshop nearby. All the artifacts were dated to the Abbasid period-the second half of the eighth and the first half of the ninth centuries CE. Several fragments of glass vessels and small lumps of raw glass were discovered (see below).

## The Glass Finds <br> Natalya Katsnelson

Several fragments of glass vessels, including bottles, beakers and a jar, as well as small chunks of raw glass and some deformed vessels, were found at the site. The fragments were uncovered on plaster floors, attributed to the late eighthearly ninth centuries CE (Loci 101, 102, 105, 108 and 110) and they form a homogeneous assemblage of Early Islamic domestic ware.
Most of the vessels may be associated with the occupation levels. However, some fragments represent earlier types, which were produced in the country as early as the seventh-early eighth centuries CE and continued into later periods. These fragments, made of bluish green glass, include a beaker or bottle (Fig. 8:1) with a rounded rim and tapering walls and small bottles with a flaring infolded rim, a cylindrical neck and probably a globular body (Fig. 8:2, 4).
Other finds included a bluish green deformed bottle with a typical ridged neck (Fig. 8:3), a small colorless bottle with a cylindrical body and a flat base (Fig. 8:5), a colorless phial with a lentoid body (Fig. 8:6) and a colorless jar with a rounded rim, a short neck and a globular body (Fig. 8:7).
Noteworthy is a small body fragment that belongs to a luxury vessel, a beaker or a bottle, made of purple glass and decorated with incised dense parallel lines (Figs. 8:9; 9). Vessels with this style of decoration are usually dated to the eighth-tenth centuries CE, as is a colorless cylindrical beaker that bears a linear design incised above the base (Fig. $8: 8$ ).
The small chunks of raw glass in green, blue and purple and a few deformed glass vessels (L102, L105; Figs. 10-13) may point to glass production activities that were probably conducted at the site. It is tempting to connect this evidence with the remains of a domed installation uncovered in Square 3 and associated with ceramic production. Although not enough data to determine the actual function of the installation exists, the raw glass chunks and fragments of deformed glass vessels may imply that the installation was somehow associated with glass production.


3. Pit 103, looking north.

4. Floor 102 and arch-shaped installation, looking north.

5. Installation 108, looking north.


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10. Deformed fragment of a bottle.

11. Fragments of deformed glass vessels and lumps of raw glass.

12. Lumps of raw glass.
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## Ramla, Herzl Street

## Final Report



1. Location map.

2. Plan and section.

3. The excavation area, looking north.

4. Pottery.

During May-June 2006, a trial excavation was conducted at 30 Herzl Street in Ramla (Permit No. A-4814; map ref. NIG 187477-94/649259-75; OIG 137477-94/149259-75; Fig. 1), after a preliminary inspection exposed antiquities prior to construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by N. and D. Marudy, was directed by A. Buchennino, with the assistance of E. Bachar (administration), A. Hajian (surveying and drafting), T. Sagiv (field photography), K. Ben Or-Ashi (preliminary inspections), I. Berin (drafting), C. Amit (studio photography), L. Kupershmidt (metallurgical laboratory), M. Shuiskaya (pottery drawing) and D.T. Ariel (numismatics).
Building remains, fragments of pottery vessels and installations from the Early Islamic period were discovered in excavations that were recently conducted along Herzl Street and the roads adjacent to it (HA-ESI 117, HA-ESI) 119, HA-ESI 120, HA-ESI 121 and Permit Nos. A- 4728 and A-4774).
$\overline{\text { A square was opened in the current excavation, revealing building remains, potsherds and a coin from the Early }}$ Islamic period (eighth-tenth centuries CE).
Two construction phases that dated to the Early Islamic period were discerned.
The early phase included a section of a fieldstone-built wall (W13; length 1.5 m , width 0.55 m ; Fig. 2) without bonding material, which was preserved a single course high, and possibly another section of a similarly built wall (W14; width 0.35 m ).

Two rooms (L30, L31; Fig. 3) ascribed to the second phase were exposed. The walls (W10- length 4.9 m , width 0.5 m ; W11-length 3.5 m , width 0.5 m ; W12-length 1.7 m , width 0.65 m ), founded on the sand without foundation trenches and built of fieldstones without bonding material, were preserved three courses high. Sections of a crushed chalk and small fieldstones floor (L20) survived in Room 30. A hearth (L110) of small fieldstones that was surrounded by ash and burnt stones was exposed in the corner formed by Walls 10 and 11. Outside the building and adjacent to the eastern face of W12 was a round fieldstone installation (L106). Both rooms probably belonged to a single structure, yet its plan could not be ascertained due to the limitations of the excavation.

The pottery assemblage from the two phases was homogeneous and dated to the Early Islamic period (eighth-tenth centuries CE). An assortment of bowls was discovered, including glazed and unglazed bowls of buff-colored clay (Fig. 4:1-3), a buff-colored bowl with curved sides and a folded rim (Fig. 4:4) and a deep bowl of brownish red fabric, with a thickened rim folded inward and sides decorated with patterns of combed stripes and wavy lines (Fig. 4:5). Other ceramic artifacts included a cooking krater of dark brown clay (Fig. 4:6), a jar of orange colored ware, with a ridge beneath the rim (Fig. 4:7), a jug of levigated, well-fired and buff-colored clay, with a flat base (Fig. 4:8), a mold-made and buff-colored jug, with a stylized floral decoration (Fig. 4:9), a flask of dark brown clay (Fig. 4:10) and two mold-made and almond-shaped lamps of buff-colored ware (Fig. 4:11, 12).
An Umayyad fils (minted in Ashqelon, 708-717 CE; IAA 102366) was found between Installation 106 and W11.


1. Location map.


1-1
2. Plan and section

3. The excavation area, looking north.

4. Pottery.


1. General view, looking east

2. Pottery: bowls, cooking vessels and jars.

3. Pottery.

4. Bronze objects.

# (Volume No. HA-ESI 121 (2009 <br> Ramla, Herzl Street Final report 

Ofer Sion
During February 2006, a salvage excavation was conducted on 50 Herzl Street in Ramla (Permit No. A-4728; map ref. NIG 187585/649070; OIG 137585/149070), prior to construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Edry Brothers Company, was directed by O. Sion, with the assistance of S. Ya'aqov-Jam (administration), A. Hajian (surveying), T. Sagiv (field photography), E. Belashov (drafting), C. Amit (studio photography) R. Vinitsky (metallurgical laboratory), I. Lidski-Resnikov (pottery drawing) and S. Gat, W. Atrash and M. Sharon (Arabic epigraphy).
The excavation area lies c. 600 m north of the White Mosque and $100-150 \mathrm{~m}$ north of former excavations, which exposed portions of buildings and floors that dated to the Early Islamic period (HA-ESI 111:103*-104; HA-ESI 118 ; HA-ESI 120 ).
Three squares were opened (Figs. 1, 2), revealing numerous ceramic and metal artifacts that dated to the Early Islamic period (eighth-tenth centuries CE), without any architectural remains.

Modern refuse, the remains of a Mandatory-era building (W1, W2) and the surface layer were removed by mechanical equipment (to a depth of 1 m ). Underneath were alternating layers of sand and small stones. The upper layers in Squares 1 and 2 were horizontal; the lower layers in Square 1 sloped to the east (L53; Fig. 2: Section 2-2) and in Square 2 they were horizontal (L55)

The wide variety of pottery vessel fragments, which dated to the Early Islamic period (eighth-tenth centuries CE), included bowls (Fig. 3:1-6), small bowls (Fig 3:7, 8), cooking vessels (Fig. 3:9, 10), jars (Fig. 3:11-13), jugs (Fig. 4:1, 2), a juglet (Fig. 4:3), flasks (Fig. 4:4, 5), ceramic bars used in a kiln (Fig. 4:6-10), jar lids (Fig. 4:11, 12) and lamps (Fig. 4:13, 14).
Part of an inscription written in black ink was found on the interior upper part of one of the bowls (Fig. 3:6). The first two words are "Allah the merciful" ("اللهالرحمن "), followed by three letters of the third word ("...لالر"). The reconstructed inscription reads "In the name of Allah the merciful and compassionate" (بسماللالرحمنالرحي)).
Other artifacts included three square bronze weights (1.38 grams-Fig. 5:1; 5.68 grams- Fig. 5:2; 5.76 grams-Fig. $5: 3$ ), a fragment of a bronze cylinder ( $0.7 \times 1.2 \mathrm{~cm}$; Fig. 5:4), a hollow bronze cone ( $0.2 \times 3.0 \mathrm{~cm}$; Fig. 5:5) and two unidentified coins.

The absence of any architectural remains may stem from the fact that this was an open area within the city or from the robbing of building stones, although the latter was not corroborated by robber trenches. The layers of sand and small stones could reflect water-borne sediments as described in al-Muqaddasi's account of the city's drainage system that turned Ramla into "an island of mud" (A. Schiler, 1988, Eretz Israel and its Sites in Descriptions of Moslem Pilgrims, Ariel 59:63 [Hebrew]).


1. General view, looking east.





2. Bronze objects.

Ramla (East)
Final Report


1. Plan.

2. Square 3, looking northwest.

3. Jar (L56).

4. Pottery and glass.

5. Bronze objects.

Ofer Sion
During January-February 2006, a salvage excavation was conducted in the eastern precinct of Ramla, next to the Newe Tirza prison (Permit No. A-4700; map ref. NIG 18847-51/64887-90; OIG 13847-51/14887-90), prior to construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the S.A.L. Ramla Company, was directed by O. Sion, with the assistance of V. Essman (surveying), T. Sagiv (field photography), E. Belashov (drafting), C. Amit (studio photography), R. Vinitsky (metallurgical laboratory), N. Katsnelson (glass), I. Lidski-Reznikov (pottery and glass drawing) and A. Berman (numismatics).
The excavation area is located east of and adjacent to Highway 44, c. 950 m east of the White Mosque. A number of excavations had been conducted in the vicinity (ESI 19:52*-53*; HA-ESI 119; Permit No. A-3080). Three squares were opened (Fig. 1), revealing building remains and artifacts from the Early Islamic period (eighth-tenth centuries $C E$ ). The remains probably belonged to a residential building that was situated outside the city walls of ancient Ramla.

Square 1. Two parallel walls, preserved a single course high (W3, W6; height 0.15-0.34 m; Figs. 2, 3), were exposed in the southwest corner of the square. Another wall (W5) that had survived by a few stones was uncovered between them. A carefully leveled floor (Loci 54, 60) of kurkar and crushed chalk abutted the walls.
Square 2. Only fragments of pottery vessels and small artifacts, without any architectural remains, were found.
Square 3. Several walls of a room (W1, W2, W4; Figs. 4, 5) that were built of two rows of partly dressed limestone and a core of small stones were exposed. A tamped chalk floor (L53) abutted either side of the walls. In the eastern part of the square, a jar that contained six olive pits (L56; Figs. 6, 7) was embedded in the floor. Another wall (W3) built of limestone and bonded with mortar, whose function was not ascertained, was exposed in the northeastern part of the square.
The ceramic finds, which dated to the Early Islamic period (eighth-tenth centuries CE), included bowls (Fig. 8:1-11), a small bowl (Fig. 8:12), a jar with a pinched rim and a striped decoration that is incised along the upper part of the vessel (Fig. 9:1), jugs (Fig. 9:2-4), a juglet (Fig. 9:5), a handle that bears a round stamped impression with a pattern similar to a Star of David and a circle in its center (Fig. 9:6), four fragments of ceramic bars that were used to separate between vessels in a potter's kiln (Fig. 9:7-10) and a fragment of a zoomorphic vessel (Fig. 9:11).
A few glass fragments that dated to the Abbasid period (end of the eighth century-tenth century CE) were found mostly in Square 3. These included two shallow cylindrical bowls, several bottles, including the upper part of a bottle with a funnel and a low conical neck, as well as a fragment of a goblet that was discovered in Square 1 (Fig. 9:12).
The bronze artifacts included a rectangular weight ( 5.26 g ; Fig. 10:1), two decorated hinges ( $1.8 \times 2.6 \mathrm{~cm}$, Fig. 10:2; 1.8 $\times 4.1 \mathrm{~cm}$, Fig. 10:3) and a round disk perforated in its center (diam. 3 cm , Fig. 10:4).
Two coins were discovered; one was identified as a dirham from the time of the Abbasid caliph Haron al-Wathiq Ballah (227-232 AH, 842-847 CE; IAA 109734), most likely from the Mişr mint.


2. Square 1, plan and section.

3. Square 1, looking west.





10. Bronze objects.

# (Volume No. HA-ESI 121 (2009 

## Ramla, Ta‘avura Junction

## Final Report



Amir Gorzalczany
During November 2007, a salvage excavation was conducted in Ramla, at the Ta‘avura Junction industrial zone (Permit No. A-5296; map ref. NIG 189055-83/648365-87; OIG 139055-83/148365-87), in the wake of damage caused to ancient remains during development works. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ta'avura Company, was directed by A. Gorzalczany (photography and surveying), with the assistance of S. Ya'aqov-Jam (administration), M. Sharon (epigraphy), D.T. Ariel (numismatics), T. Kanias and a group of laborers from East Jerusalem. Important information was provided by O. Sion, D. Masarwa and M. Peilstöcker and the Ta'avoura Company rendered much valuable assistance.
The excavation is a continuation of the former excavation by E. Haddad (Permit No. A-4740; HA-ESI 120; Fig. 1). Preliminary inspection by I. Kornfeld revealed a marble slab engraved with an Arabic inscription. Three squares were opened: a plastered installation that was connected to a plastered and covered water channel was exposed in Squares 1 and 2 and a plastered water reservoir was discovered in Square 3. Other finds included a basalt millstone, several coins and three marble slabs engraved with inscriptions in ancient Arabic, which consisted of two tombstones and a monumental dedicatory inscription.

2. Square 3, Water Reservoir 119, plan.

3. Water Reservoir 119.
looking southeast.

5. Plastered installation 114 and Channel 113, looking east.

9. Two fragments of a marble slab bearing Arabic inscriptions.

## Water Reservoir

The installation (L119; Figs. 2, 3) was not entirely exposed. Its southern side was adjacent to a thick, east-west oriented wall (W108; exposed length 4 m , width 0.8 m ), which was built of various size fieldstone debesh and bonded with grayish white mortar. The continuation of the wall was discerned in the eastern and western balks of the square. The western end of Wall 108 northern side was coated with gray hydraulic plaster and the cross-section of the cistern's top that was not completely preserved could be seen; it was probably bell-shaped or vaulted, two forms of roofing that were rather prevalent in Ramla and have been documented in other excavations. Due to the limitations of the excavation it was not possible to reconstruct a complete plan of the reservoir, or calculate its volume and amounts of water it contained.

## Plastered Installation

This square installation (L114; $2.5 \times 2.5 \mathrm{~m}$, inner dimensions $1.7 \times 1.7 \mathrm{~m}$; Figs. 4,5 ) was plastered and enclosed within four walls (W109, W111, W115, W120; each $0.4-0.5 \mathrm{~m}$ wide) that were built of fieldstones and roughly hewn stones. The northern W109 was well preserved; Walls 111 and 120 on the east and west were not as well preserved and W115 on the south was poorly preserved. The walls were coated with a single layer of gray hydraulic plaster, mixed with potsherds, which was excellently preserved (thickness $2-3 \mathrm{~cm}$ ). The floor of the installation was composed of numerous potsherds mixed with hydraulic plaster (Fig. 6), a very efficient method for storing liquids that had proven itself when rains fell during the excavation. The installation was probably covered, since remains of a vault could be discerned on the inside of W120.
A covered water channel (L113, average width 0.95 , inside width $0.25-0.30 \mathrm{~m}$ ) conveyed water to the installation from the east. Based on its general direction, its source was probably the water reservoir. The sides of the channel were built of ashlar stones (average size $25 \times 30 \times 45 \mathrm{~cm}$ ), combined with small fieldstones; flat stones slabs that covered it ( $20 \times$ $40 \times 60 \mathrm{~cm}$ ) were not all found in situ. Some of the slabs were probably tombstones from a nearby cemetery that were removed to cover the channel, in secondary use. Several such tombstones were found scattered and broken in the vicinity of the excavation.
The remains of a stone pavement (L118) that abutted Walls 109 and 111 were found northeast of the plastered installation complex and the channel. The pavement consisted of various size stones and was rather poorly preserved. Scant remains of another floor (L117) that abutted W115 from the south were discerned south of Installation 114.

## Finds

The finds at the site included a small amount of extremely worn potsherds (not drawn) that dated to the Abbasid and Fatimid periods. The vessels included jars, jugs with occasional plastic decoration that is common to Ramla and bowls, some of which were glazed light green. Three poorly preserved bronze coins that could not be identified were found. A fragment of a basalt donkey millstone was discovered out of any archaeological context (Fig. 7). Numerous fragments of marble slabs were gathered in and around the excavation. Those bearing Arabic writings were joined together to form three slabs with inscriptions, two tombstones and a slab with a monumental inscription that mentions the construction of a bridge. One of the tombstones (Fig. 8) comes from the grave of an Egyptian cloth merchant who died on Tuesday, July 28, 306 AH ( 918 CE ). The monumental inscription (Fig. 9), which consists of six complete lines in relief and the remains of a seventh line, cites the emir, commander of the faithful, who ordered the construction of a bridge in the years 331334 AH (942-945 CE). The name of the ruler is Muhammad b. Tughj Abu Bakar al-Ikshid, the son of a family of Turkish origin who was appointed governor of Egypt in the year $323 \mathrm{AH}(935 \mathrm{CE}$ ). He fought a series of bitter battles against Ibn Ra'iq, the governor of the Euphrates region, in the years 940-942 CE. After the battles and prior to the treaties that came in their wake, the southern region of the Land of Israel, including the city of Ramla, was transferred to him and upon the murder of Ibn Ra'iq, Al-lkshid took control of Damascus in July 942 CE. Thus, the inscription found in the excavation mentions the construction of a bridge that was built during the first years he governed the region of Ramla and its vicinity. It is interesting to note that in previous excavations at the site, E. Haddad identified the foundation of a road on an embankment inside a wadi channel that is dated to this period (HA-ESI 120 and pers. comm.). The continuation of this foundation was exposed in another excavation at the site (D. Masarwa, pers. comm.; Permit No. A-5246). This foundation probably served as a base for the bridge mentioned in the inscription. Hence, the inscription is a valuable contribution to our understanding of the road network and transportation infrastructure in this period. The third slab is the tombstone of an unknown Muslim, engraved with a verse from the Koran. The final publication of the inscriptions will be prepared by M. Sharon for his Corpus of Islamic Inscriptions and for the final report of the Mazliah excavations.

The results of the excavation are quite consistent with the findings from previous excavations in the region. E. Haddad rightfully determined that the site is an open area on the outskirts of the city of Ramla, in which refuse, including many animal bones, was discarded. The finds in the current excavation further validate this identification. The water reservoir and plastered industrial installation for liquids are in keeping with the multitude of similar installations in the agriculturalindustrial hinterland of the city of Ramla, beyond the built-up area, as has been discovered in many recent excavations (HA-ESI 118; HA-ESI 120, Qadmoniyot 135:30-35, 39-44 [Hebrew]; Tel Aviv University, Salvage Excavation Reports 5). Although the tombstones and dedicatory inscription were not discovered in situ, they are still valuable as an indication of the population in the region during the tenth century CE. The tombstones probably originated from a cemetery, which was discovered next to and north of the current excavation during an inspection of other infrastructure work, as well as in nearby excavations (O. Sion, pers. comm., Permit No. A-4503).
The monumental dedicatory inscription is a good and tangible evidence of the historic events that affected the region in the tenth century CE and attests to the construction of infrastructure on a national scale that was meant to glorify the city and the name of the governor, upon his takeover of the region.


1. The excavation, looking southwest; in background, the Ta'avura factory under construction.

2. Square 3, Water Reservoir 119, plan.

3. Water Reservoir 119, looking southeast.


4. Plastered installation 114 and Channel 113, looking east.

5. Installation 114, interior, looking southeast.

6. Basalt donkey millstone.

7. Fragment of marble slab with an Arabic inscription.

8. Two fragments of a marble slab bearing Arabic inscriptions.

## Ramla, Ha-Palmah Street

## Final Report

Raz Kletter
29/7/2009


1. Eastern excavation area plan and section

2. The two drawing shafts of the cistern, looking west.

3. Pottery, the Early Islamic period.

4. Pottery, the Mamluk period.

5. Pottery, the Ottoman period.

During June 2001, an excavation was conducted near Ha-Palmah Street in Ramla (Permit No. A-3429; map ref. NIG 18830/64850 OIG 13830/14850), prior to the construction of a building in Ha-Shoftim neighborhood. The excavation, on behalf of the Israel Antiquities Authority, was directed by R. Kletter, with the assistance of Y. Arbel (area supervision), Y. Rahamim (administration), A. Hajian (surveying), H. Tsion-Cinamon (GPS), T. Sagiv (field and studio photography), M. Avissar (pottery reading), M. Ben-Gal (pottery restoration), M. Shuiskaya (pottery drawing), O. Shorr (glass restoration), C. Hersch (glass drawing), L. Horowitz (archaeozoology) and laborers from Rahat and Jerusalem.
Two areas, separated by a sewer, were examined in the excavation. The western area consisted of two squares that were partially excavated, revealing only scant remains of a wall and mixed potsherds, mostly dating to the Early Islamic and Mamluk periods, with a few to the Ottoman period. The majority of the remains were found in the eastern area (Squares A-D; Fig. 1).

Early Islamic Period. A large and round cistern (L107; diam. 3.8 m, visible depth c. 2 m; Fig. 1: Section 1-1) and meager building remains were ascribed to this period. Water flowed into the cistern via two small openings. On the inside ends of the openings were round ceramic pipes (length 0.3 m , inside diam. 0.13 m ; Fig. 2) that had a plain rounded rim. Water was drawn from the cistern through two square shafts $(0.45 \times 0.45 \mathrm{~m})$ that were built of well-dressed limestone (Fig. 3); marble in secondary use was incorporated at the bottom of one of the shafts (Fig. 4). The tops of the shafts were probably provided with a perforated capstone because the top courses of the shafts' stonework bear no indication of wear from the ropes that were used to draw water. Stone collapse and soil had accumulated inside the cistern but were not excavated due to safety precautions. The sides of the cistern were coated with gray plaster (thickness c. 2 cm ) that contained numerous potsherds. These included a fragment of a rouletted base from a Cypriot Red Slip bowl (Fig. 5:1) and rims that belonged to the later type of Gaza jars (Fig. 5:2). These vessels, which are not represented in the other pottery assemblages from the excavation, have a broad chronological range, from the latter sixth century CE until the seventh-beginning of the eighth centuries CE. Accordingly, it seems that the cistern is the earliest architectural feature in the excavation area. It is possible that the cistern belonged to a farmstead, which existed in the area prior to the founding of the city of Ramla in the year $715 / 716$ CE. However, it may have been installed together with the overlying construction and then, these vessels should be dated to the beginning of the Umayyad period.

The limited excavation area and later disturbances precluded making the connection between the cistern and the building remains above it and in the adjacent squares. Scant building remains and a mixed assemblage of potsherds were found south of the cistern in Square A. Meager building remains (walls? W4, W7) and part of a small-stone floor (L101) were discovered above the cistern in Square B, next to the upper part of the cistern's western shaft; the ceramic finds were also mixed. Two walls (W1, W10; width c. 0.5 m ) in Square C formed a corner of what may have been a residential building. The walls were built of lime stones that were mostly fieldstones and a few dressed stones. A level of tamped soil mixed with plaster (L109; floor?) abutted W1 and yielded mixed ceramic artifacts that dated to the Early Islamic and Mamluk periods. However, a probe cut below the earthen level contained only fragments of pottery vessels from the Early Islamic period. A jar (L108; Fig. 5:7) that dated to the Early Islamic period was found in the northwestern corner of the square, next to W10. Most of the jar seems to have been embedded into the floor level, which was probably the continuation of Floor 109. Its top protruded above it and was damaged by a pile of stones (W6) that was probably meant to block an entrance, fixed in W10 at a later period. The continuation of W1 in Square D was severed by the construction of installations in the Mamluk period.

Walls 1 and 10 should be dated to the Early Islamic period (ninth-tenth centuries CE), based on the jar and the artifacts discovered below Floor 109. These finds included a pale yellow glazed bowl that belongs to the monochrome lead glaze type (Fig. 5:3) and a delicate bowl of buff-colored clay with a turquoise alkali glaze (Fig. 5:4) that are dated to the eighthtwelfth centuries CE. Vessels of buff-colored clay, such as the jug in Fig. 5:5 are very common to Ramla, as well as a jug handle of red clay and glazed green (Fig. 5:6) that is similar to the handles of the buff-ware jug.

Mamluk Period (fourteenth century CE). Two installations (Loci 113, 114), dug in the ground and lined with small stones, were exposed in Square $D$ and ascribed to this period. It is unclear if the installations were included within the area of the city of Ramla in this period because the exact course of the city wall is unknown.

The eastern side of Installation 113 extended beyond the excavation area. The elliptical installation (the section that was excavated was 1.2 m long; Fig. 6) was built of two courses of limestone and contained very soft brown soil fill. An elliptical pit (c. $0.5 \times 0.6 \mathrm{~m}$, depth 0.4 m ) was dug in the middle of the installation. The unlined pit contained numerous pottery vessels that dated to the Mamluk period, including two almost intact coarse bowls, as well as egg shells and bones of small animals, including a pigeon skull.

Installation 114 was a circular pit (inner diam. 1.1 m , depth c .1 m ) built of eight to ten courses of limestone (Fig. 7), which had remains of gray plaster on the bottom. The soft brown soil in the installation was similar to that in Installation 113 and contained a large quantity of pottery vessels and sherds that dated to the Mamluk period, save one or two potsherds from the Early Islamic period that penetrated into the pit. A diverse assemblage of glass vessels was found as well (see below). Most of the pottery vessels were covered with a layer of coarse encrustation. Many of the vessels, especially the bowls, were damaged or deformed and it seems that they represent debris of a pottery workshop rather than vessels that were discarded after use.

Most of the pottery vessels from the two installations were wheel thrown. The most common vessel in the assemblage is a coarse bowl with a round rim, ribbing and a string-cut base (Fig. 8:1-5). Almost all of these bowls are deformed, cracked or otherwise damaged. Four intact bowls, 168 rims of this kind of bowl and 11 complete profiles were found in Installation 114. A bowl with a base ring (Fig. 8:6), which is different in quality and form from the others, was in an unclear context near Installation 113 and probably postdated it. The other ceramic vessels included a sugar bowl (Fig. 9:1) with repair holes; a small closed bowl (Fig. 9:2); buff-ware jugs, most of which had a shade of pale green (Fig. 9:3, 4); part of a juglet ornamented with a perforated decoration and delicate incising (Fig. 9:5); a fragment of a mold-made flask (Fig. 9:6), several nearly complete large jugs (Fig. 9:7) and upper parts of jars (Fig. 9:8).
The finds from both installations consisted only of a small number of handmade vessels, possibly because these are typical of rural settlements rather than urban area like Ramla, including two kraters (Fig.10:1, 2), a cooking pot (Fig. 10:3) and two upright jar rims (Fig. 10:4,5), one of which has a dark brown decoration painted on and outside the rim. A few potsherds of glazed vessels (Fig. 10:6-12) were found. Outstanding among them are fragments of Syrian Underglaze Painted Ware bowls, made of frit and decorated blue and black with a transparent glaze (Fig. 10: 6, 7). The bowl in Fig. 10:7 belongs to a subtype of the same family of vessels which has a linear decoration and paint splashes on the inside; these are known primarily from Bet She'an and Ramla. The bowl base in Fig. 10:8 is probably a local variation of Chinese Celadon Ware vessels that were imported into the country in small numbers in the twelfth-fourteenth centuries CE. Several pottery fragments belonged to Mold-Made Glazed Ware vessels. Two such sherds from two different vessels are decorated with a horned animal within an elliptical frame and remains of an inscription to its right (Fig. 10:9, 10). The head of the animal is discernable on the sherd in Fig. 10:9 and on the sherd in Fig. 10:10, the animal is depicted with its head turned backward and its legs bent; the decoration on the back of the animal resembles crossed swords. These
vessels, which are known from the fourteenth century CE and are ascribed to a workshop that was discovered in Jerusalem, have a high trumpet-like base (Fig. 10:11). A fragment of a glazed lamp with a pinched nozzle was discovered (Fig. 10:12).

Ottoman Period. Only fragments of pottery vessels and small finds from this period were discovered in the excavation; the site was apparently situated outside the city limits during this period. The finds included a few gray Gaza sherds, including a small bowl that is probably the bottom of a coffee cup (Fig. 11:1); a bowl of gray fabric with a flared rim on which a white-slipped stripe was haphazardly applied (Fig. 11:2); a carelessly glazed bowl (Fig. 11:3); a blue-white porcelain-type vessel with a floral decoration that was imported from China (Fig. 11:4); a green and yellow glazed vessel with a sgraffito decoration that was probably imported from Italy in the fifteenth century CE (Fig. 11:5); an almos complete jar (Fig. 11:6) that was found upside down in soil fill near the surface in Square D; a few pipes, including one of gray clay with a rather narrow stem and a small tobacco bowl, which is dated to the seventeenth-eighteenth century CE (Fig. 11:7) and a small hollow ceramic ball that contained pieces of stone or small clay balls that made noise when shaken, probably a toy rattle (Fig. 11:8).

Several stone vessels that have no clear stratigraphic context were found in the excavation, including an extremely worn, broken stone capital, fragments of a marble slab and a rim fragment of a marble vessel. Two items of green stone (steatite or soap stone; Fig. 12) were found in an unclear context and are dated to the Early Islamic period.

## The Glass Vessels from Installation 114

Yael Gorin-Rosen
An assemblage of diverse glass vessels, which is dated to the Mamluk period, was recovered from Installation 114. The assemblage consisted of vessels decorated with marvering, which are characteristic of the period, alongside simpler forms and vessels that are decorated with mold blowing. Based on the quality of material and the forms, it seems that all the vessels were locally produced, in Ramla or its environs or in workshops in Jerusalem (N. Brosh 2005. Islamic Glass Finds of the Thirteenth to Fifteenth Century from Jerusalem: Preliminary Report. Annales du $16^{e}$ Congrès de l'Association Internationale pour l'Histoire du Verre (London 2003). Nottingham. Pp. 186-190).

Bichrome Vessels Decorated with Marvered Trails (Fig. 13:1-5). The vessels in this group, made of dark glass, are decorated with light colored trails, mostly opaque white or an opaque pale greenish gray. The trails were applied to a wide variety of vessels; after application, the trails were flattened on top of a flat working surface (the marver, hence the name of the technique) and in most instances they were reheated and combed into feathered designs or undulating patterns. In addition, some of the vessels were mold-blown.
The bowls of this type are most characteristic to this group. The bowl in Fig. 13:1 is made of purple glass and has a flared rim; it is covered with a thick layer of crust and is severely pitted. The decoration consists of many white trails, applied and embedded by reheating in the walls of the bowl. The trail extending on the rim's edge is thicker than the others. The bowl in Fig. 13:2 has a rim unique to this group, which is inverted and in-turned; it resembles the rims on ancient clay holemouths jars. The rim, made of dark purple glass, is decorated with white trails that include a thick trail on the rim's edge and thinner trails below it. The bowl in Fig. 13:3 whose rim did not survive is made of dark purple glass and decorated with white trails and a pattern of vertical mold-made ribs that were fashioned after the trails were applied. The rim of Fig. 13:2 probably belonged to the bowl in Fig. 13:3, yet the fragments did not connect and could not be restored. Two bottles were in this group. The bottle in Fig. 13:4, made of purple glass, is decorated with horizontal opaque pale green-gray trails that were applied to the rim and below it. The bottle in Fig. 13:5 is smaller, made of blue glass and adorned with a white trail that stands out on the edge of the rim.

Undecorated vessels (Fig. 13:6-12).Two undecorated bottles were found. The bottle in Fig. 13:6 is very small and has especially thin sides; the glass is opaque with a pale green bluish/gray hue. The quality of the material and the manner of the work are similar to metal vessels. This bottle belongs to a unique group of small vessels of opaque glass, with a light pale blue/gray or turquoise hue that are not particularly common; they are known in Mamluk assemblages from Jerusalem and from Hama in Syria. The fragment in Fig. 13:7 belongs to a bottle of very light, pale green glass and has a rim that flares and forms a short shelf. This type of simple bottle is exceptionally common in Mamluk assemblages.
Several fragments belong to tall beakers that were used as lamps. The rim in Fig. 13:8 flares downward and belongs to a broad cylindrical vessel that is made of translucent glass.
Rims of this kind had previously been attributed to large bottles; however, in recent years, many vessels with similar rims were found in Jerusalem and Bet She'an and it was possible to reconstruct them as beakers with a wick tube in the center, similar to base in Fig. 13:11 that is made of translucent glass. The fragment in Fig. 13:9 belongs to a broad cylindrical vessel of colorless glass with a pale green tinge, which has a flared and folded rim. The sides are decorated with very delicate diagonal ribbing. During the Mamluk period tall beakers of this kind were mostly used as lamps. The rim in Fig. 13:10 is made of colorless glass with a pale green tinge. The end of the rim is flared and a tooled-out tube below it is pinched outward. It belongs to a cylindrical vessel that has particularly thick sides. Vessels of this type probably served as lamps and it seems that the tooled-out tube was used to suspend it from a metal chandelier.
The rim in Fig. 13:12 belongs to a vessel that was blown in a mold, which left an intricate design on its base. This design is known on vessels in Mamluk assemblages in Jerusalem and other sites. The vessel is made of colorless glass that has a pale yellow tinge.

Most of the vessels recovered from Installation 114 have comparisons in a Mamluk assemblage from the Jewish Quarter (Brosh 2005, op. cit.) and in other Mamluk assemblages from Jerusalem, such as those from the region of Herod's Gate (HA-ESI 113:76*-79*) and from the salvage excavation in the Western Wall Plaza (Permit No A-5432); similar vessels were found in other excavations, e.g., Bet She'an (ES/ 15:43-47) and the El-Watta Quarter in Zefat (Permit No. A-4210).

## Coins

Danny Syon
Ten poorly preserved bronze coins were discovered in the excavation. Four of the ten were identified, dating to the Mamluk period.

1. Reg. No. 1019, Locus 103, IAA 102849
al-SalihSalah? (1351-1354 CE), Halab?
Obverse: :المل].....
Reverse: bird?
Bronze, fals, $0.80 \mathrm{gr}, 18 \mathrm{~mm}$
Cf: Balog P. 1964. The Coinage of the Mamluk Sultans of Egypt and Syria (Numismatic Studies 12). Pp. 190-191, No. 338.
2. Reg. No. 1016, Locus 103, IAA 102850

Mamluk, fourteenth century CE.
Obverse: remains of an inscription
Reverse: remains of an inscription.
Bronze, fals, $1.25 \mathrm{gr}, 19 \mathrm{~mm}$.

Mamluk, fourteenth century CE.
Obverse: remains of an inscription
Reverse: illegible.
Bronze, fals, $2.55 \mathrm{gr}, 16 \mathrm{~mm}$.
4. Reg. No. 1073, Locus 112, IAA 102747

Mamluk, fourteenth century CE.
Obverse: :...[الس]طانط][]
Reverse: illegible.
Bronze, fals, $1.38 \mathrm{gr}, 12 \mathrm{~mm}$.


[^4]
2. A ceramic pipe opening, view from inside the cistern.

3. The two drawing shafts of the cistern, looking west.

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5. Pottery, the Early Islamic period.

6. Installation 113, looking east.

7. Installations 113 and 114, looking south.

8. Pottery, the Mamluk period.






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10. Pottery, the Mamluk period.


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11. Pottery, the Ottoman period.


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# (Volume No. HA-ESI 121 (2009 

Ramla
Final Report
Alla Nagorsky


1. Plan and section.

2. Square A, looking southeast.

3. Square A, opening of Silo 16, looking west.

4. Pottery.

5. Square A, Installation 12, looking northwest.

During June 2001, a salvage excavation was conducted in the Begin neighborhood of Ramla (Permit No. A-3438; map ref. NIG 18868-73/64928-9; OIG 13868-73/14928-9), in an area slated for the construction of a gymnasium. The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Nagorsky, with the assistance of A. Hajian (surveying), Y. Rahamim (administration), E. Belashov (drafting), I. Lidski (pottery drawing) and A. Berman (numismatics).
Antiquities were discovered in probe trenches and three excavation squares were opened (Fig. 1).
Square A. Remains of an installation (L10; Fig. 2), built of dressed limestone and fieldstones, were discovered at a depth of 0.8 m below surface. The bottom of the installation was flat and consisted of two rows of rectangular stones. The walls had apparently caved in and their stones were found in the collapse around the installation.
A layer of sand (thickness 0.4 m ) beneath Installation 10 covered the southern side of a silo (L16) that was built of medium-sized round stones. The opening of the silo was circular (diam. $0.5-0.6 \mathrm{~m}$; Fig. 3) and it became wider toward the bottom (width at base 1.2 m , height in center 0.82 m ).
Another silo (L17; preserved height 0.4 m ; Fig. 4) was discovered next to the eastern balk of the square; its eastern side was beyond the excavation limits. The floor of the silo consisted of tamped earth and below it was a layer of hard hamra soil, devoid of finds. The soil fill inside the two silos contained numerous potsherds that dated to the ninth-tenth centuries CE, including bowls (Fig. 5:1-4, 6-8), jugs (Fig. 5:9, 13, 15), a decorated jug (Fig. 5:19), a cooking pot (Fig. 5:22), lamps (Fig. 5:25, 26), as well as glass fragments, animal bones and a bronze coin that was recovered from Silo 17. Another round installation (L12; Fig. 6), c. 1.4 m south of Silo 17, was built of small fieldstones and preserved two courses high. Its bottom consisted of hamra and it contained soil fill that was devoid of archaeological finds.

Square B. A section of a tamped level $(1.50 \times 1.85 \mathrm{~m})$, founded on top of natural hamra soil and built of small stones and crushed white chalk, was exposed 0.8 m below surface in the middle of the square. The sandy soil fill above the tamped level contained potsherds from the Early Islamic period, fragments of glass and animal bones. An irregular shaped pit (L11) in the western part of the square was dug to a depth of c .1 .9 m below surface. The pit was filled with light brown sand, which contained numerous fragments of pottery vessels that dated to the Early Islamic period, including bowls (Fig. 5:5), jugs (Fig. 5:10-12), jars (Fig. 5:16-18), decorated jugs (Fig. 5:20,
21), lamps (Fig. 5:23, 24) and a zoomorphic vessel (Fig. 5:27), as well as glass fragments and animal bones.

Square C. The base of a wall (W14) built of small stones and the foundation of a plaster floor that abutted it (L13) were discovered at a depth of 0.8 m below surface. White lime fill with charcoal inclusions was found in-between the stones of the wall. The soil fill that covered the wall and the floor contained potsherds that dated to the Early Islamic period, such as a jug's base (Fig. 5:14).


2. Square A, looking southeast.


4. Square A, Silo 17, looking northwest.


6. Square A, Installation 12, looking northwest.

# (Volume No. HA-ESI 121 (2009 <br> <br> Ramla (South) <br> <br> Ramla (South) <br> Preliminary Report 



1. Location map.

2. A kiln negated by an Abbasid wall. In the foreground are a tabun and an Abbasid floor, looking northwest.

3. A series of kilns built one atop the other, looking east

4. A plastered installation with notches from the Abbasid period, looking east.

5. Vessels that were exposed in a septic pit.

## Amir Gorzalczany

1/9/2009
During June-August 2007, a salvage excavation was conducted in Ramla South, on the route of the access road to Moshav Matsliah (Road 4304; Permit No. A-5168; map ref. NIG 187450-84/646923-7051; OIG 137450-84/146923-7051; Fig. 1), The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Department of Public Works, was directed by A. Gorzalczany, with the assistance of K. Edrei and A. Kozlov (area supervision), E. Bachar and S. Ya'aqov-Jam (administration), V. Essman (surveying), T. Sagiv (field photography), R. Chen (metal detection), O. Ackerman (geomorphology), Y. Elisha (preliminary examinations, exposure and antiquities inspection), B. Ajami (safety consultant), P. Gendelman (ceramics), E. Kamaisky (pottery restoration), Y. Gorin-Rosen (glass), M. Sadeh (archaeozoology) and I. Ktalav (archaeomolluskology).

Exposure and preliminary inspections were initially conducted on the route, along which two areas were excavated: the northern (Area E; see the report below) by the IAA and the southern (Area F; License Nos. B-298/2005, B-306/2006) by Tel-Aviv University. The Matsliah site was discovered by IAA inspector O. Shmueli during an excursion to the area and several excavations had been carried out there in the past (HA-ESI 118; HA-ESI 120; HA-ESI 120; License No. B-299/2005; Permit Nos. A-4454, A-4674, A4725, A-5118).

The area is characterized by hard hamra soil that shows signs of carbonates and iron oxide flooding, rendering it a lustrous red color. It was probably the result of a seasonal lake or constant contact between ground and water. Work along the route of the road damaged the later phase remains at the site and left cesspits in the area. Twenty-eight squares were opened, following the removal of a cement layer that belonged to a road from the time of the British Mandate.

The Early Phase (seventh-eighth centuries CE)
An extensive industrial area, which included numerous kilns that had mostly survived by their combustion chamber, was exposed. Two main types were identified: a round shaped (diam. 2.0-2.2 m) that had a central post, supporting the shelf with the vessels (Fig. 2) and an elliptical shaped. The kilns had various sizes (3.5-5.0 m ); some were built over a pit dug in the ground and coated with clay and others comprised fired mud bricks on a stone foundation (Figs. 3, 4). One of the pottery workshops, which was bordered by a stone wall, contained six round kilns that were not all completely excavated (bottom diam. 5 m ); they superposed the ruins of previous kilns. It seems that the pottery workshop functioned over a prolonged period of time, during which new kilns were built on top of earlier ones that went out of use. The hard fired walls of the combustion chambers (width 10-15 cm ) had survived. Each kiln was surrounded by refuse layers from its cleaning. These layers were sometimes discerned above a kiln that went out of use. The foundation trench of a kiln's wall was noted in one instance, penetrating into the debris layer of an earlier kiln (Fig. 5).
Six phases were identified in the kiln complex, dating to the time between the end of the Byzantine and the beginning of the Umayyad periods (seventh-eighth centuries CE), based on pottery vessels, mainly cooking-pot rims. Deformed vessels and wasters that characterize pottery workshops were noted in the ceramic debris.
Several coins and many potsherds, mostly of cooking pots that dated to the Late Roman period, were found near two of the kilns in the southern region. Potsherds from the Persian (Attic vessels) and Hellenistic (Rhodian handles) periods were also found, although out of any stratigraphic context.

The Later Phase (eighth-ninth centuries CE)
Sand deposits discerned in the trial probes indicated that the site was abandoned for a period of time. Following the gap, new square and rectangular installations, coated with gray-white plaster, were built. These were probably utilized for the production of linen (Tal O. and Taxel I. 2008. Ramla (South) - An Early Islamic Industrial Site and Remains of Previous Periods. Salvage Excanations Reports 5. Tel Aviv. Pp. 123-124; Fig. 6). Traces of color noted in several installations may indicate they have served for dying textiles. Other installations had signs of decreasing in size and in several others, small depressions in the corner of the floor were found.
Stone walls that delimited rooms were exposed in the southern part of the area and many sections of floors, which were partially related to the plastered installations (Fig. 7), were uncovered. Elsewhere, later walls that penetrated into the earlier phases and severed installations were discerned. Thus, for example, the foundation trench of a wall that had cut through the mud-brick wall of a kiln from the early phase was identified and in another case, a series of floors from the Abbasid period negated a kiln and sealed it. Ovens and stone installations for milling grain, some of which were architectural elements in secondary use, were found on the different floors (Fig. 8).
Cesspits of a well-known type in Ramla were exposed in the center part of the area.
They were square or rectangular, lined with small stones and several were covered with a stone vault. The cesspits and several refuse pits near them contained an impressive amount of artifacts, including complete vessels, coins, bronze vessels and small intact glass bottles; all dating to the Abbasid period (Figs. 9-11). It should be noted that apart from the cesspits and the refuse pits, no remains later than the eighth-ninth centuries CE were discovered in the area. However, these later strata could have been removed when the Mandatory road was paved.

A rich and diverse assemblage of ceramic artifacts, a recurrent phenomenon in the excavations of Ramla and its vicinity, was discovered. The finds include numerous cooking pots that are characteristic of the transition phase from the Byzantine to the Umayyad periods, frying pans, lids and jars. Numerous intact vessels were found, including bowls, cups, saqiye vessels, jugs, juglets and lamps, two of which standout: one bearing a Star of David decoration and the other is coated with a green glaze. Another lamp of the Roman period has a blocked filling hole, which indicates a failure during the production process. The rich glass artifacts included several intact perfume bottles. Thirty-nine coins from different periods were exposed, as well as stands, bronze vessels for filling oil lamps that typify of the transition phase, bronze weights, a tiny bronze bucket with a handle, kohl sticks and many nails. Numerous animal bones, which indicate the nutrition habits of the inhabitants and the sanitary conditions that prevailed at the site, were collected. Many architectural elements, including capitals, columns, stone weights of an olive press and marble slabs were discerned; they were mostly incorporated in secondary construction and in all likelihood, originated from ancient sites that were robbed in antiquity. The small finds included beads of faience, carnelian and lapis lazuli, two clay zoomorphic figurines, fragments of a stone measuring cup (from the Second Temple period), a carved bone handle, a decorated and carved bone spindle weight and a rare example of ancient pottery restoration that involved a glazed vessel, probably a bowl, whose parts were tied with strips of bronze (Fig. 12).

The results of the excavation and those of previous excavations at the site, show that two main periods are represented. The early period is the transition from the Byzantine to the Umayyad periods; dozens of kilns from of linen and included many plastered pools that were made smaller in different phases, was established at the site. The rich finds at the site, which was probably abandoned during the eighth or ninth centuries $C E$, point to the commercial and industrial activity and the high standard of living, as reflected in the plethora of luxury items.


1. Location map.

2. A kiln: its sides are lined with stone and there is a center column, looking south.

3. A kiln negated by an Abbasid wall. In the foreground are a tabun and an Abbasid floor, looking northwest.

4. A kiln negated by an Abbasid floor, looking west.

5. A series of kilns built one atop the other, looking east.

6. A plastered installation with notches from the Abbasid period, looking east.

7. Floors from the Abbasid period, looking east

8. Pounding tools.

9. Pottery in a septic pit, looking north.

10. Small glass bottles from the Abbasid period.

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## (Volume No. HA-ESI 121 (2009

## Ramla, Railway Station

## Final Report

Ofer Sion


1. Location map.

2. Square 1, looking northwest.

3. Squares 3 and 4, pottery.

4. Square 4, plan and section.

5. Square 6, looking northwest.

During June 2005, a salvage excavation was conducted east of the city of Ramla, to the north of and adjacent to Ma'asiyahu (Ta'avura) Junction and east of the railroad platform (Permit No. A-4503; map ref. NIG 18838-62/64828-58; OIG 13838-62/1482858), prior to construction work. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by Israel Railways Authority, was directed by O. Sion, with the assistance of A. Hajian (surveying), T. Sagiv (field photography), E. Belashov (drafting), C. Amit (studio photography), R. Vinitsky (metallurgical laboratory), M. Avissar (pottery reading), I. Lidski (pottery drawing) and R. Kool (numismatics).
The excavation area, adjacent to Ramla's bypass road, was c. 850 m east of the White Mosque (Figs. 1, 2). A cistern that dated to the Early Islamic period had been exposed in a previous excavation, c. 20 m to the south (HA-ESI 111:103*-104*).
Following the removal of top soil and modern debris (depth 0.5 m ) with the aid of mechanical equipment, six squares were excavated (depth 1.0-2.5 m). Building remains were exposed in five of the squares and artifacts dating to the Early Islamic period (eighth-tenth centuries CE), as well as a few finds from the Mamluk and Ottoman periods, were found in all six of them.
Square 1 (Figs. 3, 4)
An ancient wall (W37), overlaid with three sections of walls that enclosed a room (W19, W23, W30), was exposed. The wall foundations were built to a depth of 0.75 m below the crushed and tamped chalk floor of the room. Two rectangular installations, oriented east-west, were uncovered in the middle of the room (Loci 109,112; length 1.6-2.8). The walls of the installations were coated with gray plaster that was decorated with an incised herringbone pattern (Fig. 5). As no floors were discovered in the installations, they were probably used as septic pits or perhaps even as toilets. The base of a tabun was exposed in the northeastern corner and stone collapse occurred in the eastern part of the square.
The potsherds above and below the floor dated to the Early Islamic period (eighth-tenth centuries CE) and included two bowls (Fig. 6:1, 2), a cooking pot (Fig. 6:3), a jar (Fig. 6:4) and a body fragment of a jug (Fig. 6:5). A coin (Table 1:4) that dated to the Mamluk period was found on surface.

Square 2 (Figs. 7, 8)
A wall that bisected the square from north to south (W29) was exposed; it was adjoined from the east, at right angles, by Wall 38. Another wall in the western part of the square (W21) was also perpendicular to W29. The walls were built of soft dressed limestone blocks, set on a foundation of small fieldstones. A crushed chalk floor (L110) was also found. A pit, dug in sandy hamra and filled with stones (depth 1.65 m ), was exposed in the northwestern part of the square; this was probably a septic pit. The discovery of human bones (L123) suspended the excavation in the southern part of the square. The potsherds above Floor 110 and below it (L119) dated to the Early Islamic period (eighth-tenth centuries CE) and included a large bowl (Fig. 9:1), bowls (Fig. 9:2, 3), small bowls (Fig. 9:4, 5), a cooking pot (Fig. 9:6), an amphoriskos (Fig. 9:7), a fragment of a zoomorphic vessel decorated with white paint and black stripes (Fig. 9:8) and lamps (Fig. 9:9, 10). A coin that dated to the Mamluk period (Table 1:3) and was probably a later intrusion was found.

Square 3 (Figs. 10, 11)
A cist tomb (L122; $0.95 \times 1.80 \mathrm{~m}$ ), lined with stones and abutted by a floor (L117), was exposed. The interior of the tomb (preserved depth 0.3 m ) was coated with gray plaster. The discovery of human bones caused the suspension of the excavation. Human bones were also discovered in a pit grave (L102), in the western part of the square. A cooking pot (Fig. 12:1) that dated to the Early Islamic period (eighth-tenth centuries CE), an Umayyad coin (Table 1:1) and an Abbasid coin (Table 1:2) were found on Floor 117.

Square 4 (Figs. 13, 14)
Two walls (W22, W39) that probably formed the corner of a room were exposed. The walls continued westward and a leveled surface between them was probably a doorway threshold. A tamped-soil floor (L111) that abutted the northern side of W22 was uncovered. The potsherds discovered below the floor (L116) mostly dated to the Umayyad period and included bowls (Fig. 12:2-5), jugs (Fig. 12:6, 7), a flask (Fig. 12:8) and a zoomorphic vessel (Fig. 12:9). In addition, a mold-decorated jug fragment (Fig. 12:10) and an intact lamp (Fig. 12:11) that dated to the Early Islamic period, were discovered.

## Square 5

Human bones were exposed atop the characteristic indigenous sand throughout the entire square and the excavation was suspended. The interred (five individuals) were aligned east-west, as customary in Muslim burials.
Numerous fragments of pottery vessels that dated to the Early and Late Islamic periods and a coin from the Mamluk period (Table 1:5) were found in the debris that had accumulated above the tombs.

Square 6 (Fig. 15)
A floor of mortar and stone fragments (thickness $0.1-0.2 \mathrm{~m}$ ) was exposed in the eastern part of the square; the floor was overlain with stone collapse (height 2 m ). Human bones, generally aligned east-west, were exposed in the northwestern and eastern parts of the square.
Fragments of pottery vessels that dated to the Early and Late Islamic periods and were not found in stratigraphic contexts, as well as an Ottoman coin (Table 1:6), were discovered.

The exposed building remains were most likely those of residential buildings; however, the distance between the excavation squares made it impossible to connect them. Probe trenches that yielded no building remains were dug in the vacant areas between the squares and it seems that the construction in the area was sparse. The tombs exposed on top of the sand belonged, in all likelihood, to the first burial phases in Umayyad Ramla; they probably indicated the boundaries of the city, which was located to their south and west. Land for construction was increasingly sought for during the accelerated development of the city in the Abbasid period (eighth-tenth centuries CE ); the result was building in areas that had been used for burial up until then. The absence of architectural remains from later periods (twelfth century CE onward) was probably related to the earthquakes that had struck the city during the eleventh century CE and caused extensive destruction. The masonry stones were probably taken for rebuilding the new city.

Table 1. The Coins

| No. | Locus | Period/Ruler | Date | Mint |
| :--- | :--- | :--- | :--- | :--- |
| IAA. No. |  |  |  |  |
| 1 | 117 | Umayyad | $696-750$ CE | - |
| 2 | 117 | Ga'far, govenor (Abbasid) | 846 CE | 109521 |
| 3 | 120 | Barqūq (Mamluk) | 1387 CE | Tarablus |
| 109523 |  |  |  |  |
| 4 | 100 | Barqūq (Mamluk) | $1389-1398$ CE | - |
| 5 | 104 | Barqūq (Mamluk) | 1396 CE | Hamah |
| 6 | 168 | Suleiman (Ottoman) | $1519-1566$ CE | Misr |





4. Square 1 , looking northwest.

5. Installation 109, decorated wall, looking east.


7. Square 2, plan and sections.


9. Square 2, pottery.


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10. Square 3, plan and section.

11. Square 3 , looking south.



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12. Squares 3 and 4, pottery


14. Square 4, looking northwest.

15. Square 6, looking northwest.

## Ramla (South)


2. The excavation areas.

3. Stratum VIII, a refuse pit below walls of Stratum III looking northeast

4. Stratum IV, mud-brick installation and stone enclosure, looking west.

9. Shattered jars from Stratum IIIb and intact jar from Stratum IIIa; metal object in left foreground.

11. Bronze bowls in situ inside a septic pit.

## Amir Gorzalczany

During December 2007-March 2008, a salvage excavation was conducted south of Ramla and north of Moshav Mazliah (Permit No. A-5331; map ref. NIG 18732-67/64645-98; OIG 13732-67/14645-98), prior to paving Highway 431. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Netivē Ha-Yovel Company, was directed by A. Gorzalczany, with the assistance of Y. Elisha, T. Kanias, E. Kogan-Zehavi, R. Lavi, M.A. Tabar and Y. Arbel (area supervision), O. Ashkenazi and D. Mizrahi (registration and data entry), E. Bachar and S. Ya'aqov-Jam (administration), V. Essman, M. Isserlis, T. Kornfeld and M. Kunin (surveying and drafting), L. Yihye and H. Ben-Ari (GIS/GPS), T. Sagiv (field photography), R. Chen (metal detection), Y. Arnon (ceramics), Y. Gorin-Rosen (glass), M. Sadeh (archaeozoology), A. Salamon (geology), I. Ktalav (archaeomolluskology) and also Z. Greenhut, A. Re'em, P. Spivak and A. Shadman. Special thanks are extended to B. Begin, R. Amit and the staff of the Geological Survey of Israel, as well as to E. Ayalon, Y. Drey, S. Shalev, Y.Qartz, A. El'ad and K. Cytrin-Silverman.

Eleven main strata (Table 1) had been identified in former excavations at the site (HA-ESI 118, HA-ESI 120, $\underline{H A-}$ ESI 120, HA-ESI 121); only several of these were exposed in the current excavation. Nine excavation areas (H1, I, I2, J1, J2, J3, K1, K2, K3) were opened along the route of Highway 431 (Figs. 1, 2) and 127 squares were excavated. The finds included refuse pits from the Middle Bronze Age (Stratum VIII), industrial installations and enclosures from the Byzantine period (fourth-fifth centuries CE; Stratum IV), an extensive industrial region and two bathhouses from the Early Islamic period (Strata IIIa-IIIb) and remains of a meager settlement and refuse pits from the eleventh century CE (Stratum I). Evidence of an earthquake that had struck in the middle of the eighth century CE, possibly the famous earthquake of 749 CE , was discovered in the course of the excavation.

## Stratum VIII (Middle Bronze Age)

Pits dug into the hamra soil were exposed. Especially noteworthy was a large pit (c. $2.0 \times 2.8 \mathrm{~m}$, depth 0.7 m ; Fig. 3), probably an ancient refuse pit that contained a large amount of potsherds, animal bones, mud-brick fragments and several flint artifacts, including sickle blades. Potsherds and animal bones were also discovered within a layer of grayish yellow sand that contained many patches of ash and was located primarily on the hamra at the base of the site or on a layer of sand that overlaid the hamra. This sand layer was mainly found in the higher parts of the site's ancient hill. The ceramic finds dated to the MiddIIe Bronze Age (IIB?).

## Stratum IV (Byzantine period; fourth-fifth centuries CE)

An installation built of flat mud bricks, which is characteristic of heating installations, was exposed, as well as meager stone walls that surrounded two enclosures and were built of stones, without bonding material (Fig. 4). One of the enclosures reached the eastern wall of the mud-brick installation and it seems they were related to each other. A thick layer of ash mixed with potsherds was discovered in this enclosure, which was delimited on the east by a low wall of one row of stones that had a niche protruding to the east. The enclosure, situated on the clean hamra soil that lies at the base of the site, was probably used for heating water or some other material for an industrial use. The ash layer in the enclosure also contained fragments of ceramic pipes, but no evidence of the inflow or outflow of water from the mud-brick installation was found.

## Strata IIIa-IIIb (Early Islamic period; seventh-ninth centuries CE)

The site reached the peak of its prosperity during the Early Islamic period (Fig. 5), as had already been noted in the previous excavations. An extensive network of plastered water channels that were connected to plastered industria installations and cisterns, some of which were large and very deep, was exposed in all the excavated areas. The most common installation was a shallow plastered rectangular pool, often with a small depression in its bottom (Figs. 6, 7). Some of the installations were built in pairs and triplets. Several round pools were discovered. All the pools were coated with hydraulic plaster of fine quality. Some of the pools were paved with a coarse white mosaic and in some pools was a bench of sorts, built along the inside of one of the walls. Most of the installations were repaired and reduced at one point or another for reasons unknown. It is impossible to determine for which industry the installations were used at this time, yet it can reasonably be assumed that it involved the use of liquids. Numerous septic pits, which were usually dug into the hamra, lined with fieldstones and covered with a vault that was sometimes completely preserved, were discovered at the site (Fig. 8). These septic pits were turned in a later phase into refuse pits that contained large quantities of excellently preserved pottery, glass and bronze vessels.

Bathhouses. The remains of two bathhouses, located at either end of the site (Areas I2, K1), were discovered in Stratum III (seventh-eighth century CE). All that was preserved of the two bathhouses were parts of the caldarium heating system. The eastern bathhouse (in Area K1) was built on a foundation of large stones that were placed directly on top of sandy soil. Several of the caldarium's round columns, built of flat fired mud bricks and placed one on top of the other, were preserved in this bathhouse. Most of the columns sagged and the remains of the bases were mainly visible in the area. A small section of the room's upper floor, which the columns supported, was also preserved. Columns in the caldarium of the western bathhouse (Area 12) were preserved as well, but unlike those in Area K1, these were built of limestone, upon which the effect of heat was clearly apparent. The use of stone columns in bathhouse caldaria was not widespread because the stones could not withstand the heat as well as the mud bricks. Some of the columns in the western bathhouse were round, some were pilasters and some stood on a base. The irregularity in the construction of the columns suggests that they were taken from another place and put to secondary use here. The caldarium's northern wall and part of the northeastern corner were preserved. Between the columns in the room was a thick layer of ash and burnt material, as well as pieces of mud bricks that probably belonged to the upper suspended floor. Signs of later activity were discerned between the columns, such as the intentional blocking of openings. It seems that the building underwent renovations and its use was modified. The discovery of two bathhouses at the site in the seventh-eighth centuries CE indicates its importance during this period.

Earthquake. Evidence of a major earthquake was discerned in Areas J 2 and K 1 ; it included cracks along the walls of installations, large sections of collapse composed of neat ashlar stone construction that had not been robbed, floors that had dropped and walls that curved in unexpected directions. Wall collapse, which had been intentionally covered over with soil and hamra to save the building stones from being plundered, was observed. It seems that the residents of the town were concerned with the quick restoration of the settlement's activity. Especially interesting was a series of jars, some positioned upside down, which were discovered in situ, smashed inside a room that was apparently used for storage. The jars dated to the first half of the eighth century CE and they seem to have been all damaged simultaneously in the same event. The room was leveled and quickly refurbished in an attempt to regain its capacity for industrial manufacture as soon as possible. The renovation of the room included the construction of new walls, with which jars dating to the second half of the eighth century CE were associated and preserved intact (Fig. 9). It therefore seems that we have here a small, rare chronological window, which enables us to date the earthquake.
Indisputable proof of the earthquake occurrence was found in the balks of Area K1, where a fault in the layers of sand and hamra, which were split due to a fissure, stands out prominently (Fig. 10). One side of the layers in the section was lower than the other side. The fissure continued along several excavation squares and it caused a plaster floor and a column base that stood above it to sink 1.5 m . Such vertical movement of layers could only be caused by a powerful seismic event. An opposite fracture was discerned elsewhere on the site, where the movement was not only vertical but also horizontal, causing the layers to climb one atop the other.
It appears then that archaeological evidence of an earthquake, which occurred close to Ramla in the middle of the eighth
century CE, can be pointed to for the first time. The dating is firmly based on the pottery and it is feasible that this is the famous earthquake of the year 749 CE

Stratum I (eleventh century CE)
A noticeable decline in the intensity of the settlement occurred from the ninth century CE onward. Remains of a meager settlement, dating to the tenth-eleventh centuries CE and damaged by modern activity, were exposed. Several floors and walls stumps were revealed and large refuse pits that contained fragments of glazed pottery vessels were recovered from most of the excavation areas.

The material remains from the excavation were considerable. The pottery assemblage contained a large and diverse number of vessels, some of which were intact. Outstanding among them were the many imports, including vessels from Cyprus, China and Coptic vessels. The large quantity of Islamic pottery adorned with kerbschnitt decorations was also exceptional. The largest numbers of these vessels, which are a type of rare fine ware, were found in Area I. The rich glass assemblage was among the most diverse found to date in the excavations in and around Ramla. The bronze artifacts included excellently preserved bowls (Fig. 11), cosmetic containers and numerous coins. The stone vessels included basalt bowls with pedestals, hearth tools made of imported steatite and pounding tools. Other artifacts included zoomorphic vessels, mother-of-pearl shells, some of which were whole and probably used for inlays and jewelry, and numerous animal bones. The wealth of the site was also apparent in the large quantity of marble fragments that were scattered about, as well as the architectural elements that included columns, capitals, bases and frieze fragments, incorporated in secondary use in the buildings at the site.

A meager rural settlement probably existed at the site during the Middle Bronze Age. Industrial installations, mostly pottery kilns that dated to the Byzantine period were discovered. The site attained its peak in the Early Islamic period. During the Umayyad period, a farm that concentrated the industrial and agricultural work from the vicinity was apparently located at the site. After the earthquake in the middle of the eighth century CE, the site was renovated with the emphasis placed on industrial production. A very meager settlement was located at the site in the eleventh century CE and most of it was abandoned and not destroyed
Table 1. The stratigraphic sequence in Ramla.

| Stratum | Dating | Comments |
| :---: | :---: | :---: |
| 0 | Modern era | Remains of a military installation |
| 1 | Eleventh century CE |  |
| II | Fatimid period (ninth-tenth centuries CE) |  |
| IIIa | Abbasid period (eight-ninth centuries CE) | Industrial installations |
| IIIb | Transition period from the Byzantine to the Umayyad periods (seventh-eighth centuries CE) | Industrial installations |
| IV | Byzantine period (fourth-fifth centuries CE) | Pottery kilns |
| V | Roman period (first century BCE-fourth century CE) |  |
| VI | Persian-Hellenistic periods (fifth-fourth centuries BCE) | Potsherds only |
| VII | Late Bronze Age (fifteenth-thirteenth centuries BCE) | Potsherds only |
| VIII | Middle Bronze Age (twentieth-fifteenth centuries BCE) |  |
| IX | Prehistoric periods | Area A |



1. Location map.

2. The excavation areas.

3. Stratum VIII, a refuse pit below walls of Stratum III, looking northeast.

4. Stratum IV, mud-brick installation and stone enclosure, looking west.

5. Strata IIIa-IIIb, looking west.

6. Strata IIIa-IIIb, plastered rectangular pools, looking east.

7. Stratum IIla-IIIb, a plastered pool turned into a refuse pit.

8. Septic pit.

9. Shattered jars from Stratum IIIb and intact jar from Stratum IIIa; metal object in left foreground.

10. The fault in the sand and hamra strata caused by strong earthquake.


## Ramla (South)



1. Seasons 2005-2006, plan

2. The stepped pool from the early Byzantine period.

3. Ashlar building from the Late Byzantine period and remains from the Early Islamic period.

4. In situ remains of the olive press from the Late Byzantine period.

5. The large cistern from the

Early Islamic period, plan.

Oren Tal and Itamar Taxel 30/12/2009
During July-August 2005, June-July 2006 and July 2007, excavations were conducted in the eastern part of the Ramla site (South; License Nos. B-298/2005, B-306/2006, Permit No. A-5168), in an area that was mostly used as a military base until several decades ago and an area where the access road to Moshav Mazliah was located. The excavations, undertaken on behalf of the Institute of Archaeology of the Tel Aviv University and the Israel Antiquities Authority and underwritten by the Israel National Roads Company Ltd., were directed by O. Tal and I. Taxel, with the assistance of M. Edrey, M.Iserlis, I. Gordin, T. Harpak, G. Lerner, N. Messika, A. Nashef and A. Nativ (area supervision), A. keinan (registration), N. Wachidi, E. Inbar and R. Eran (administration), D. Porotsky and V. Pirsky (surveying and drafting), P. Shrago (field and studio photography), A. Brauner (preparing plans for publication), N. Halperin (metallurgical laboratory), Y. Wiener and R. Pelta (pottery restoration) and N. Messika, R. Pinchas and A. Perry (drawing). The excavation results and finds were processed by O. Tal and I. Taxel, with the participation of R.E. Jackson-Tal (glass), A. YasurLandau, D. Sweeney and R. Shimelmitz (Middle Bronze Age finds) and N. Amitai-Preiss (numismatics). The final report was published in 2008 (O. Tal and I. Taxel, Ramla [South]: An Early Islamic Industrial Site and Remains of Previous Periods, Tel Aviv) and a summary of the findings is presented hereafter.

The Ramla site is located south of the city of Ramla, along both sides of the access road to Moshav Mazliah; one hundred and fifty squares were excavated. The surface in some of the squares consisted of gravel beds, kurkar, asphalt and the like, which was the result of development activities at the site over the recent generations that greatly ravaged the archaeological remains. Nonetheless, the geological characteristics of the site aided, at times, in determining the stratigraphy. Ramla (South) is situated on gromosol; hamra soil was discovered at different depths throughout the site, in and upon which the site's strata were founded. Other layers were set on top of brown alluvium or red or yellow sand, which characterize the region, as alluded to by the city's name, Ramla (ramal = sand).
The ceramic artifacts from the site were dated to several periods: Middle Bronze IIA, the transition from Middle Bronze IIA to IIB, Late Bronze Age and the Persian, Hellenistic (Hasmonean), Roman, Byzantine, Early Islamic (all phases) Mamluk, Ottoman and the Mandatory era. Not all the periods were represented by architecture and in some instances, potsherds were the sole testimony to a period, for example, a complete jar and bowl attributed to the Late Bronze Age, which probably originated in a tomb that did not survive, or fragments of tableware, cooking and storage vessels from the Persian and Early Roman periods that were recovered from squares in the western part of the site.

Strata 1-6 (below) represented chronological phases that were not necessarily stratigraphic. A stratigraphic section, in which the potsherds represented all the periods at the site, could not be traced. On several occasions, the ceramic assemblages from early periods were discovered in a level higher than the assemblages and/or architectural remains of later periods, due to numerous disturbances that occurred at the site over time. It should be mentioned that many robber trenches, which had impaired the preservation of archaeological remains or hampered the understanding of stratigraphy, were exposed in all the excavations of Ramla (South). The trenches were intended for robbing building stones and construction material in a region where stone was in short supply.

## Stratum 1: Middle Bronze IIA (twentieth-eighteenth centuries BCE)

The stratum was discovered in Squares S213, S214 and T214 (Fig. 1). A series of installations and pits that dated to the Early Islamic period (eighth-ninth centuries CE) sealed it and were partly founded on the MB layer or penetrated it. It is noteworthy that a few MB potsherds, not in context, were discovered in the adjacent squares, yet an excavation down to virgin soil did not reveal any remains from this period. This stratum was represented by eight habitation levels of brown clayey soil that were probably the result of disintegrated mud bricks. The stratum had no architectural remains, but was rich in potsherds that were laying one atop the other, separated by a grayish yellow sand layer (average thickness of each layer c. 0.2 m ). The potsherds consisted of an assortment of bowl fragments, handmade and wheel-thrown cooking pots, kraters, jars and jugs. A distinct find was a jar handle stamped with a scarab of an ancient Canaanite type (the altar pattern), which was discovered in an Early Islamic pit that had cut the MB IIA habitation levels. Judging by the nature of the remains, it seems that this was a courtyard of a building that did not survive or a temporary encampment site that was re-inhabited for short periods during the MB IIA
Stratum 2: The Hasmonean Period (end of second-beginning of first centuries BCE)
This "stratum" consisted of hamra soil pockets in several places at the site that contained pottery (including a perforated cooking pot) and glass vessels and a few Hasmonean coins. It seems that the remains of the Early Islamic stratum eradicated any trace of the architectural remains from this period.
However, a section of a rectangular plastered pool $(1.2 \times 3.0 \mathrm{~m})$ that had two steps leading down to its bottom was exposed in Square X209 (see Figs. 1, 4)

Stratum 3: The Late Roman and/or Early Byzantine Period (third-fifth centuries CE)
The southeastern corner of a stepped foundation was exposed in Squares M140/209 (see Fig. 1). Its exterior faces were built of ashlar stones, with a core of fieldstones and soil and it was preserved five courses high ( 1.4 m ). Several fragments of cooking pots and jars from the Late Roman/Early Byzantine period were discovered in the fill of the foundation, which was probably that of a massive public, cultic or military building that did not survive.

Stratum 4: Late Byzantine-Beginning of Umayyad Periods (sixth-seventh centuries CE)
Architectural remains that dated to the sixth-seventh centuries CE were revealed in various scattered squares. The date of the remains was based on the ceramics, glass and coins they contained.
Ashlar Building. Building remains were uncovered in Squares K/L138 and L139 (see Fig. 1). The interior face of the walls was built of small fieldstones bonded with mortar, without plaster and the exterior face was constructed from ashlar stones, some of which were meticulously dressed and some were only roughly hewn. It seems that the ancient masonry stones used in the building were probably dismantled from a structure in Stratum 3 (above). The main section of the building was a rectangular room ( $2.0 \times 3.2 \mathrm{~m}$; Fig. 5), whose southern and eastern walls were preserved to the height of the foundation course, while its northern and western walls survived three courses high; no remains of an opening were discovered. It can be assumed that the entrance to the room was set in the southern or eastern walls. Pillars intended to support an arch were built in the room's northwestern and southwestern corners. The room had a plaster floor that abutted the second course of the walls and only a small section of it had survived in the south of the room. A probe was excavated where the floor was missing, revealing the walls' foundations that were set on virgin soil. Other walls that abutted those of the room were exposed north and east of the building. More walls and a section of a plaster floor, founded on flint and limestone pebbles, were discovered in two places west of the room. It is unclear whether the remains were part of the building or belonged to other buildings close by. The remains of the ashlar building were severely damaged by later construction and the robbing of stones, which were attributed to the Early Islamic period.
An Installation and an Adjacent Tabun. Two parallel ashlar walls-in the east and in the west-were discovered east of the ashlar building; they survived to the height of the foundation course and had a coarse white mosaic floor between them. A square engaged pillar that may have been meant to support an arch was incorporated in the western wall and next to it was a round plastered pool, paved with a white mosaic, with a sump in its center. A small tabun, abutted by a plaster floor, was discovered slightly south of the mosaic floor.
Olive Press Complex. Two cylindrical screw weights were exposed in Squares Q139/140 and R139/140 (see Fig. 1). Each of the weights had two narrow hewn grooves in their sides and two large stone collecting basins were located
alongside them. One of the weights was discovered in situ (Fig. 6), while the other was found lying on the ground. The collecting basins were discovered in situ, embedded deep into the hamra soil. The original levels of the olive press, including the work surfaces, were not preserved.
Winepresses. Floors paved with a coarse white mosaic, with collecting vats in their corners (Fig. 7), were discovered below the remains of the Early Islamic period in the northern part of the area, Square O138 and in the southern part of the area, Squares X10/11-Y10/11 (Fig. 3). A large stone, which was probably used as a base for anchoring a press screw, was found below the winepress, excavated in 2007. Another plastered stone basin, probably also for collecting liquid, was revealed in the northwestern corner. Sections of other surfaces paved with a coarse white mosaic were discovered to the south, east and west, beyond the area of the treading floor. These could have been used by other winepresses or other parts of the same winepress, which had been dismantled when the installations of the Early Islamic stratum were built.
Pottery Kilns. Sections of kilns below the remains of the Early Islamic period that had been destroyed in the past were revealed in Squares S10 and T10 (Fig. 2), opened where the access road to Moshav Mazliah passed. A section built of fired mud bricks in a horseshoe shape and mud brick collapse whose outline was curved were preserved in one of the complete installations. A refuse pit, discovered nearby, primarily contained fragments of Palestinian bag-shaped jars, which are characteristic of the central and southern coastal plain. Some of the jars were deformed and it can reasonably be assumed that they had been fired in the kiln.
Glass Furnace. Small amounts of fired mud-brick collapse (of a kiln) were discovered in Square Y134 (see Fig. 1). Next to the collapse was debris from a workshop where glass had been blown. Fragments of glass vessels, deformed fragments and leftover glass fragments that bear marks of moil detachment were discovered alongside chunks of raw glass and of debris from worked glass.

## Stratum 5: End of Umayyad Period (?), Abbasid and Fatimid Periods (eighth-eleventh centuries CE)

This stratum represents the main phase of the site's occupation that began some time after the founding of Ramla at the beginning of the eighth century CE, probably around the middle of the same century, at the end of the Umayyad or beginning of the Abbasid periods. An extensive complex, clearly industrial in nature, was constructed at the site. It included numerous and assorted installations-cisterns, water pipes, channels and pools-that were intended for the storage, conveyance and use of water and perhaps other liquids as well. Installations that included vaulted septic pits and floors of plaster, stone and mosaic, meant to fulfill other functions in the industrial activity of the site, were built next to them. Almost all of these penetrated into the earlier strata remains and caused additional damage. The remains of this stratum, which consisted of several sub-phases, were discovered in all the excavation squares; in light of the extensive archaeological work that was conducted in the area it is clear that they extended beyond the limits of the excavated area. The dating of the installations was based on the ceramics, glass and coins they contained.
Cisterns. Seven cylindrical-shaped cisterns (diam. 1-5 m) that had a domed ceiling were discovered. All were built of different size fieldstones, bonded with cement and coated on the inside with at least one layer of plaster. It was found in the examined cisterns that the upper layer of plaster on their sides was embedded with potsherds, mostly body fragments of jars that dated the construction of the cisterns. Most of the cisterns were found filled with alluvium almost to their ceilings and sometimes their upper sections had caved in. The largest of the cisterns in Squares S-T139/140 (see Fig. 1) was the only one discovered almost completely clean of silt (measured depth 11 m ). A square opening (width c. 0.5 m ), built of ashlar stones, was set at the top of its domed ceiling. Ceramic pipes that led to two sides of the cistern were probably meant to convey water to the installation and drain off its overflow; the openings of the pipes were located at different levels in the sides of the cistern, in which case the cistern was used for storage and distribution (Fig. 8).
Pipes and Channels. The remains of many pipes and channels, used to convey water and possibly other liquids, were discovered. All the pipes and most of the channels were subterranean and only several channels were above ground and embedded in the floors. A source or terminus of a pipe/channel was found in many places, usually in cisterns or pools. Most of the pipe remains were composed of ceramic sections that had a limited number of standard diameters. The fragile pipes were lined on all sides with a protective layer of small fieldstones bonded with mortar. Relatively short sections of pipes were usually discovered; however, it was possible in one instance to trace the course of a pipe that crossed the excavation area from north to south, over a distance of c. 60 m . The source and terminus points of this pipe were not discovered and it is not clear what its purpose was. In any event, the path followed by the pipe seems to have served at least two pipes or another pipe and a channel that were set at lower levels. The upper long pipe was built in accordance with the topography of the site; it was necessary to lower its level in the northern part by installing a cement 'elbow'. Unlike the pipes, the channels were built of roughly hewn stones and small fieldstones, bonded with cement. The inner faces of their sides were plastered, although plaster was not always applied to their floors. The channels were usually covered with roughly hewn stones; however, in several places no covering stones were discovered and the channels were probably open or all their covering stones were robbed (Fig. 9). The channels apparently did not lead to the cisterns, but rather to industrial pools and perhaps to septic pits.

Pools. Remains of c. 40 pools in various states of preservation were discovered. Sometimes only the floors of the pools and the foundations of their walls were found and sometimes, entire pools were exposed to their full depth. They were built of small fieldstones bonded with cement and their sides, flat bottom and sometimes the tops of their walls, were plastered (Fig. 10). As was the case with the cisterns, body potsherds of jars were embedded in the upper layer of plaster in all the pools. Occasionally, a marble slab fragment was embedded as a foothold in the wall of the pool, meaning to aid in entering and exiting the pool. Three types were discerned among the pools: (1) Rectangular water reservoirs with a barrel vault ceiling. Four such pools of different sizes were exposed and most of their ceilings were collapsed when excavated; (2) Square, rectangular or rectilinear pools. About 30 pools were exposed; most were small and quite shallow (average dimensions $0.5 \times 1.0 \times 1.0 \mathrm{~m}$ ) and only a few were larger and deeper. Most of the pools could not be directly related to other remains in their proximity due to the site's state of preservation. A narrow step was installed next to the long side in some of the pools and in others, a sump was located in one of the corners (Fig. 11); and (3) Small round pools that were quite shallow (diam. c. 1 m , depth c. 0.5 m ; see Fig. 1).
Vaulted Septic Pits. Remains of thirteen underground vaults were discovered. Most of them were barrel-shaped (average dimensions $1.5 \times 2.0 \mathrm{~m}$ ) and noted among them was an especially large vault in Squares R/S140 (see Fig. 1). In the absence of access steps, floors or any other means that rendered them usable, as well as their proximity to the pools (above) and work surfaces (below), it is obvious to conclude that the vaults were initially used as septic pits for wastewater and/or run-off. Interestingly, many of the vaults were used as refuse pits in a later phase, or even simultaneously, when they still functioned as septic pits. They were found filled with large quantities of domestic debris, mostly pottery vessels, but also glass vessels, metallic objects, a few coins and animal bones. Hence, the richest assemblages of artifacts at the site were recovered from some of the vaults. A preliminary analysis of the finds showed that they should be ascribed to the ninth century CE and that some of the vessel types may have extended into the tenth century CE. The pottery and glass vessels represented the common domestic assemblage of the period. In the absence of deformed shapes, it appears that this was not workshop debris, but rather regular household garbage.
Work Surfaces. Sections of paved surfaces that were adjacent or close to pools and vaulted septic pits were discovered in many of the squares. The surfaces were usually made of plaster and small stones and the repair layers upon them were indicative of several phases (Fig. 12). The work surfaces functioned in industrial activity and were not floors of dwellings. In addition to the plaster work surfaces, others of beach rock that was especially brought to the site from the Mediterranean coast and of coarse white mosaics were documented.
Refuse Pits. A section of a large deep refuse pit, dug into the natural hamra soil, was discovered in Square Y138 (see Fig. 1). A series of refuse pits and deposits were leveled and dug one into the other. The pits were probably located along the southern fringes of the site and contained a very large quantity of finds, mostly pottery vessels, along with glass vessels, stone objects and animal bones. The pottery vessels, like the artifacts from the underground vaults, were dated to the ninth and tenth centuries CE, although the upper levels of the pits also contained vessel types of the eleventh century CE .

Stratum 6: The Mamluk Period (thirteenth-fifteenth centuries CE) and the British Mandate Era (twentieth century CE)
This stratum was represented by finds discovered on the surface, without any relation to architectural remains. The finds ascribed to the Mamluk period included a complete ceramic jug, whereas a few fragments of pottery and glass vessels, Marseille roof tiles and metallic objects, discovered in the north of the site, were attributed to the British Mandate era. It seems that the latter belonged to the British military base in the area and/or to the Arab settlement located nearby.

The two earliest strata at the site, ascribed to Middle Bronze IIA and the Hasmonean period, were an innovation in the archaeology of the region; the MB IIA site was most likely connected to the network of roads that linked Ashqelon with Afeq, the prominent political centers in the south of the country during this period, as well as to other sites in the region, such as Tel Miqne, Gezer and Ashdod. The Hasmonean site was probably rural in nature and inhabited by Jews in the second half of the second century BCE, as part of the Hasmonean political strategy to create a Jewish territoria sequence' in the region of Modi'in and Lod, which would have separated the pagan coastal cities of the Shephelah (Philistia) from the Jewish settlement in Judah and its lowlands. This Jewish settlement probably continued to exist in the Early Roman period as well, based on the 'Jewish artifacts' (e.g., stone vessels and coins) recovered from ourexcavations, as well as from other excavations in the vicinity (HA-ESI 118 4144; Permit Nos. A-4454, A-5311, A5331). The nature and function of the ashlar-built foundation is unclear and therefore, the character of the site in the third-fourth centuries CE remains unknown. During the sixth and seventh centuries CE, a small rural settlement existed at the site and included dwellings, industrial installations and workshop facilities-pottery kilns and glass furnaces, winepresses and olive presses-mostly built along the settlement's margins. The settlement was administratively subordinate to Lod (Diosopolis/Georgiopolis), the largest city in the region. Its abandonment can be attributed to the founding of Ramla (c. 715 CE) and the gradual decline of Lod. Certain settlements in the rural hinterland of these two cities continued to exist after the sharp political and administrative changes in the region, while other settlements were abandoned in the wake of these changes. Historical sources from the Early Islamic period and the many excavations that had been carried out in Ramla indicate that the economy of this city was diverse. A variety of crafts was practiced, including processing of agricultural produce that was grown around and beyond it, textiles (manufacturing, weaving and dying) and the production of pottery, glass, stone and metallic items. Some of these crafts required the use of large quantities of water and the assemblage uncovered in the current excavations evidences this need unequivocally. It is feasible that most of the installations at the site were used in the various phases of processing the flax plant (Linum usitatissimum L.) to produce fibers that were intended for spinning. The contemporary historical sources mention that flax was grown in Ramla, in the alluvial fields south and east of the site, which benefited from a dependable water table c. 3 m below today's surface. Growing flax was practiced in the region also in modern times, until the 1960s and was replaced with cotton, which is grown in this region to date. The lack of finds that can be attributed to spinning and weaving crafts negates the possibility that the fibers produced at the site underwent further treatment. Moreover, it seems that the absence of colors on the sides of the many discovered pools invalidates the possibility that the site was used for dying cloth. The establishment of the complex is dated to the end of the Umayyad period and particularly, to the Abbasid period. A relatively small amount of finds that definitely dated to the Fatimid period (the end of tenth-eleventh centuries CE ) indicates that at least parts of the complex continued to exist in this period, possibly until the destruction of Ramla in the earthquake of 1033 or 1068 CE. Nevertheless, the vast majority of the finds indicates that the main activity at the site occurred until the tenth century CE. The geographer lbn Thafar mentions in one of the historical sources that spinning mills for weaving linen were established in Egypt at the end of the tenth century CE; these perhaps caused the industry in Ramla to wane and perhaps, to be abandoned altogether until modern times. In any event, with the decline in the growth of flax and production of linen in the tenth century CE, as the excavation indicated, there was apparently an increase in the growth and production of cotton, which was considered a more profitable crop economically, taking a prominent place in the textile industry of Ramla and the Land of Israel.


1. Seasons 2005-2006, plan


2. Season 2007, Squares $U-Y / 10-12$, plan.

3. The stepped pool from the early Byzantine period.

4. Ashlar building from the Late Byzantine period and remains from the Early Islamic period.

5. In situ remains of the olive press from the Late Byzantine period.

6. A winepress from the Late Byzantine period.

7. The large cistern from the Early Islamic period, plan.

8. A covered channel from the Early Islamic period.

9. A complex of pools from the Early Islamic period, plan.

10. A square, stepped pool from the Early Islamic period.

11. Plastered work surfaces from the Early Islamic period.

12. Side view of cave's area.

13. Top view of the cave's area.

14. One striking platform or irregular discoidal core.

15. Square A2, unmodified flake within breccia.

16. Fallow deer tooth.
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## Rantis Cave

## Preliminary Report

Ronit Lupu, Ofer Marder, Amos Frumkin, Guy Bar-Oz and Reuven Yeshurun
During January2005, a salvage excavation was conducted at the Rantis Cave (Permit No. A-4331; map ref. NIG /510-200470 282-659240; OIG 150470-510/159240-282), in the wake of discovering the site during the construction of the separation fence. The excavation, undertaken on behalf of the Israel Antiquities Authority and financed by the Ministry of Defense, was directed by O. Marder and R. Lupu, with the assistance of S. Ya'aqov-Jam and E. Bachar (administration), A. Hajian (surveying), G. Bar-Oz, R. Yeshurun and M. Belmaker (archaeozoology), A. Frumkin, (geology), O. Ackermann (geomorphology), H. Ron and N. Porat (radiometric analyses) and L. Zeiger (flint drawing). Further assistance was extended by N. Gubenko, E. Yannai, O. Shmueli and A. Re'em of the IAA central district, as well as students, volunteers and IAA laborers.

Rantis cave is located on the western slope of triangulation point 242, c. 1 km west of the Arab village of Rantis and about 6.5 km northeast of Shoham. The site is c. 200 m above sea level, on the western slopes of the Samaria Mountains. During a visit to the construction area of the separation fence, a large sinkhole, which comprised brown terra rossa soil with numerous animal bones and some flint artifacts, was noticed in the road's section (Figs. 1, 2).
The ensuing excavation consisted of 12 squares $(1 \times 1 \mathrm{~m})$ in a rectangular grid (Fig. 3); six squares on the upper part of the cave from north to south were designated as E and six squares on the section of the cave, parallel to the upper row, were designated as $A$. The squares were excavated in vertical units (depth 10 cm ) and all the material was dry-sieved ( $2-5 \mathrm{~mm}$ mesh). One fifth of the excavated sediments were sifted through a 1 mm mesh to recover small flint and bone artifacts.
The aim of the excavation was to clarify the stratigraphic and chronological relations between the flint artifacts and the numerous animal bones, as well as to attempt a reconstruction of the paleoenvironment of the cave.

It appears that more than half of the cave was preserved (length east-west 6 m , width north-south 12 m ). Originally, it was a karstic chamber-shaped cave that collapsed in antiquity. It was apparently entered from the top, which had also collapsed in prehistoric times. Subsequently, the cave was filled with accumulated sediments, fragments of roof collapse and pellets of different birds of prey that occupied the cave throughout its long existence.
The upper part of the cave underwent surface erosion. The eroded upper part was originally much higher than the depth measured from the present surface to the bottom (c. 6 m ). On the upper level, some traces of the cave's outline are still visible.

The geological and archaeological reconstruction of the cave's history is described below from bottom to top.
Phase 1. The cave was complete and its roof was c. 2-5 migher than at present. Karstic activity led to the formation of speleothems (cave deposits). Layers of clays and concretions of manganese, accompanied by organic material, were deposited at the bottom of the cave (Row A; Fig. 4), pointing to wet and water-logged conditions.
Phase 2. Part of the roof collapsed, forming a heap of rocks in the center of the cave. Some broken speleothems were found within the sediments.
Phase 3. Following the collapse, natural deaths of ungulates together with activity of predators and birds of prey occurred, as well as short-term visits of humans to the cave area. Soil rich in animal bones and some flint artifacts was consequently deposited alongside the rock collapse. Some of the bones and artifacts underwent strong fossilization processes under wet conditions.
Phase 4. Processes from Phase 3 continued in this phase. The main difference between the phases was that the soil in Phase 4 was loose terra rossa with minimal fossilization activity. Faunal remains were therefore better preserved, relatively to Phase 3.
Phase 5. The upper part of the cave was sealed with dark gray rendzina that was washed from the hill slopes during the last millennia.

## The Flint Assemblage

The assemblage consists of 39 artifacts, mostly unmodified flakes and chips (Figs. 5; 6:1, 3; 7; 9) made of gray-green, fine-grained high quality flint. Two cobble-sized and oval-shaped nodules were found in the excavation and it seems that a flint outcrop was located nearby, although its exact position is unknown.
The flakes vary in size (length 24-61 mm, width 17-52 mm). The dorsal scar pattern was mostly a simple along axis (Figs. 5:1, 2, 4; 6:1;7:3), although centripetal ridged and bipolar patterns were observed (Figs. 5:3; 7:1, 2). Striking platform shape was simple (Figs. 5:3, 4; 7:3) or less frequently, faceted (Figs. 5:1, 2; 6:3, 5) cortical (Fig. 6:2) and relatively wide (width $10-30 \mathrm{~mm}$, thickness $3-18 \mathrm{~mm}$; e.g., Figs. 5:1; 7:3). Crushed striking platforms were also recorded (Fig. 6:1). Core trimming elements in the cave (Figs. $5: 1 ; 6: 4,5$ ) included a particularly interesting one, i.e., an oval/rounded, debordant flake that was a rejuvenation flake of Levallois production system (Fig. 5:1). Only one core with a single striking platform was found; the preparation on its back resembled a discoidal core (Fig. 8). A total of seven tools were retrieved, including two notches (Fig. 6:5), two retouched flakes, one combined (retouched/notched) and one transversal burin (Fig. 6:4), as well as flakes with insolated removals (Fig. 6:1). None of them were of a diagnostic type and therefore, it is difficult to attribute this assemblage to a particular industry or period. However, the fact that flakes display faceted platforms with a simple along axis scar pattern (e.g., Figs. 5:1, 2; 6:3) possibly implies that these flint artifacts were produced during the Middle Paleolithic period, occasionally by the Levallois technique. The occurrence of one debordant flake (Fig. 5:1) and a presumably discoidal core (Fig. 8), underlines this observation.

## Dating of the Site

As part of the multidisciplinary research of the cave, both paleomagnetism and radiometric methods were used for dating Two Uranium-Thorium dates of broken, redeposited speleothems below the main cave sediments are 141.2 and $143 . \mathrm{c}^{2}$ Ka. Generally, the paleomagnetic samples taken from the cave indicated normal polarity that is younger than 780,00C years BP. The age of c. 140,000 years BP presents a maximum age of the finds (post quem) and it seems that most o the cave deposits, as well as human and animal activities, were later.

## The Fauna

Two-hundred and forty large mammal bones and teeth were identified. These included predominantly Mesopotamiar fallow deer (Dama mesopotamica, 68\% of total identified bone fragments; Figs.10-12) and mountain gazelle (Gazellc gazella, 13\%). Aurochs (Bos primigenius), goat (Capra sp.) and wild boar (Sus scrofa) are represented in small numbers No small game species were found, except for two hyrax (Procavia sp.) specimens. Remains of five species of carnivores were identified, each represented by one to three specimens: leopard (Panthera pardus), wolf (Canis lupus), brown beal (Ursus arctos), a single undetermined species of hyena (Hyena/Crocuta) and a small canid, either fox (Vulpes vulpes) oI jackal (Canis aureus).
Bone surface modification data, skeletal-element representation data and age structure of fallow deer all indicate lon anthropogenic and carnivore impact on the faunal remains. It is suggested that the large mammal remains of the cave were accumulated as a result of natural deaths, either at the site where the cave acted as a pitfall, or in its immediate vicinity. Humans and carnivores were occasionally attracted to the cave, perhaps for the exploitation of the deac ungulates.
Additional data came from the microfauna. Micromammal remains were numerous (Fig. 13). They mainly belonged to the social vole (Microtus gunetheri), followed by the field mouse (Mus macedonicus) and a single mandible of a long tailec field mouse (Apodemus sylvaticus).Two other taxa included the Tristram's Jird (Meriones tristrami) and the shren

## (Crocidura spp.)

The Rantis cave represents a long geological, archaeological and paleoecological history. It was probably formed before the Pleistocene and in its last stages animal activity and occasional human visits took place. The same activity continued for tens of thousands of years. Different chamber-shaped caves that probably went through the same processes are present in the vicinity of Rantis cave and some were used as water holes in later periods.
The importance of the cave lies in the ability to reconstruct its paleoenvironment during the late Pleistocene-early Holocene eras. The apparently low interaction between the humans and animals in the cave provided a rare opportunity to reconstruct the natural habitats, using a faunal sample largely unbiased by human predacity. The results show some differences from what is reflected in Middle Paleolithic caves that were fully or partially occupied by humans, e.g., the nearby Shukbah and Immanuel caves. The differences concern mainly carcass processing, mortality patterns and species composition. The scarcity of preserved sites from ancient periods in the area further underlines the significance of the Rantis cave research.


1. Side view of cave's area.

2. Top view of the cave's area.

|  | A | B | C | D | E |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |




7. Unmodified flakes

8. One striking platform or irregular discoidal core.

9. Square A2, unmodified flake within breccia.

10. Fallow deer metapodial, in situ.

11. Fallow deer mandible.

13. Square A2, concentration of rodent bones within breccia.

# (Volume No. HA-ESI 121 (2009 

Ras Abu Dahud

## Final Report

Aviva Buchennino
11/3/2009


1. Plan and sections.

2. Square A, looking northeast.

3. Square A, pit, looking northeast.

4. Pottery.

During May 2006, a salvage excavation was conducted at the site of Ras Abu Dahud in the Nahalat Yehuda neighborhood of Rishon Le-Ziyyon (Permit No. A-4799; map ref. NIG 182050-87/654565-98; OIG 132050-87/154565-98), in the wake of discovering antiquities during a preliminary inspection prior to construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and financed by S. Eden, was directed by A. Buchennino, with the assistance of E. Bachar (administration), A. Hajian (surveying), Y. Rapuano (preliminary inspections), E. Belashov (drafting), C. Amit (studio photography), M. Shuiskaya (pottery drawings) and N . Katsnelson (glass).
Along the kurkar ridge in the region, numerous arcosolia tombs are scattered, mostly in ruins due to kurkar quarrying. Previous excavations in the area had exposed building remains and burial caves that dated to the Roman period (HA 4:15, 18-19:10, 40:13 [Hebrew]; Permit No. A-3937; License Nos. B-32/1998, B-162/1998, B-20/1999).
One excavation square (A) and another half square (B) were opened. A poorly preserved pit, which contained potsherds and fragments of glass vessels that dated to the Byzantine period, was exposed. An intact jar from the Ottoman period was discovered nearby.
Square A (Fig. 1) was opened in the area where antiquities, covered over with modern refuse in recent years, were traced during the preliminary inspection. A row of various size fieldstones, oriented east-west, was exposed in the northern part of the square (Fig. 2), as well as part of a pit (Fig. 3) whose precise outline could not be determined due to extensive damage caused to it. The pit contained fragments of pottery vessels, mostly ribbed jars (Fig. 4:1) that dated to the Byzantine period, as well as a number of cooking pots sherds, fragments of two oil lamps (Fig. 4:2, 3) and fragments of glass vessels, all dating to the Byzantine period. It probably functioned as a refuse pit.
Square B was adjacent to the northern side of Square A. Fragments of pottery vessels, mostly ribbed body sherds of jars and a few body fragments of cooking pots, dating to the Byzantine period, were found.
An intact jar (Fig. 4:4) that dated to the Ottoman period was discovered on top of a kurkar hill, c. 250 m to the north of the excavation area.


2. Square A, looking northeast.

3. Square A, pit, looking northeast.

4. Pottery.
(Volume No. HA-ESI 121 (2009
Ras Abu Dahud (North)

## Final Report

Diego Barkan 8/12/2009


1. Plan and section.

2. Pottery and stone finds.

During July 2003, a trial excavation was conducted at 24 Giborē Yisrael Street in the Nahalat Yehuda neighborhood of Rishon LeZiyyon (Permit No. A-3937; map ref. NIG 182208-42/655097-108; OIG 132208-42/155097-108), following the discovery of ancient remains in a lot slated for construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by S. Avraham, was directed by D. Barkan, with the assistance of E. Bachar (administration), A. Hajian (surveying), A. Glick (GPS), T. Sagiv (field photography), Y. Elisha (preliminary inspections), P. Gendelman (pottery consultation), D.T. Ariel (numismatics) and E. Ayash, M. Ajami and E. Yannai.
Building remains and burial caves that dated to the Roman period had been excavated at the site in the past (HA 4:15, HA 40:13 [Hebrew]). The current excavation was conducted c. 100 m west of the Bet Dagan-Rishon Le-Ziyyon road (Highway 412). Mechanical equipment was used to remove ground level down to the elevation of the tops of the walls. Three half squares were opened, revealing building remains that dated to the Roman period (first-second centuries CE).

Square A (Fig. 1)
Two walls (W1, W2; width 0.6 m ), preserved four courses high, were exposed. The walls were built of two rows of indigenous kurkar stones, most of them dressed. An earlier wall (W6; width 0.7 m ), built of medium-sized fieldstones and preserved a single course high, was discovered along the line of and below W1.
A coin that dates to the reign of Hadrian (117-135 CE; IAA 97904) and was struck in the mint of Caesarea was found on the surface.

Square B
Walls of medium-sized fieldstones (W3, W4; width $0.5-0.6 \mathrm{~m}$ ) that formed a corner (L108) were exposed c. 8 m northeast of Square A. A number of flat stones (length $0.30-0.35 \mathrm{~m}$ ), probably part of a floor, were found c .0 .5 m northeast of W4. A copper coin of Domitian (81-96 CE; IAA 97905), minted in Caesarea, was found north of W4.

## Square C

A wall built of small and medium fieldstones and preserved a single course high was exposed (W5; width 0.6 m ).
The ceramic finds were dated to the Roman period (first-second centuries CE) and included locally produced bowls (Fig. 2:1-3), cooking pots (Fig. 2:4,5) and bag-shaped jars (Fig. 2:6-11). A worn fragment of a stone cup that resembles a measuring cup (Fig. 2:12) and is dated to the first century-beginning of the second century CE, was also found. Other finds included two jar rims (Fig. 2:13, 14) from the Hellenistic period (fourth-third centuries BCE), which were apparently swept to the site, and two potsherds that dated to the Fatimid period (eleventh century CE) were found on surface.

The pottery assemblage and coins date the site to the Roman period-the years between the Great Revolt and the Bar Kokhba Revolt. It seems that the site was inhabited for only a short duration.




1. Plan and section.


## (Volume No. HA-ESI 121 (2009

Rehovot, Havatselet neighborhood, Survey
Final Report
Yehuda Dagan and Leticia Barda


1. Field wall, looking east.

2. Modern building, looking north.

During September 2005, a survey was conducted southeast of Gan Shelomo (Permit No. 4579; map ref. NIG 1812-5/6421-9; OIG 1312-5/1421-9), prior to expanding the Havatselet neighborhood in Rehovot. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the contractor, was carried out by $\overline{\mathrm{Y}}$. Dagan and L. Barda (GPS).

The survey area (c. 200 dunams), located south of Rehovot and north of Kibbuts Giv'at Brenner, extends across two kurkar hills and in cultivated areas (orchards and irrigated fields) at their foot. No ancient remains were found in the cultivated areas, possibly because of agricultural activities. A field wall (map ref. NIG 181586/642434; width c. 1.5 m ; Fig. 1) built of medium fieddstones that delineated a cultivation plot and a kurkar quarry (map ref. NiG 181427/642364; Fig. 2) were situated along the fringes of these areas. A modern building (map ref. NIG 181410/642407; Fig. 3) which was .constructed c. 100 years ago and probably served as a packing house, was also identified


1. Field wall, looking east.

2. Quarry, looking northeast.

3. Modern building, looking north.

## (Volume No. HA-ESI 121 (2009

Rishon Le-Ziyyon Sand Dunes Final Report
Yoav Arbel


1. Plan.

2. Pottery.

3. The winepress, looking east.

4. Vat 9, looking south.

5. The winepress, pottery.

During September-October 2003, a salvage excavation was conducted in the Rishon Le-Ziyyon sand dunes, west of the Nobel Prize Winners neighborhood (Permit No. A-3982; map ref. NIG 177676-703/653346-78; ÖlG 127676-703/153346-78), prior to construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by Y. Arbel, with the assistance of M. Mulokandov (area supervision), S. Ya‘aqov-Jam (administration), V. Pirsky (surveying and drafting), T. Sagiv (field photography), E. Yannai (pottery reading), Y. Rowan (flint tools) and M. Shuiskaya (pottery drawing).
The upper sand dune was removed by mechanical equipment and probes were excavated where ancient remains were visible in the brown hamra. Meager remains of stone walls, habitation levels and pits from Middle Bronze IIA, a winepress from Iron II and a long channel whose date is unclear, were discovered.

## Settlement Remains

Remains of two walls, c. 0.7 m apart and aligned east-west, were exposed in the eastern part of the site (W1, W2; Fig. 1). The walls, which differed in construction and in the stones that composed them, did not apparently belong to the same structure. Wall 1 (length 1.8 m , width 0.5 m , height $0.25-0.30 \mathrm{~m}$ ), preserved a single course high, was built of mediumsized kurkar stones $(0.20 \times 0.25 \mathrm{~m})$, some of which underwent preliminary dressing. The relatively fine quality of the wall's construction was evident despite its poor state of preservation. Wall 2 (length 6.3 m , width 0.7 m , height $0.20-0.25$ $\mathrm{m})$ was built of small kurkar stones $(0.10 \times 0.15 \mathrm{~m})$, which were placed close together with mud as bonding material and survived to three courses high. The northern side of the eastern part of W2 was made thicker (length 2.7 m , width 0.4 m ) in a later phase. At its western end, it formed a corner with a wall that faced south (W3), but did not survive beyond this point. At its eastern end, W2 was connected to a robber trench of another wall that also faced south. It seems that these walls were part of a building whose plan is unclear.
The beddings of two floors (L16, L21 and L37) were exposed north and south of the walls. They consisted of tamped earth together with small fragments of kurkar and mud bricks and related to the building. Several adjacent stones that may be the remains of construction were exposed atop a section of the northern floor (L37). Remains of a tabun (L42), fragments of another tabun and a concentration of ash that related to them were identified north of W2's eastern end. Basalt grinding stones and c. 20 flint tools were found in the floor beddings (Loci 16, 21).
Remains of another habitation level that included an accumulation of soil mixed with ash, overlying the natural hamra (max. thickness c. 0.2 m ), were identified c. 8 m west of the walls. It contained many fragments of pottery vessels, basalt grinding stones, as well as animal bones, mostly sheep and goat and the rest-cattle bones.
The remains of five round pits (diam. 0.5-1.2 m) were exposed c. 15-20 m west of the building. Four of the pits were only preserved to a depth of several centimeters due to severe erosion. At least two phases of use that were separated by a layer of tamped stones were identified in one pit. A few fragments of pottery vessels and animal bones, probably sheep and goat, were found in the fill inside the pits.

Domestic pottery vessels were discovered, including kraters (Fig. 2:1) and cooking pots (Fig. 2:2-5) that are typical of MB IIA, cooking pots that are common throughout the MB II (Fig. 2:6) and jars of MB IIA (Fig. 2:7-13).
The flint tools include 17 coarsely knapped blades, including several sickle blades. A single core, three pounders and numerous flakes were also discovered. The flint artifacts cannot be dated with certainty, but it seems that they are not earlier than the MB II (S.A. Rosen, 1997. Lithics after the Stone Age, London). The presence of the pounders, the many flakes and at least nine partially finished blades or blades that were not used, as well as the small quantity of tools, suggests that a limited amount of flint knapping activity had occurred at the site.

The numerous cooking pots, grinding stones and flint artifacts attest to activity common to a rural settlement. The poor state of preservation makes it difficult to estimate its size, although it was probably limited to a few houses.
With the exception of one location, which was not excavated, where fragments of human bones were identified (c. 0.1 m below top of hamra layer), no tombs were discovered. A large burial compound from MB IIA-B (ESI 13:57-59) was discovered adjacent to the site.

## Winepress

A winepress was discovered c. 30 m west of the building remains. It included three adjacent vats in a row, aligned northsouth (Loci 12, 9, 15; Fig. 3). The two extreme vats were of similar size (L12, L15; $0.8 \times 0.8 \mathrm{~m}$, depth 0.7 m ), while the middle vat was slightly smaller (L9; $0.5 \times 0.8 \mathrm{~m}$, depth 0.7 m ; Fig. 4). The sides and floors of the vats were coated with a layer of white plaster, composed of lime and tiny shells mixture (thickness 2 cm ). A settling depression (diam. 0.3 m , depth 0.3 m ) was in the eastern side of each vat. As no traces of an external treading floor were evident.
The fill in the vats yielded fragments of pottery vessels that dated to Iron II, including a bowl (Fig. 5:1), a filter jug (Fig. $5: 2$ ) and a jar (Fig. 5:3). The fill in Vat 12 contained a handle, with the eroded remains of a round stamped impression in its center (diam. 1.6 cm ; Fig. 5:4). Potsherds from this period were only found in the area of the winepress.
An Iron Age settlement, identified as an Assyrian fortress, was located nearby (NEAEHL 5, pp. 2020-2022), yet it is impossible to determine if the currently exposed winepresses was used by the inhabitants of this site. Similar winepresses were excavated in an adjacent site (ESI 20:96*-97*), at Tel Michal (ESI 1:73-74), Lod (HA-ESI 112:65*), as well as at Tel Gezer and Tell Qasile (E. Ayalon, 1994, Wine Presses from the Iron Age around Tell Qasile. Israel People and Country 7-8:53-66). The winepress was relocated to the archaeological study center at the southern entrance to Rishon Le-Ziyyon.

## Channel

A north-south oriented channel (length 3 m , width $1.5-1.7 \mathrm{~m}$, max. depth 1 m ), cut into the layer of natural hamra soil, was discovered in the western part of the site. The sides of the channel tapered down to the point of creating a $V$-shaped cross-section. The channel continued below the sand dune in the north and terminated in a large depression that may have been a drainage pit or storage reservoir in the south, which was not excavated. Compacted gray fill that was devoid of finds had accumulated in the channel. The probe trenches excavated at different points along the course of the channel indicated that it was not uniform in width or depth, possibly because of its state of preservation or due to later activity.


3. The winepress, looking east.

4. Vat 9, looking south.

5. The winepress, pottery.

# (Volume No. HA-ESI 121 (2009 

Rosh Pinna
Preliminary Report
Moshe Hartal


1. Lot 9, plan and section.

2. Corner of building and burnt layer, looking west.

3. Walls of building. looking south.

4. Corner of building, looking north.

5. Wall with pilasters, looking west.

During June-August 2006, a salvage excavation was conducted at Rosh Pinna, next to the reconstructed compound (Permit No. A4800; map ref. NIG 25027/76403; OIG 20027/26403), in the wake of building plans. The excavation, undertaken on behalf of the Israel Antiquities Authority and financed by Mr. M. Zer, was directed by M. Hartal (photography), with the assistance of A. Mokary and O. Zingboym (area supervison), Y. Ya'aqobi (administration), A. Hajian and T. Kornfeld (surveying and drafting) and workmen from al-Mughar and Ayelet Ha-Shahar.
Previous excavations at the site of the reconstructed moshava (HA-ESI 120) exposed building remains from the Iron Age and the Hellenistic, Roman, Byzantine and Early Islamic periods. An excavation in the upper part of the moshava (Permit No. A-4357) exposed remains from the Byzantine and Mamluk periods.
Buildings from Iron I, which were destroyed in a mighty conflagration, were exposed in the current excavation, as well as building remains from the Late Roman and Byzantine periods and pottery that dated to the Mamluk period.
The site is situated on a steep rocky slope. The preservation of building remains on the upper part is rather poor and improves down the slope. Excavations were conducted in two lots (Nos. 9 and 11).

## Lot 9

A strip ( $2 \times 20 \mathrm{~m}$; Squares A-E; Figs. 1, 2) was excavated where bedrock drops precipitously from west to east in a number of terraces. Walls (W924, W930 and W934) that formed cells were built perpendicular to the bedrock slope. The cells were filled with soil that contained numerous potsherds dating to Iron I. Above the cells, fieldstone-built foundations that apparently supported mud-brick walls were exposed. These walls were apparently coated with red plaster, as evidenced by many plaster fragments found in the ruins. A round stone that may have been used as a column (Fig. 3) was incorporated in one of the wall foundations (W951). An accumulated layer of burnt soil and ash (thickness c. 1.5 m ; Fig. 4), which contained many Iron I potsherds, attests to a mighty blaze that destroyed the buildings.
A large building was constructed in the Late Roman period, atop the ruins of the Iron Age structures. The foundations of a wall (W902; preserved height 3.25 m ) in the eastern part of the excavation were set on bedrock. Another wall (W912), which was overlain with a pilaster of ashlar stones (Fig. 5) and was probably constructed in the Phoenician building tradition, abutted W902. A floor overlain with stone collapse and pottery vessels from the Late Roman period abutted these walls.
Two connected bell-shaped pits (Fig. 6) were hewn in chalk bedrock that was exposed below surface at the western end of the lot. The ceiling of the northern pit was entirely preserved and had an opening, blocked with stones; the ceiling of the southern pit had collapsed or was intentionally removed. Plaster remains were not traced in the pits, which were apparently used as silos or as a winery, rather than as water cisterns. The pits contained fragments of pottery vessels whose date ranged from the Roman to the Mamluk periods.
A fieldstone paved surface (L922) in the center of the excavation area was most likely the courtyard of a house from the nineteenth century CE.

Lot 11
A strip ( $2.5 \times 20.0 \mathrm{~m}$; Squares A-E; Figs. 7, 8) was excavated on a slope where bedrock moderately slanted from west to east, compared to its steep drop in Lot 9 .
Remains of buildings that dated to Iron I were found. Their exposed walls (W131, W133; Fig. 9) could not form a coherent plan due to the limited excavation area. Layers of burnt red soil and ash, which contained a large amount of pottery vessels from Iron I (Loci 127, 132), attest to the same violent destruction as evidenced in Lot 9.
Settlement was renewed in the Late Roman period and new buildings were constructed on the ruins of the Iron Age. One of the walls of these buildings (W105; Fig. 10) was constructed from ashlar pilasters in the Phoenician building tradition. Two walls (W111, W114) were exposed above a bedrock terrace at the western end of the area. The walls formed a corner in which finds from the Byzantine period were uncovered.
A wide pit that penetrated into the Roman layer was filled with collapse of small stones and numerous pottery fragments from the Mamluk period (L124), although no building remains from this period were found.
A stone pavement (L113) that was found in the eastern part of the excavation was similar to the one revealed in Lot 9 , The pavement was placed directly on the remains from the Roman period and next to it was a cluster of tools and iron horseshoes that probably belonged to residents of the moshava in the nineteenth century CE.
The settlement in the excavated area seems to have begun in the Iron I period and was destroyed by a mighty conflagration. The destruction layer and the numerous pottery vessels it contained indicate that the destruction of this settlement was mighty and sudden. Similar evidence was found in the nearby previous excavations (HA-ESI 120). After a long hiatus, this area was resettled in the third or fourth centuries CE. The bell-shaped pits were probably hewn at this time. Only one building from the Byzantine period was found in the current excavation and it appears that the settlement was relocated to the upper part of the slope at this period. Potsherds from the Mamluk period may point to a settlement of this period that was also established along the upper part of the slope.

2. Lot 9, a building, looking west.

3. Column incorporated in wall of building, looking west.

4. Corner of building and burnt layer, looking west.

5. Walls of building, looking south.

6. A bell-shaped pit, looking south.

8. Lot 11, general view to the west.

9. Corner of building, looking north.

10. Wall with pilasters, looking west.
(Volume No. HA-ESI 121 (2009
Sandala Final Report


1. Plan and sections.

2. The excavation, looking east.

3. Wall 102, looking north

4. Architectural elements in vicinity of excavation.

During October 2006, a salvage excavation was conducted in a private building plot on the hilltop of the Sandala village (Permit No. A-4924; map ref. NIG 23074/71429; OIG 18074/21429). The excavation, undertaken on behalf of the Israel Antiquities Authority and partially financed by the landowner M. Omri, was directed by Y. Alexandre, with the assistance of Y. Lavan (administration), A. Hajian (surveying), E. Belashov (drafting) and workers provided by the landowner.
The small Arab village of Sandala is situated on a limestone hill at the western edge of the Gilbo'a range. It has no local water source, but several rock-hewn cisterns are scattered around the village to collect rain-water. According to the villagers' tradition, the present-day village was established in the Late Ottoman period, when two brothers of the Omri family emigrated here from Arane, a village near Jenin in the northern Samarian hills. A Survey of Mount Gilbo'a and the Jezre'el valley recorded some building remains and architectural elements of the Byzantine period and a decorated limestone sarcophagus and basalt millstones in the north of the village, as well as some rock-hewn agricultural installations spread over a larger area (Zori N. 1977, The Land of Issachar, p. 43 [Hebrew]). Two previous excavations at the site revealed a fill layer with a concentration of potsherds from the Early Islamic period in the center of the village (HA-ESI 120) and some ashlar masonry walls and two bell-shaped cisterns in association with Byzantine pottery adjacent to and northwest of the mosque (U. Ben Zioni, pers. comm.). The Byzantine building was overlaid with collapsed building stones and accumulated fill that contained some Ottoman potsherds.
The present excavation was located directly adjacent to the village mosque on its eastern side. The stone walls of some of the old Ottoman houses were still standing in the immediate vicinity, although poorly preserved. They had been removed from the excavation area prior to its beginning. A single square ( $8 \times 8 \mathrm{~m}$ ) was opened, revealing stone walls that belonged to a large building of the Byzantine period, superimposed by some fragmentary remains of the Late Ottoman period.
The Byzantine period
Some walls of worked limestone blocks were built on a thin layer of soil directly overlying bedrock (Fig. 1). The walls (W102, W102A, W106, W107, W110, W114 and W115) are contemporary and define four rooms (L104, L105, L108 and L112) of a single building (Fig. 2), whose orientation is exactly along the cardinal directions. The walls (width $0.8-1.2 \mathrm{~m}$ ), mostly built of two faces of worked stones with a core of small fieldstones (Fig. 3), are preserved one-two courses high $(0.3-0.5 \mathrm{~m})$. A small row of stones (W103) that created a corner seems to be a remnant of a later addition. A facing layer of small stones and mortar was preserved on the eastern face of W115. Room 112 (c. $2.5 \times 4.0 \mathrm{~m}$ ) was enclosed by four walls (102A, 106, 114, 115) with a possible entrance in W106, although this was not clear. The floor (L112a) of packed earth was overlain with a few potsherds, including a black bag-shaped storage jar with white lines, typical of the Byzantine period. Room $104(4 \times 5 \mathrm{~m})$ had a thicker layer of brown packed earth (thickness c. 0.3 m ) that contained a significant quantity of ash, charcoal, plaster and a few Byzantine potsherds. This room may have been a courtyard. Rooms 105 and 108 contained stone collapse, but no floors overlying the uneven bedrock were preserved. The few potsherds on the bedrock and in the collapse could be dated to the Late Byzantine period. No coins and only a few tiny glass fragments were found.
The location of the building at the top of the hill and the width of the walls suggests that the remains were part of a large, public building. Similar wide walls exposed in the adjacent excavation, c. 25 m away (U. Ben-Zioni, pers. comm.) raises the possibility that these walls may have been part of a single large building complex. The orientation of the walls exactly along the cardinal points and the dating to the Byzantine period may imply that the building was a church. Additional support for this interpretation is provided by a pile of four finely carved architectural elements found in the immediate vicinity (Fig. 4).

## The Late Ottoman period

A few centimeters below surface some patches of packed tiny stones with mortar and plaster (L101) were uncovered directly above the wall tops of the Byzantine building. The few potsherds found in association with these floor patches dated to the Ottoman period. This floor thus belongs to the Late Ottoman building that was demolished and removed prior to the current excavation.

The archaeological remains exposed in the excavation point to the existence of a large building at the site during the Byzantine period, possibly a church. Subsequent to the abandonment of the Late Byzantine period village, the site was not reoccupied until the Ottoman period. The limited periods of occupation at the site can be clearly attributed to the marginal nature of the region and the absence of a water source.


2-2


3-3

1. Plan and sections.

2. The excavation, looking east.

3. Wall 102, looking north

4. Architectural elements in vicinity of excavation.
(Volume No. HA-ESI 121 (2009

## Sha'alvim (East)



1. Western winepress, plan and section.

2. Limekiln, looking southwest.

3. Cooking pot.

4. Stone clearance heap, plan and section.

During June 2006, an excavation was conducted at Ben Deqer South (Permit No. A-4835; map ref. NIG 19971-90/64176-90; OIG 14971-90/14176-90), following the discovery of installations along the route of the road. The excavation, on behalf of the Israel Antiquities Authority, was directed by R. Lupu, with the assistance of E. Bachar (administration), A. Hajian (surveying), M. Shuiskaya (pottery drawing) and A. Cohn-Tavor, A. Re'em, A. 'Azab, M. Peilstöcker and U. 'Ad (IAA Central Region).

The excavation was carried out along a spur that ascends to the southeast and overlooks Nahal Ayyalon, c. 1 km east of Tel Sha'alvim, on the road between the Nof Ayyalon neighborhood in Sha'alvim and Highway 2 to Modi'in. Various installations were cleaned and documented, including two winepresses, a kiln, a quarry, cupmarks and a stone clearance heap. Previous excavations had been carried out in the vicinity (HA-ESI 119, HA-ESI 120).
Winepresses. The two winepresses were hewn in the nari bedrock and consisted of a treading floor and a collecting vat. The treading floor of the western winepress (L500; $1.25 \times 1.35 \mathrm{~m}$, depth $0.1-0.2 \mathrm{~m}$; Fig. 1) had slightly curved sides. A perforation (length c. 0.1 m ) connected it to the collecting vat (L501; $0.50 \times 1.15 \mathrm{~m}$, depth 0.6 m ), which was parallel to its southern side. The floor of the collecting vat was grooved as a result of weathering and had a depression ( 0.3 m ) in its center; remains of plaster were discerned on the sides of the vat. The eastern winepress had a trapezoidal treading floor (L700; $1.1 \times 1.4 \mathrm{~m}$, depth 0.2 m ; Fig. 2) that was 0.1 cm higher in the south than in the north. A hewn channel linked the treading floor to an elliptical collecting vat (L702; $0.55 \times 0.65 \mathrm{~m}$, depth 0.3 m ) with a depression (depth 0.1 m ) at its bottom.

Limekiln. Beneath a stone clearance heap and field soil was a kiln $(2.2 \times 3.0 \mathrm{~m}$, depth 1.5 m ; Fig. 3) whose eastern side was bedrock hewn and western side was, in all likelihood, built. A probe excavated from the surface next to the western side of the kiln revealed a layer of black field soil mixed with stones (thickness 0.2 m ), a layer of fieldstones and a layer of light colored earth $(0.7 \mathrm{~m})$. A hard gray layer at the bottom part of the kiln was not excavated, and it seems that the color of the layer was produced by fire. A thick gray layer ( 0.7 m ) on the southern side of the kiln overlaid a layer of lightcolored soil, in which an intact cooking pot that dated to the Roman period (Fig. 4) was found near the floor of the kiln.

Quarry (Fig. 5). The quarry, adjacent to the kiln, had negatives of two stones that were detached and removed (L600$1.00 \times 1.15 \mathrm{~m} ; \mathrm{L} 601-0.65 \times 1.00 \mathrm{~m}$ ). Two severance channels for another rock-cutting that was not completed (L602) were discerned; they evince the usage severance channels for detachment of the stones from bedrock, rather than perforations into which water was poured.

Cupmarks. To the north of the quarry were four cupmarks; a group of three cupmarks (L 402-diam. 0.2 m , depth 0.1 m ; L 400-diam. 0.55 m , depth 0.22 m ; L 401-diam. 0.5 m , depth 0.3 m ; Fig. 6) was hewn in the same bedrock surface, whereas the fourth cupmark (diam. c. 0.6 m , depth 0.2 m ) was in another bedrock surface. The cupmarks had flat bottoms with a round depression in the center.

Stone Clearance Heap (L200; diam. c. 2.5 m , height 1 m ; Fig. 7). The perimeter of the stone clearance heap on top of a bedrock surface consisted of medium and large fieldstones, with small stones in its center.
The documented installations in the excavation were scattered across bedrock surfaces next to each other. This area was most likely the agricultural hinterland of some settlement, which was located on the adjacent hilltop. With the exception of the cooking pot, which is dated to the Roman period, several non-diagnostic potsherds were found, as well as a few flint flakes and one scraper that are of no relevance in dating the installations.


1-1

1. Western winepress, plan and section.


2. Limekiln, looking southwest.





## (Volume No. HA-ESI 121 (2009

## Shamir

Final Report

Oren Zingboym



1. Dolmen 1, plan.

2. Dolmen 2, the burial cell, looking south.

3. Dolmen 2, pottery.

4. Dolmen 3, plan.

During December 2004, a salvage excavation was conducted in three dolmens north of Qibbuz Shamir (Permit No. A-4293; map ref. NIG 26175/78625; OIG 21175/28625), prior to the construction of a new neighborhood. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by Qibbuz Shamir, was directed by O. Zingboym, with the assistance of Y. Ya'aqoby (administration), V. Essman and V. Pirsky (surveying), H. Tahan (pottery drawing), N. Getzov (professional guidance) and M. Kagan, R. Bar-Nur and Y. Ben-Ephraim (members of Qibbuz Shamir).
The dolmens belong to a large dolmen field that extends across a rocky basalt area along the lower part of the Golan Heights. The area had been surveyed in the past (M. Kagen 1962. Survey of Dolmens in the Fields of Kibbutz Shamir and the Korazim Region. Me-Tikufat HaEven 3:33-39 [Hebrew]) and several dolmens were excavated (D. Bahat 1973. The Dolmen Field at Kibbutz Shamir. Eretz Israel 11:58-63 [Hebrew]).

The three dolmens include burial cells that were, in all likelihood, originally covered with stone slabs which were removed when the contents of the cell were plundered. They were surrounded by three to four stone circles and the burial cells were not uniformly aligned.

Dolmen 1 (Fig. 1). This is the largest of the three. The elliptical burial cell $(0.8 \times 2.6 \mathrm{~m})$, oriented northwestsoutheast, was built of small and medium fieldstones that were preserved to maximum three courses high (0.8$0.9 \mathrm{~m})$. Fragments of pottery vessels that dated to the Intermediate Bronze Age (2300-2000 BCE) were lying on the floor of the cell, which consisted of small stones that were placed to level the bedrock surface. Four circles of fieldstones (max. diameter 12 m ) were built around the cell. A stone game board ( $0.35 \times 0.55 \mathrm{~m}$ ) was located on the edge of the cell; it had seven pairs of hewn semicircular depressions and three single ones. Pottery vessels (Rashaya el-Fukhar ware) that dated to the nineteenth century CE were collected around the cell. It seems that this dolmen was erected in the Intermediate Bronze Age.

Dolmen 2 (Fig. 2). The elliptical burial cell ( $0.7-0.9 \times 2.0 \mathrm{~m}$ ), aligned north-northeast-south-southwest, was built of medium fieldstones and preserved to maximum two courses high ( $0.7-0.8 \mathrm{~m}$ ). The floor of the cell, composed of small stones (Fig. 3), was overlain with fragments of pottery vessels from the Intermediate Bronze Age, including kraters (Fig. 4:1, 2) and a handle (Fig. 4:3). Another floor, c. 0.2 m below this floor, consisted of small stones that were placed to level bedrock surface; no ceramic finds were discovered between these stones or below them. Two circles of fieldstones (max. diam. c. 8.5 m ) were built around the burial cell. This dolmen was probably erected in the Intermediate Bronze Age as well.

Dolmen 3 (Fig. 5). The rectangular burial cell $(0.8 \times 2.4 \mathrm{~m})$, oriented north-south, was built of upright stones slabs, only two of which remained in situ; the rest were removed when the cell was plundered. Non-diagnostic potsherds, as well as fragments of pottery vessels from the nineteenth century CE, were gathered on bedrock within the cell, which was leveled with small stones. Two circles of fieldstones (max. diam. 7 m ) surrounded the cell.


1. Dolmen 1, plan.


2. Dolmen 2, pottery.


## (Volume No. HA-ESI 121 (2009

Shim‘a - Mezdot Yehuda, Survey Final Report


1. Survey map.

2. Site 17, farming terrace, looking southeast.

Yigal Israel and Flavia Sonntag
During November 2004, an archaeological survey was conducted along the planned route of the separation fence (Stage D-2) in the southern Hebron hill country, between Shim'a and Mezadot Yehuda (Permit No. A-4288; central map ref. NIG 1982-2093/5843-54; OIG 1482-593/0843-54). The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was carried out by Y. Israel and F. Sonntag, with the assistance of N.S. Paran (data compilation) and S. Gal (GPS).

A strip (length c. 11 km , width c. 0.5 km ), out of the 15.5 km route of the separation fence, was surveyed (Fig. 1; the rest of the route lies beyond the Cease-Fire Line and was surveyed by the Archaeological Staff Officer of Judea and Samaria). The route of the fence runs through a mountainous area of limestone and chalk, along the southern bank of Nahal Eshtamo'a. The survey area encompassed the northern fringes of Horbat Yattir.
Ninety sites (Table 1), mostly agricultural installations of domestic nature that included farming terraces (dozens), field walls (dozens), cup marks (dozens), sheepfolds (14), cisterns (11), winepresses (6), stone piles and clearance heaps (5), dams (5), troughs (3), watchmen's huts (3), olive presses (2) and other installations (5), were surveyed. Other sites included caves, about half of which were used as dwellings (11) and the rest for burial (10); 11 buildings, some of which were located near architectural installations and may have been farmhouses, while others were situated along the edge of Horbat Yattir; rock cuttings (quarry?); and a single cist grave. Most of the sites did not yield any datable finds; however, the installations, characteristic of the archaeological remains in the southern Hebron hill country, were part of the agricultural hinterland of the settlements during the Byzantine period.


5 . Site 25, burial cave.

7. Site 27, Horbat Yattir, cave surrounded by sheepfold.

13. Site 45 , winepress, looking northeast.

| $\sqrt{\left\lvert\, \begin{array}{l} \text { Site } \\ \text { No. } \end{array}\right.}$ | Map Ref. (NIG) | Description of Find | Period | Excavations (Permit No. Publications) |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 198250/584537 | Dam | Byzantine | HA-ESI 120 |
| 2 | 198264/584541 | Dam | Byzantine | HA-ESI 120 |
| 3 | 198669/584427 | Building | Unknown |  |
| 4 | 198673/584439 | Field wall (Fig. 2) | Unknown |  |
| 5 | 198658/584438 | Burial cave, sheepfolds, farming terraces | Unknown |  |
| 6 | 199027/584524 | Sheepfold | Unknown | A-4482 |
| 7 | 199026/584532 | Sheepfold | Unknown | A-4482 |
| 8 | 199026/584531 | Sheepfold | Unknown | A-4482 |


| 9 | 199043/584542 | Farming terrace | Unknown | A-4482 |
| :---: | :---: | :---: | :---: | :---: |
| 10 | 199060/584537 | Sheepfold, building, cistern | Unknown |  |
| 11 | 199143/584487 | Building, dam, farming terraces | Byzantine |  |
| 12 | 199194/584508 | Field wall (Fig. 3) | Unknown |  |
| 13 | 199182/584521 | Sheepfold | Unknown |  |
| 14 | 199197/584502 | Sheepfold | Unknown |  |
| 15 | 199214/584500 | Sheepfold | Unknown |  |
| 16 | 199223/584540 | Sheepfold | Unknown |  |
| 17 | 199257/584535 | Farming terrace (Fig. 4) | Unknown |  |
| 18 | 199237/584562 | Sheepfold | Unknown |  |
| 19 | 199411/584460 | Field wall | Unknown | HA-ESI 120 |
| 20 | 199706/584605 | Sheepfold, cup mark | Byzantine |  |
| 21 | 199704/584614 | Sheepfold | Unknown | HA-ESI 120 |
| 22 | 199542/584824 | Watchman's hut | Byzantine | HA-ESI 120 |
| 23 | 199468/584748 | Burial cave, dam | Unknown |  |
| 24 | 199471/584739 | Dam | Unknown |  |
| 25 | 199493/584707 | Burial cave (Fig. 5) | Unknown |  |
| 26 | 199630/584648 | Sheepfold | Unknown | HA-ESI 120 |


| 27 | $\left\lvert\, \begin{aligned} & 199992- \\ & 201180 / 583700- \\ & 585180 \end{aligned}\right.$ | Horbat <br> Yattir:settlement, church, cisterns, olive press, road sheepfolds, caves (Figs. 6, 7), installations | Roman-Byzantine | $\left\lvert\, \frac{\frac{H A-E S I 119}{H A-E S I 119}}{\frac{H A-E S I 120}{H A-E S I 121}}\right.$ |
| :---: | :---: | :---: | :---: | :---: |
| 28 | 201332/585082 | Watchman's hut (Fig. 8) | Unknown | A-4482 |
| 29 | 201325/585086 | Rock cuttings (Fig. 9) | Unknown |  |
| 30 | 201318/585091 | Olive press | Unknown |  |
| 31 | 201355/585004 | Building (Fig. 10) | Unknown |  |
| 32 | 201382/584954 | Cave | Unknown |  |
| 33 | 201293/584999 | Cave | Unknown |  |


| 34 | $201298 / 585002$ | Cave | Unknown |  |
| :--- | :--- | :--- | :--- | :--- |
| 35 | $201440 / 584982$ | Hewn cistern | Unknown |  |
| 36 | $201508 / 585005$ | 2 hewn cisterns | Unknown |  |
| 37 | $201360 / 585284$ | Cave (Fig. 11) | Unknown |  |
| 38 | $201363 / 585312$ | Cave |  |  |
| 39 | $201555 / 585164$ | Cup mark | Unknown |  |
| 40 | $201551 / 585160$ | Farming terrace | Unknown |  |
| 41 | $201826 / 585222$ | Cup mark | Unknown |  |
| 42 | $201811 / 585230$ | Cup mark | Unknown |  |
| 43 | $201852 / 585244$ | Building | Unknown |  |


| 44 | 201845/585149 | Hewn cistern (Fig. 12) | Byzantine |  |
| :---: | :---: | :---: | :---: | :---: |
| 45 | 201848/585151 | Winepress (Fig. 13) | Byzantine |  |
| 46 | 202041/585271 | Cave | Unknown |  |
| 47 | 202116/585260 | Burial cave | Unknown |  |
| 48 | 202104/585265 | Burial cave | Unknown |  |
| 49 | 202068/585217 | Burial cave | Unknown |  |
| 50 | 202096/585199 | Burial cave | Unknown |  |
| 51 | 202065/585169 | Burial cave | Unknown |  |
| 52 | 202062/585173 | Hewn cistern | Unknown |  |
| 53 | 202063/585153 | Cup mark | Unknown |  |
| 54 | 202067/585153 | Burial cave | Unknown |  |
| 55 | 202082/585154 | Cup mark | Unknown |  |
| 56 | 202098/585159 | Cave and hewn installation | Unknown |  |
| 57 | 202119/585214 | Hewn cist grave | Unknown |  |
| 58 | 202309/585225 | Burial cave | Unknown |  |
| 59 | 205432/585101 | Hewn cistern (Fig. 14), trough | Byzantine | A-4502 |
| 60 | 205779/585082 | Sheepfold, winepress | Unknown | HA-ESI 120 |
| 61 | 205710/585072 | Stone heaps (Fig. 15) | Unknown |  |
| 62 | 205682/585065 | Burial cave | Unknown |  |
| 63 | 205670/585035 | Field road (Fig. 16) | Unknown |  |
| 64 | 205969/585029 | Cave, building, olive press (Fig. 17) | Byzantine |  |


| 65 | $205948 / 584996$ | Hewn installation | Byzantine |  |
| :--- | :--- | :--- | :--- | :--- |
| 66 | $207252 / 585025$ | Building, cisterns, <br> winepress | Unknown | HA-ESI 120 |
| 67 | $207263 / 584994$ | Hewn cistern | Unknown |  |
| 68 | $207256 / 584982$ | Cave | Unknown |  |
| 69 | $207273 / 585008$ | Hewn cistern (Fig. <br> 18) | Unknown |  |
| 70 | $207253 / 584980$ | Cave | Unknown |  |
| 71 | $207412 / 585027$ | Winepress (Fig. 19) | Unknown |  |
| 72 | $207423 / 585028$ | Cave | Unknown | HA-ES/ 120 |
| 73 | $207357 / 585053$ | Winepress (Fig. 20) | Unknown |  |
| 74 | $207377 / 585097$ | Hewn cistern | Unknown |  |
| 75 | $207653 / 584984$ | Hewn installation | Byzantine |  |
| 76 | $207670 / 584988$ | Olive press | Byzantine |  |
| 77 | $207687 / 584987$ | Hewn cistern | Byzantine |  |


| 78 | $207701 / 584995$ | Hewn installation | Byzantine | HA-ES/ 120 |
| :--- | :--- | :--- | :--- | :--- |
| 79 | $207688 / 584963$ | Hewn cistern | Unknown |  |
| 80 | $207759 / 584843$ | Sheepfold | Unknown | HA-ES/ 120 |
| 81 | $207902 / 584905$ | Hewn installation, <br> building (Fig. 21) | Unknown |  |
| 82 | $207935 / 584889$ | Winepress, building | Unknown | HA-ESI 121 |
| 83 | $208280 / 585059$ | Stone heaps | Unknown |  |
| 84 | $208278 / 585059$ | Stone heaps | Unknown |  |
| 85 | $208324 / 585029$ | Stone heaps | Unknown |  |
| 86 | $208485 / 584923$ | Stone heaps | Unknown | HA-ES/ 120 |
| 87 | $209270 / 585078$ | Cave | Unknown |  |
| 88 | $209151 / 585014$ | Hewn installation | Unknown |  |
| 89 | $209146 / 585010$ | Cup mark | Unknown |  |
| 90 | $209135 / 585012$ | Building | Unknown |  |


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2. Site 4, field wall, looking northwest.


4. Site 17 , farming terrace, looking southeast.

5. Site 25 , burial cave.

6. Site 27, Horbat Yattir, cave surrounded by sheepfold, looking east.

7. Site 27, $\underline{H}$ orbat Yattir, cave surrounded by sheepfold.

8. Site 28 , watchman's hut, looking north.

9. Site 29 , rock cuttings, looking northwest.

10. Site 31 , building, looking south.


12. Site 44, cistern opening.

13. Site 45 , winepress, looking northeast.

14. Site 59 , cistern with capstone, looking southwest.

15. Site 61, stone clearance heap, looking east.

16. Site 63 , field road delimited by walls, looking southeast.

17. Site 64, crushing basin (yam) of an olive press.

18. Site 69 , cistern opening.

19. Site 71, collecting vat of a winepress, looking north.

20. Site 73 , treading floor and collecting vat of a winepress, looking west.

(Volume No. HA-ESI 121 (2009
Shoham (East)

## Final Report

Elena Kogan-Zehavi


1. Excavation plan.

2. Installation 1, looking north.

3. Installation 4, plan.

4. Installation 4. looking southeast.

During January 2008, a salvage excavation was conducted east of Shoham (Permit No. A-5345; map ref. NIG 19512-20/65672-9; OIG 14512-20/15672-9), prior to the construction of a kindergarten. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Shoham Economic Company, was directed by E. Kogan-Zehavi, with the assistance of E. Bachar (administration), A Hajian (surveying and drafting), T. Sagiv (field photography) and C. Hersch (pottery drawing).
Two squares were excavated along the lower northeastern slope of a gentle hill and two rock-hewn installations (F1, F4) and a quarry (F5; Fig. 1) were exposed on surface. Several salvage excavations had been conducted in the past, east and south of the hill, revealing bedrock-hewn installations and tombs (ES/ 15; HA-ESI 112; HAESI 117).
A pit (F1; Loci 100, 105; width 1.2 m, depth c. 1.4 m; Figs. 2, 3) was exposed in the southeastern part of the area. Its upper part was natural and the bottom part was bedrock hewn. It seems that the pit was used to store water. A protruding rock, whose top part was hewn straight, was discerned in the northeastern part of the area (F4; Figs. 4, 5). On the upper part of the rock was a north-south oriented, narrow hewn channel (L106). On the southern side of the rock, a natural channel, which was hewn wider in several places (L108), was discerned. A jar rim that dated to the Byzantine period (Fig. 6:1) was discovered in the soil that filled Channel 108. It seems that these rock-cuttings were used to collect rainwater for the purpose of watering animals. A small quarry was exposed in the center of the area (F5; L107; C. $2 \times 4 \mathrm{~m}$; Fig. 7). The quarry was damaged in the modern era. A jar rim from the Byzantine-Umayyad periods (Fig. 6:2) was discovered in the soil that overlaid the quarry.

The few remains and finds at the site show that the hill was part of an open area in antiquity, which was used for quarrying and grazing.


1. Excavation plan.

2. Installation 1, plan and section.

3. Installation 1, looking north.

4. Installation 4, looking southeast.


(Volume No. HA-ESI 121 (2009
Shomeriyya - Shim‘a, Survey Final Report

Yigal Israel and Flavia Sonntag


1. Survey map.

During November 2004, a survey was conducted along the route of the separation fence between Shomeriyya and Shim'a, in the southern part of the Hebron highlands (Permit No. A-4267; map ref. NIG 191/586; OIG 141/086). The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was conducted by Y. Israel and F. Sonntag, with the assistance of S. Gal (map).
The surveyed area (length 8 km , width c. 150 m ; Fig. 1) extended across a region of low limestone hills, separated by valleys. A section of the surveyed area, located beyond the Green Line, was surveyed by the Archaeological Staff Officer of Judea and Samaria. Seven sites were recorded and finds that formed part of the agricultural system in the southern part of the Hebron highlands were documented.
Site 1. A rock-hewn cistern, stone fence, two rock-hewn conical cupmarks and a scattering of potsherds from the Byzantine period were documented along a spur. The cistern and fence were excavated in 2006 (HA-ESI 120).
Site 2. Stone clearance heaps.
Site 3. Building remains, natural and rock-hewn caves, two dams, a natural rock shelter surrounded by stone fences and potsherd scattering that dated to the Byzantine and Ottoman periods were documented.
Site 4. Two dams that were built of two courses of large fieldstones on the bank, at the top of the wadi channel and c. 50 m from the building remains in Site 3, were documented. Potsherds from the Byzantine period were collected nearby. The site was excavated in 2005 (Permit No. A-4513).
Site 5. A rock-hewn cistern and drainage channel that led to it. Potsherds from the Byzantine period were collected nearby.
Site 6. A rock-hewn cistern with an elliptical opening, alongside which a broken stone trough was situated. A rolling stone was recorded next to the cistern. Potsherds from the Byzantine and Ottoman periods were collected nearby.
Site 7. A rock-hewn cistern that had a round shaft and a square opening, which consisted of four dressed stones, was documented. A rolling stone was recorded nearby. Potsherds from the Byzantine and Ottoman periods were collected in the vicinity.


## (Volume No. HA-ESI 121 (2009

## Shomeriyya, Survey

## Final Report



1. Survey map.

2. Site 14, a built cover on a cistern, looking south.

3. Site 14, the mouth of a cistern.

4. Site 17, cistern and cupmarks, looking southwest.

5. Horbat Moran, genera view, looking west.

Flavia Sonntag and Nir-Shimshon Paran
7/12/2009
During January 2007, an archaeological survey was conducted in the area northwest of Shomeriyya (Permit No. A-5011; map ref NIG 18865/59360; OIG 13865/09360), prior to expanding the settlement. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Rural Building Administration of the Ministry of Construction and Housing, was directed by F. Sonntag and N.S. Paran, with the assistance of S. Gal (map preparation).
The survey area was partly situated in a flat region that drains south, toward Nahal Yaval, and partly on the eastern slope of the hill where Horbat Moran is located. A small area, located on the hill within the settlement precincts was also surveyed, as a synagogue is intended to be built there. Thirty-eight sites with ancient remains were identified in four survey areas (A-D), as well as an ancient settlement site (Fig. 1).
Area $\mathbf{A}$ is located within the precincts of the existing settlement, on the fringes of Horbat Dagesh, which is situated on a hill north of the settlement. A building (5), a cairn (9), field walls $(3,4,7)$, farming terraces $(1,2)$ rock-cuttings $(8,10,11)$ and a depression in the ground (6), probably a cave or a cistern, were discovered.

Area B is located west of the current settlement, on a gentle spur that ascends toward the southwest. Three cisterns (12, 14, 17; Figs. 2, 3), with cupmarks near Cistern 14 (Fig. 4), a winepress (16; Fig. 5), a large cupmark (19), field walls (13, $15,18)$ and farming terraces $(20-23)$ were discovered.

Area C, located west of Area B, is in a forested section along the eastern slope of Giv'at Moran. Four caves (27, 28, 36, 37 ; Fig. 6) were discovered; two were probably burial caves $(27,28)$. In addition, an ancient road that ascends in the direction of $\underline{H}$ orbat Moran and is delineated by stone walls ( 29 ; Fig. 7), a cairn ( 25 ), field walls ( $24,26,30,31,33,35,38$ ) and farming terraces $(32,34)$, were documented.

Area D is west of Area B and north of Area C, within the precincts of Horbat Moran (Fig. 8), which consists of a dense and complex concentration of ancient remains, including buildings, caves, underground hiding complexes, cisterns and farming terraces.

The finds indicate that the survey area had mostly been used for agriculture in the past and was connected to the settlements at Horbat Moran and Horbat Dagesh. The artifacts recovered from the surveyed sites were largely potsherds, which indicate that some of the sites were dated to the Byzantine or the Early Islamic periods (sixth-seventh centuries CE). At other sites, particularly farming terraces and field walls, no datable artifacts were discovered, yet it is presumed that they were part of the same agricultural systems.


1. Survey map.

2. Site 14, a built cover on a cistern, looking south.

3. Site 14, the mouth of a cistern.

4. Site 17, cistern and cupmarks, looking southwest.

5. Site 16 , a winepress' treading floor, looking northwest.

6. Site 28 , opening of a rock-hewn cave (burial cave?).

7. Site 29, ancient road, looking east.

8. Horbat Moran, general view, looking west.

# (Volume No. HA-ESI 121 (2009 

## Suhmata, Survey

Final Report
Yoav Lerer

2. Kh. ed-Duweir, water reservoir.

3. Kh. ed-Duweir, remains of the church.

4. Kh. ed-Duweir, the church decorated capital.

6. Bronze dagger.

7. Hand axe.

During January 2006, a survey prior to development was conducted at the site of Suhmata, along the western fringes of Giv'at Zuri'el, northwest of Moshav Zuri'el and east of Ma'alot-Tarshiha (Permit No. A-4667; map ref. NIG 22810-95/76800-945; OIG 17810-95/26800-945), prior to the preparing construction plans for the expansion of Ma'alot. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ma'alot-Tarshiha municipality, was directed by Y. Lerer, with the assistance of N. Getzov, L. Porat and E. Stern (surveyors), A. Shapiro (GPS), O. Marder (flint artifacts) and A. Rochman-Halperin and S. Krapiwko (IAA archive).
The surveyed area is partly covered with a dense Mediterranean thicket and partly with deciduous orchards that entail intensive agricultural activity. The elevation of the surveyed area ranges from 495.9 m above sea level in the southwestern part, close to the Ma'alot-Hurfeish road, to 575 m above sea level at the northeastern end. Twenty-eight antiquities sites, which represented different finds and installations, were inspected (1-26, 28, 29; Fig. 1). Most of the sites (1-21, 26) belong to Khirbat ed-Duweir of the Byzantine period; to the same period belongs another site with building remains (24). The other five sites (22, 23, 25, 28, 29) are earlier and consist only of small finds.
Khirbat ed-Duweir (map ref. NIG 228489-822/768067-297). The settlement remains at this site were dated to the Byzantine period and had previously been examined in the survey of the Upper Galilee (IAA Reports 14, p. 27). Most of the building stones at the site were robbed; some of them were in secondary use in farming terraces built by the residents of the Arab village Suhmata, which was abandoned in 1948. Despite the repeated use of the ruin's stones, clearly visible at the site were the outlines of buildings and streets, numerous cisterns, a large water reservoir and different agricultural installations that attested to a thriving settlement in the Byzantine period. Six building complexes ( 8 , 12,16 ) in an alley that is aligned east-west and part of it can still be seen (14), building and wall remains ( $3,5,10$ ), remains of olive presses (2 [weight], 4, 9, 11, 15), a winepress (20), a large hewn water reservoir (18; Fig. 2), a burial cave (19), remains of a large sarcophagus lid (13) and cisterns ( $1,6,17,21,26$ ) were surveyed. The church in the center of the site gave it its name. It was excavated in 1932 by N. Makhouly and M. Avi-Yonah, who dated it to 555 CE, based on an inscription in the mosaic floor (QDAP 3, 1934:92-105). Remains of the church were identified in the survey-some walls from the building, including the apse and a cistern (7; Fig. 3) -and architectural elements that belonged to it were found scattered around the church, including a capital decorated with a floral pattern (Fig. 4).

Site 22 (map ref. NIG 228859/768389). A scatter of flint implements (diam. c. 60 m ), including a hand axe from the Lower Paleolithic period.

Site 23 (map ref. NIG 228408/768427). A scatter of flint implements (diam. c. 60 m) from the Upper Paleolithic period.
Site 24 (map ref. NIG 228544/768544). A small farmstead that dated to the Byzantine period and was part of the agricultural hinterland of Khirbat ed-Duweir. A fieldstone-built compound ( $14 \times 14 \mathrm{~m}$; Fig. 5) with a tower in its southeastern corner was surveyed. A large heap of fieldstones in the middle of the compound was piled after the site had been abandoned and the stone collapse was cleared. The ceramic finds collected from the compound dated to the Byzantine period.

Site 25 (map ref. NIG 228453/768625). A scatter of flint implements (diam. c. 200 m ). It was impossible to date the finds, yet they may be connected to the flint tools from the Chalcolithic period that Y. Aharoni had discovered nearby in 1952 (map ref. NIG 2287/7685).

Site 28 (map ref. NIG 228633/769041). A bronze dagger (length 0.28 m ; Fig. 6), dating to the beginning of the Middle Bronze Age, was found on surface at the edge of an orchard. Similar daggers are known from tombs of this period and it therefore seems that the dagger was part of a funerary assemblage that was damaged when the ground was prepared for planting trees.

Site 29 (map ref. NIG 228633/769331; Fig. 1:29). A large flint hand axe (Fig. 7), dating to the Lower Paleolithic period, was found in an orchard.


2. Kh. ed-Duweir, water reservoir.

3. Kh. ed-Duweir, remains of the church.

4. Kh. ed-Duweir, the church, decorated capital.

5. Site 24, built compound.
6. Bronze dagger.

7. Hand axe.


1. Aerial photograph of

Sulam village with markings of previous excavations.

2. Section, looking north.

3. Floor bedding (L3), looking east.

## (Volume No. HA-ESI 121 (2009

Sulam
Final Report
Edna Amos
14/2/2009
During August 2007, a trial excavation was conducted beneath the foundations of a new building in the village of Sulam (Permit No. A-5195; map ref. NIG 23153-5/72358-60; OIG 18153-5/22358-60). The excavation, on behalf of the Israel Antiquities Authority, was directed by E. Amos, with the assistance of Y. Lavan (administration), M. Hartal (guidance) and laborers from the Sulam village.

The site was first excavated in 1998 and since then numerous excavations had been carried out (HA-ES) 114:26*-27*; HA-ESI 118; Eretz Tsafon, pp. 83-89).
The excavation area was located along the southwestern slope of Tell Sulam (Fig. 1), adjacent to remains that dated to Middle Bronze IIA and probably also to the Roman period (Permit Nos. A-4117, A-4323).
A square $(4 \times 4 \mathrm{~m})$ was opened; a floor bedding that dated to the end of the Byzantine or the beginning of the Early Islamic periods was found, as well as two layers of soil accumulations that contained potsherds from the Iron Age.

## Iron Age

Bedrock was a conglomerate of wadi pebbles (L7; Fig. 2). A layer of dark brown soil (Loci 5, 6) that contained potsherds from the Iron Age had accumulated on top of it. This layer was overlain by a stratum of reddish brown soil (L4) that contained potsherds from the Iron Age and several potsherds from the Hellenistic period and the Middle Bronze Age.

## End of the Byzantine-Beginning of the Early Islamic Periods

Most of the excavation area was covered with floor bedding of small fieldstones (L3; Fig. 3) that was disturbed by the foundations of the new building. Part of the bedding was dismantled and the potsherds below it dated to the end of the Byzantine-beginning of the Early Islamic periods
The floor bedding was covered with a layer of light brown soil (L2) that yielded potsherds ranging in date from the Iron Age to the Early Islamic period.
The finds indicate that the excavation area on the western slope of the tell was encompassed within the settlement limits of the Early Islamic period. It is unclear whether the area was incorporated within the limits of the Iron Age settlement, whereas the absence of MB IIA potsherds probably indicates that the excavation area was located outside the settlement limits of this period.


1. Aerial photograph of Sulam village with markings of previous excavations.

2. Section, looking north.

3. Floor bedding (L3), looking east.

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## Sulam

Final Report


1. Location map.

2. Plans and sections.

3. Square A, fieldstone level looking west.

4. Square B, Wall 27 and Channel 29, looking south.

5. Pottery.

Edna Amos
2/12/2009
During December 2007, a salvage excavation was conducted at Sulam (Permit No. A-5220; map ref. NIG 23166/72348; OIG 18166/22348; HA-ESI 118, HA-ESI 120), prior to replacing lighting poles. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel Electric Company, was directed by E. Amos, with the assistance of Y. Lavan (administration), R. Mishayev (surveying and drafting), M. Hartal (scientific guidance), E.J. Stern (ceramics), H. Tahan (drawing) and D.T. Ariel (numismatics).

Three squares $(A-1.8 \times 5.5 \mathrm{~m}$; B-3 $\times 5 \mathrm{~m}$; C-2 $\times 4 \mathrm{~m}$; Figs. 1, 2) were opened along the main street of the village, north of the spring. Building remains from the Early Islamic period until the late Ottoman period were exposed, as well as a burnt layer from the end of the Crusader and the beginning of the Mamluk periods. The ceramic finds consisted of potsherds from earlier periods as well, including the Byzantine, Roman and Hellenistic (few) periods, as well as the Iron Age. The core of the village was destroyed and rebuilt over the years; during the last decade, extensive renovations were conducted along the main street of the village, causing damage to ancient remains (HA-ESI 120, HA-ESI 121). This excavation focused on the upper strata of the site.

## Early Islamic period (eighth-tenth centuries CE)

Square A. A level of small fieldstones (L28; Fig. 3), descending southward in the direction of the slope, was discovered. The stone level was covered with a thin layer of brown soil.

Square B. A north-south oriented wall (W27), built of medium-sized basalt stones and preserved two courses high (length 2.3 m , width 0.83 m , height 0.65 m ; Fig. 4), was exposed. A channel (L29) built of small and medium fieldstones, was set next to the western face of the wall, which served as its eastern side. A thick burnt layer (L26) covered the wall and the channel.

The ceramic finds recovered from the two squares dated to the Early Islamic period and included glazed bowls of the ninth-tenth centuries CE (Fig. 5:1, 2), a cooking pot (Fig. $5: 3$ ) and a jar from the eighth-ninth centuries CE (Fig. 5:4).

## Crusader and beginning of Mamluk periods (twelfth-thirteenth centuries CE)

Square A. Collapse of large limestone masonry stones was exposed (L18). A coin (IAA 115433) from the Mamluk period was discovered between them. A thick burnt layer (L19; Fig. 6) located to the north of the collapse consisted of mud-brick material and animal bones; it may possibly point to intensive burning activity inside an oven.

Square B. An installation of mud bricks mixed with chalky material (L13; $0.25 \times 0.40 \mathrm{~m}$ ) was built on a tamped chalk floor (L15) that overlaid the accumulation of brown soil.

Square C. A curved wall (W12; length 2.5 m , width 0.8 m , height 0.8 m ; Fig. 7), built of various size dressed limestone and aligned north-south, was exposed. The long side of the stones in the eastern face of the wall was placed facing the exterior. Another wall (W25) that was mostly exposed in the southern balk of the square abutted the eastern side of W12. Two courses were exposed of W25, which was built of roughly hewn basalt stones. It was covered with a layer of gray soil (L17), in which ash and burnt materials were mixed.
The ceramic finds from these two periods included glazed bowls (Slip Painted Ware; Fig. 5:5), green and yellow glazed bowls, a glazed bowl decorated with incising that dated to the end of the twelfth-beginning of the thirteenth centuries CE (Fig. 5:6), an imported Cypriot bowl that dated to the thirteenth century CE (Fig. 5:7), cooking pots from the twelfth century CE (Fig. 5:8, 9), a cooking pot from the thirteenth century CE (Fig. 5:10) and many Geometric Painted Handmade vessels that dated to the twelfth-thirteenth centuries CE (Fig. 5:11-13).

## Late Ottoman period (nineteenth century CE)

Square A. A cluster of stones (L8), some of which were masonry stones and an east-west oriented wall (W3; length 1.6 m , width 0.6 m , preserved height 0.6 m ), built of limestone building stones and preserved two courses high, were discovered below the roadbed. The wall was founded on a layer of brown soil (L9) that was uncovered below the cluster of stones.

Square B. An east-west oriented wall (W4; length 2.8 m , width 0.9 m , preserved height 0.45 m ), perpendicular to Wall 7 (length 1.8 m , width 0.8 m , preserved height 0.5 m ), was exposed below the roadbed.

While dismantling the clusters of stones in Square A and Wall 4 in Square B, potsherds dating to the Late Ottoman period, including Rashaya el-Fukhar and Gaza wares and a pipe, were discovered.
The excavation exposed sections of Tel Shunam's later strata that dated from the Early Islamic until the Late Ottoman periods. Most of the finds were from the end of the Crusader and the beginning of the Mamluk periods (twelfth-thirteenth centuries CE). These ceramic finds contained many handmade vessels that were adorned with red-brown painted geometric decorations, which point to a rural settlement on the tell. The thick burnt layer and stone collapse in Square A, which dated to the end of the Crusader and the beginning of the Mamluk periods, are reminiscent of similar finds exposed in a previous excavation on the tell (HA-ESI 121 A-4973). It was gleaned from the current excavation that a hiatus in the settlement occurred between the beginning of the Mamluk period (thirteenth century) and the end of the Ottoman period.


1. Location map.




Square C

2. Plans and sections.

3. Square A, fieldstone level, looking west.

4. Square B, Wall 27 and Channel 29, looking south.

5. Pottery.

6. Square A, stone collapse and a burnt layer, looking north.


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## Sulam

Final Report
Edna Amos
5/12/2009


1. Plan and section.

2. Wall 8 and stone collapse, looking west.

3. Pottery.

4. Thick burnt layer beneath stone collapse, looking north

5. Wall 11, looking east.

During December 2006, a trial excavation was conducted at Sulam (Tel Shunem; Permit No. A-4973; map ref. NIG 23166/72348; OIG 18166/22348; HA-ESI 118, HA-ESI 120), in the wake of exposing ancient remains during the building of a house. The excavation, on behalf of the Israel Antiquities Authority, was directed by E. Amos (surveying and photography), with the assistance of Y. Lavan (administration), N. Getzov (guidance) and H. Tahan (drawing)
One square was excavated on the southern slope of the tell, in the vicinity of the spring in the middle of the village. Four strata were discerned; building remains from the Ottoman (Stratum I) and the Mamluk (Stratum II) periods were discovered. A gray layer from the Crusader period was exposed in Stratum III and a wall that was probably built before the Early Islamic period was found in Stratum IV (Fig. 1).
Stratum I (Ottoman period). Two sub-phases were noted. A section of an open area was exposed in the later phase; its pavement of medium-sized limestone slabs (L2; $3.2 \times 5.0 \mathrm{~m}$; Fig. 2) was laid on a bedding of fieldstones. Potsherds of Rashaya el-Fukhar and Gaza wares, which dated to the beginning of the nineteenth century CE, were discovered on and in the stone floor, when dismantled. The large number of animal bones on the floor suggests that some activity involving animals was conducted in the area. A thick brown layer of soil that belonged to the early phase (L6; seventeentheighteenth centuries CE) yielded potsherds and a pipe.

Stratum II (Mamluk period; thirteenth-fifteenth centuries CE). Collapsed limestone masonry stones (L7), a wall (W8) and a tamped chalk floor (L9; Fig. 3) were exposed. The stone collapse rested on Floor 9, which was inclined in the direction of the slope toward the south. Wall 8, oriented east-west and built of one row of stones, was preserved a single course high (exposed length 2.5 m , width 0.35 m , preserved height 0.25 m ). The wall was founded on a layer of brown soil that had accumulated on Floor 9. It seems that the wall was built after the stone collapse had been lying on the floor. The ceramic artifacts in the stratum included a glazed bowl decorated with incising (Fig. 4:1), glazed bowls (Fig. 4:2, 3), a krater (Fig. 4:4), a cooking pot (Fig. 4:5), jars (Fig. 4:6,7) and a handmade jug decorated with brownish red stripes (Fig. 4:8).

Stratum III (Crusader period; twelfth century CE). A thick layer of ash, soot and burnt earth levels in various colors (L10; thickness c. 1 m ; Fig. 5) was exposed. The levels, inclined with the slope southward, indicate a prolonged period of activity that was associated with burning, possibly a kiln. The ceramic finds dated to the Crusader period and included glazed bowls (Fig. 4:9, 10), a cooking pot (Fig. 4:11) and a lamp (Fig. 4:12).

Stratum IV. A wall (W11), aligned east-west and preserved three courses high (length 2.5 m , width 0.65 m ; Figs. 6, 7) was exposed. An accumulation of brown soil (L12) that contained potsherds, ranging in date from the Roman until the Early Islamic periods was discovered next to the southern face of W11. The potsherds included a jar from the Roman period (third century CE; Fig. 4:13), a bowl and a jar from the Byzantine period (Fig. 4:14, 15) and a jar and a red-painted body fragment from the Early Islamic period (Fig. 4:16, 17).


3. Wall 8 and stone collapse, looking west.


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4. Pottery.

5. Thick burnt layer beneath stone collapse, looking north.

6. Wall 11, looking east.

7. Wall 11 and Burnt Layer 10 above it, looking east.

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Tabha
Final Report
Hendrik (Enno) Bron


1. Location of current excavation.

2. Plan and section.

3. Level 1, grayish brown compact layer.

4. Level 1, circular stone element with plaster remains.

5. Level 2, W10 and foundation remains.

During January 2009, a trial excavation was conducted at the church of the Multiplication of the Loaves and Fishes near the Benedictine monastery (Permit No. A-5585; map ref. NIG 251693-773/753200-231; OIG 201693-773/253200-231), prior to the expansion of the monastery. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the German Association of the Holy Land, was directed by H. Bron, with the assistance of Y. Ya'aqobi (administration) and A. Hajian (surveying and drafting).
The church of the Multiplication of the Loaves and Fishes is situated close to the Sea of Galilee shore, between the Kefar Nahum junction and the site of the ancient Capernaum village. The Greeks had named this area Heptapegon, i.e., the seven springs'; today, only five springs have remained. The Arabic name Tabiha/Tabha means cooked food and it alludes to miracles performed by Jesus, such as the feeding of his 5000 followers, as mentioned in Mark 6:34, Matthew 14:13, Luke 9:11 and John 6:1.
A number of excavations had been carried out in this area; the early ones in 1932 by A.E Mader, assisted by A.M. Schneider who published the results (Die Brotvermehrungskirche von Et-Tabga am Genesarethsee und ihre Mosaiken, Paderborn 1934; The Church of the Multiplying of the Loaves and Fishes, London 1937) and the later excavations by B. Bagatti and S. Loffreda (Scavi di et-Tabgha: Relazione Finale della Campagna di Scavi 25 Marzo-20 Giugno 1969 [Collection Minor 7], Jerusalem 1970) and R. Rosenthal and M. Hershkovitz (IEJ 30, 1980:207). These excavations revealed a small chapel and a Byzantine basilica that had rich mosaic floors, which were removed and reinstated in the modern church.

The current excavation area consisted of a single square ( $4 \times 6 \mathrm{~m}$; Fig. 1), set parallel to the church wall; it aimed to expose part of the ancient church, which was not excavated before. Meager archeological remains were uncovered and two levels were distinguished, including a stone layer, a severely damaged wall and partial remains of a plaster floor (Fig 2).

Level 1: Following the removal of a modern sand layer (thickness c. 0.5 m ), a layer of compact grayish brown matrix with very few potsherds was exposed (L100; Fig.3).
This layer included a feature of small and medium-sized stones, as well as white colored mortar or plaster; the purpose of which is unknown. On the north side of this feature, the stones appear to be set in a semicircle (width 1 m , preserved height 0.6 m ; Fig. 4), which could be the remains of a pillar base (?).
The potsherds in this level were worn and non-diagnostic. The large amount of modern debris probably resulted from the hewing of a drain pipe channel ( 0.15 m within bedrock), which had cut through the whole length of the excavation area.

Level 2: This level consisted of a badly preserved wall (W10; length 0.65 m ; Fig. 5). Wall 10, built of square basalt stones in an east-west direction, was preserved a single course high $(0.3 \mathrm{~m})$. Some flat stones that extended westward indicate that W10 had originally continued in this direction and was set directly upon bedrock, yet it suffered extensive damage, probably due to the drain-pipe channel. The preserved part of W10 probably represents part of the ancient church's inner wall.
To the south of W10 were the badly preserved remains of a beaten-earth floor, coated with plaster and overlain with stone collapse (Floor B; Fig. 6). It is likely that Floor B was associated with W10, although the damage cause by the drain pipe channel precludes any connection.
The stone collapse (L102), to the west of Floor B, could be part of the stone element (L100) in Level 1, in which case it formed the outer wall of the Byzantine church that was discovered during the 1932 excavations. A probe (L101) excavated to the south of the stone collapse revealed a British Mandatory coin dating to 1940; it indicates that the area was exposed close to bedrock at this time.
The current excavations at Tabha exposed the continuation of the inner wall and probably the remains of the outer wall of the fifth-century CE Byzantine church.
The excavated archeological remains were very meager and no coins, diagnostic potsherds or glass fragments were found in context; however, the excavation agrees with the conclusions of the 1979-1980 excavations at the site.


1. Location of current excavation.

2. Level 1 , grayish brown compact layer.

3. Level 1, circular stone element with plaster remains.

4. Level 2, W10 and foundation remains.


5. The tomb, looking west.

6. Pottery, bowls.

7. Pottery, dipper juglets.
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Tahunat et-Tabkha Final Report

Moshe Hartal
During December 2001, a trial excavation was conducted north of Tell Tahunat et-Tabkha, south of She'ar Yeshuv (Permit No. A3547; map ref. NIG 26021/79161; OIG 21021/29161), prior to setting an electric pole. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel Electric Company, was directed by M. Hartal, with the assistance of Y . Ya'aqoby (administration), L. Porat (pottery restoration) and H. Tahan (pottery drawing).
Remains from Middle Bronze II, the Iron Age and the Persian, Hellenistic and Roman periods were found in excavations at the foot of the tell (HA-ES/ 119). Remains of a flour mill were found along the western fringes of the tell and Bedouin graves were located at the bottom of its slopes.
One square $(3 \times 3 \mathrm{~m})$ was opened. Its upper part was dug with a backhoe ( 1.5 m ) and once antiquities were discovered, excavation had continued manually.

Travertine rock was exposed in the northeastern corner of the square; it extended precipitously toward the south and west, reaching a depth of more than 2.5 m below surface. Two walls of an installation were discovered at a depth of 2 m below surface. Built of fieldstones, they had survived a single course high and were probably part of a tomb. The rest of the walls lay outside the excavation area. Numerous densely packed vessels alongside and on top of each other were found in the area enclosed by the walls on the southern side of the square (Fig. 1).
The assemblage included open bowls with a plain rim and a ring base (Fig. 2:1-3); a deep bowl with a curved carination and a concave disc base (Fig. 2:4); bowls with a sharp carination angle and a ring base (Fig. 2:5-7), one of which has a pinched rim that forms four spouts (Fig. 2:8), as well as some twenty dipper juglets (Fig. 3). The many vessels indicate that the installation was used as a tomb; however, no skeletal remains were found. Fragments of carinated bowls, juglets and jars were recovered from the area between the tomb and bedrock and these were probably the outcome of damage caused to the tomb in the past.
The assemblage of vessels is entirely ascribed to MB II and can be used to date the first phase of the settlement on the adjacent tell.


1. The tomb, looking west.



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2. Pottery, bowls.

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Tamra
Final Report

4. Packed-earth pathway
between two houses, looking north.

5. General view of northern house, looking southeast.

8. Carved black and white stones of doorpost in entrance of W103, looking west.

10. Blocked entrance in W111, looking north

15. Staircase 107, looking north.

## Yardenna Alexandre

 23/8/2009During January-February 2009, a salvage excavation was conducted in a private building plot on the hill slope at the eastern edge of Tamra (Zu'abiyya; Permit No. A-5582; map ref. NIG 23818/72649; OIG 18818/22649), prior to construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and partially financed by the landowner, T. Zu'abi, was directed by Y. Alexandre, with the assistance of Y. Lavan (administration), A. Hajian and T. Kornfeld (surveying), H. Smithline (field photography), E. Belashov (drafting), L. Kupershmidt (metallurgical laboratory), C. Amit (coin photography), E.J. Stern and Y. Arnon (ceramic reading), H. Tahan (pottery drawing), Y. Gorin-Rosen (glass finds) and R. Kool (numismatics).
The village of Tamra is located on a low hill at the western edge of Ramat Issachar basalt plateau, about 6 km south of Mount Tabor. The fairly steep eastern slope of the hill leads down to the village spring 'Ein el-Tahta and then, down to the gully of Nahal Shēzafim that flows into Nahal Harod.
Remains of a row of columns on the hill slope above the spring, identified in the late nineteenth century by V . Guerin as an ancient basilica church, were still visible on surface in 2004. A survey of the village in the late 1970s recorded various architectural elements, some of which were discerned in the courtyards of the presentday village (Map of 'En Dor [45]:57*, Site 17). The expansion of the village eastward on the hill slope revealed antiquities that necessitated numerous small-scale excavations (1996-2004). Some limited building remains of Iron II and the Hellenistic, Roman and Byzantine periods were uncovered in one of the excavations ('Atiqot $58: 47^{*}-56^{*}$ ). Remains of basalt-stone buildings in a fairly good state of preservation, which dated to the Late Byzantine-Early Islamic period on the basis of pottery, were uncovered in most other excavations (HA-ESI $113: 30^{*}-33^{*}$ ). Remains of a church were partially excavated in one of the plots, exposing a fine basilica with three building phases that were dated to the Late Byzantine, Umayyad and Abbasid periods (sixth-ninth centuries CE; Liber Annus 54:343-350).
The exposure of basalt-stone walls in backhoe-dug probe trenches, cut in a private plot adjacent to the previous excavations, prompted the present excavation that revealed building remains, dating to the 'Abbasid period on the basis of pottery.
Two squares were opened and the partial remains of two domestic houses were uncovered, with a possible path between them (Figs. 1, 2).

## The southern house

A small part of this house was exposed, since it mainly extended southward beyond the limits of the excavation. Three associated wall segments (W113-W115) were built directly on the uneven basalt bedrock gravel (Fig. 3). The walls, built of large roughly worked stone blocks (height c. 0.4 m ), were preserved one or two courses high. Two long rectangular stone blocks, not in situ, were found in conjunction with these walls. One was an ashlar threshold stone with a socket at one end (length 1.15 m , width 0.4 m , height 0.25 m ) and the other was a plain ashlar rectangular stone (length 1.36 m , width 0.3 m , height 0.2 m ). These two stones were almost certainly the threshold and lintel stones of the entrance into the house through W113 that had fallen out of line. The few retrieved potsherds dated to the Early Islamic period.

## Pathway

A strip of packed earth floor (L110; width c. 2.8 m ) between the southern and northern houses was laid on the uneven bedrock (L124). This may have been a pathway leading down the slope (Fig. 4).

## The northern house

The more extensive remains of the northern house consisted of a complete room (L125), parts of other connected rooms (L117, L120) and a staircase (L107, L123); the limited excavation area precluded the exposure of the complete house plan (Fig. 5). The southern wall of the house (W103; exposed length 5 m , width 0.6 m ), which bordered on the northern edge of the pathway, was built directly on bedrock, using the partially hewn bedrock as its bottom course. The exterior face of the wall was carefully constructed from three courses of large roughly hewn basalt stones, incorporating some small filling stones (Fig. 6). The inner face of W103 consisted of small basalt fieldstones that were pressed against the back of the large stones and must have been originally secured with a layer of mortar or plaster, of which no trace remained (Fig. 7). An entrance in the eastern side of W103 consisted of doorposts built of two courses of large, finely dressed stones, cut to the shape of a door that opened inward (Fig. 8). The upper doorpost stone was black basalt and the lower stone-soft white limestone. The opposite doorpost was mostly hidden in the balk. The threshold was built of a large dressed basalt stone that was overlain with a small soft white limestone, now broken into two. The incorporation of single white limestone blocks in the overwhelmingly black basalt construction repeated itself in another entrance of the building and was certainly an intentional stylistic feature.
The western wall of the complete room (W104; length over 7 m , width 0.6 m ) was perpendicular to and contemporaneous with W103; it was also built in the same technique as W103 and was set directly on a base course cut out of the jagged bedrock. A slight shift was evident in the upper courses of W104, possibly reflecting a rebuild or a repair in the course of its use. The entryway in W104 (width 1 m ) was flanked by doorposts constructed from two courses of large dressed stones and the threshold consisted of a white limestone block, which was broken and eroded, but still in situ, on top of a larger basalt block with a socket (Fig. 9). This entryway led into the western room (L117), whose floor was at a slightly higher level, thus accommodating bedrock's natural incline.
The northern wall of Room 125 (W111; length over 4 m , width 0.6 m ) was contemporary with W103 and W104 and showed clear evidence of two construction phases. The wall had probably adjoined W104 originally and the entryway, which was further to the east, was found blocked (Fig. 10). It seems that when it was blocked, another entrance was created in W111, at the juncture with W104, which now had a slightly higher threshold level. The blocked entry could be the result of some collapse that was visible in the incline of the three courses of the doorpost, but it could also be related to more extensive alterations that were carried out in the building (see below). Room 125 was carefully paved with large flagstones (average size $0.4 \times 0.5 \mathrm{~m}$ ), whose upper surfaces were cut flat and were well-smoothed from use. The removal of some of these stones in the middle of the room revealed a lower layer of similar paving stones on bedrock (L127; Fig. 11). However, this layer only existed in the center of the room and on its eastern side, whereas on the western side of the room, the upper layer of stones lay directly on bedrock. At the extreme western edge, the bedrock itself was exposed as part of the floor surface. Hence, it seems that the lower stone layer, L127, was a technical feature intended to level out the west to east sloping bedrock. Room 125 was a large room in the original stage of the building, or probably an inner paved courtyard ( $3 \times$ at least 4 m ) whose original eastern closing wall lay somewhere beyond the eastern boundary of the excavation. This is evident as the same stone slab floor of Room 125 clearly extended below and beyond the extant Wall 112 and into the adjoining space (L126), where an exceptionally long stone block (length 1.27 m , width 0.38 m ) was found incorporated in the floor. This may have been originally a lintel that had fallen or was laid in the flooring. In addition, a large threshold stone was found at the floor level of L126, close to the entrance in W103. Wall 112 was built in the second building phase directly over the floor stone slabs, extending at a skew angle between W103 and W111. It was constructed in a less regular fashion from mostly smaller stones (Fig. 12), compared to the other three walls and it created a smaller room (2.0-2.5 $\times 3.0 \mathrm{~m}$ ). It is evident that the changes in the doorway of W111 took place at this time. A packed earth floor (L116), lying c. 0.2 m above the flagstones, was leveled with the threshold of the later entrance in W111 and thus, belonged to the second phase. A circular basalt pressing stone was found on Floor 116 (see Fig. 5).

To the north of W111, a staircase in a good state of preservation (L107, L123) was discovered. It occupied the space between W104, W121 and Wall 109, which was just exposed in the northern balk. The staircase consisted of two blocks, each of three steps. It was accessed from the lower northeastern room (L120), which was only partially excavated due to the danger of stone collapse, through a carefully built entrance in W121. This wall, built askew between W109 and W111, clearly belonged to the second building phase as it entailed the blocking of the original entrance in W111 (Fig. 13). The lower group of stairs (L123; Fig. 14) was built of three treads of long basalt slabs laid on the sloping bedrock, with some smaller stones laid between them. After reaching a stone slab landing (L106), it was possible to either enter straigh opposite into Room 117, or to make a 90 degrees turn to the right and ascend another three steps (L107) that also had long basalt slab treads (Fig. 15). Staircase 107 was founded on a stone-filled platform that was supported by a small retaining wall (W122). It seems that additional stairs, no longer extant, would have continued up to the top of W109, giving access to an upper storey or to the roof.
The western Room117 was only partially exposed, but exhibited a stone-paved floor directly on bedrock as well. An upright white limestone block in W104 bordered the entryway into Room 117 and another large white soft limestone slab was partially exposed on top of the floor in Room 117. An additional entryway into another room was just evident in the northwestern corner and in the western balk.
The house was abandoned some time in its later phase and a layer of accumulated fill (thickness c. 0.3-0.5 m) covered all the floors. Above the fill was a layer of stone collapse (thickness c. $1.0-1.5 \mathrm{~m}$ ) that included numerous large stones and boulders that must have fallen in after the final abandonment of the building.
It is evident that the house owners left with their belongings since relatively few and fragmentary finds were recovered from the house. The finds in the rooms consisted of some basalt millstones and grinding bowls, potsherds, a few animal bones, small fragments of glass and a few metal finds; a single coin was found on Floor 116.

## Pottery and small finds

The pottery of both occupational phases in the northern house consisted of domestic vessels. The bowls included a few Byzantine Fine Ware samples (Fig. 16:1), a delicate bowl of semi-fine buff ware (Fig. 16:2) and a few Cut-Ware (kerbschnitt) bowls (Fig. 16:3, 4). More common were heavy large gray bowls or basins, some with applied and incised decoration (Fig. 16:5, 6). The cooking vessels were open bowl-shaped (Fig. 16:7), deeper closed casserole (Fig. 16:8) and a single large deep bowl of cooking ware that had signs of burning (Fig. 16:9). The storage jars were mostly the characteristic gray, high necked bag-shaped Palestinian jars (Fig. 16:10), with a few semi-fine buff storage jars (Fig. 16:11, 12), a ridged jar rim covered with some slovenly reddish brown slip (Fig. 16:13) and a single reddish jar with a simple short neck (Fig. 16:14). An unusual gray pithos rim was similar in ware, concept and the applied decoration to the heavy gray basins (Fig. 16:15). Fairly common to both phases were potsherds of semi-fine, buff ware small jugs, mostly with simple necks and rims; the handle that extended from rim to shoulder sometimes exhibited an applied blob on its top (Fig. 16:16-19). Several potsherds of this ware were found on the original paved stone floor in Room 125. A few potsherds of the earliest glazed semi-fine buff ware bowls with ring bases (Fig. 16:20) were also found. One of the lamps was of white ware with a circular design (Fig. 16:21) and the other was reddish brown with a vestigial handle (Fig. 16:22). This pottery, and specifically the earliest glazed semi-fine buff ware bowls, is dated to the Early Abbasid period-the late eighth and early ninth centuries CE. Accordingly, both construction phases of the northern house should be dated to this period.
The few metal finds were iron nails, including a bent nail in the doorway in W103, a couple of small bronze rings, and a short segment of a chain. The glass remains were extremely fragmentary and spanned the Late Byzantine-Early Islamic periods, including some fragments that pinpoint the assemblage specifically to the Abbasid period.

## The Coin

Robert Kool
The single coin (IAA No. 119535; Fig. 17), found on the later Floor 116, is well preserved and belongs to a series of rare Umayyad coins that date to the last twenty-five years of Umayyad rule. These coins depict on the obverse the usual phrase declaring the 'Kalima', central creed of Islam:"ā ilaha illa al-Lāh"-There is no God but Allah; on the reverse, an assortment of animals and plants is depicted, surrounded by the continuation of the 'Kalima' and related to the prophetic mission: "Muhammad rasul allah"-Muhammad is the Messenger of God.
This coin shows a scorpion with its tail curling upward to the right. The scorpion appears in Muslim folklore as protector against evil. This coin is a graphic example of the syncretic nature of early Umayyad Islam, prior to the iconoclasm of the Abbasids that had set in after 750 CE, when coins became completely dominated by inscriptions.

## Later remains

Remains postdating the Abbasid building included only a tabun that had survived by its circular clay bottom and lower part of walls; it overlaid the stone collapse layer, some of whose stones supported the walls of the tabun, which was devoid of any finds.

The excavation exposed part of a domestic area from the Early Islamic-period village of Tamra. It can be stated that on the basis of pottery, the northern house was first built directly on bedrock after the earthquäke of 749 CE and remained in use, with some changes, for no longer than a century. It was abandoned by the mid-ninth century CE when the owners left, taking with them all their portable possessions.
On the basis of the evidence from the previous and present excavations, it is fair to conclude that the Byzantine and Early Islamic village of Tamra was settled by Christians and the abandonment of the village may be attributed to the hassling of the Christian population by the Moslems in the mid-ninth century CE.


3. Southern house, threshold stone on right, looking west.

4. Packed-earth pathway between two houses, looking north.

5. General view of northern house, looking southeast.

6. W103, southern face of large stones.

7. W103, northern face of small stones.

8. Carved black and white stones of doorpost in entrance of W103, looking west.

9. Black and white stones of entrance in W104, looking south

10. Blocked entrance in W111, looking north

11. Flagstone floor in Room 125, with lower stone-slab layer (L127), looking north.

12. Wall 112, looking east.

13. Wall 121 in foreground, showing blocking of original entrance in W111, looking south.

14. Staircase 123, looking west.

15. Staircase 107, looking north.

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16. Pottery


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17. Umayyad coin.

## (Volume No. HA-ESI 121 (2009

## Tamra

Final Report
Mohammed Abu Fana
30/12/2009


1. The excavation areas, plan.

2. Area A, plan.

3. Area B, plan.

4. Pottery.

5. Stone artifacts.

During June-July 2001, a salvage excavation was conducted in the village of Tamra (Permit No. A-3435; map ref. NIG 23825-6/72640-1; OIG 18825-6/22640-1). The excavation, on behalf of the Israel Antiquities Authority, was directed by M. Abu Fana, with the assistance of V. Essman and V. Pirsky (surveying), T. Sagiv (field photography) and M. Shuiskaya (pottery drawing).
Three areas were opened along the eastern slope of the village (Fig. 1).
Area A (Fig. 2)
Three squares were opened and parts of rooms (Loci 506-509) that may have belonged to a single building were excavated; Wall 2 was shared by all the rooms. The walls, built of roughly dressed basalt (width 1 m , preserved height $0.5-2.0 \mathrm{~m}$ ), were partly constructed on top of the high bedrock (Loci 508, 509). A round fieldstone-built installation (L510), whose function is unclear, was exposed in Room 509. The floors in Rooms 506 and 507 were paved with basalt stones. A window was located 1 m above the floor in the northern wall (W6) of Room 507 and a raised surface (L503) was uncovered in the northwestern corner of the room; it was built of different size fieldstones and its purpose is unknown. The potsherds overlaying the floors of Rooms 506 and 507 dated to the Early Islamic period. In a later phase, the rooms were filled with building stones, fragments of pottery and glass vessels that dated to the Byzantine and Early Islamic periods. All of these remains were overlain with modern soil.

Area B (Fig. 3)
Four squares were opened c. 10 m west of Area A and rooms that apparently belonged to two dwelling units were exposed; two main phases and secondary additions were discerned in the units. The early phase was represented by rooms (Loci 534, 542-544) whose walls (width 1 m , preserved height $0.6-1.5 \mathrm{~m}$ ) consisted of various size indigenous basalt stones that were mostly arranged in two rows with a core of small stones. An opening that led to Room 534 was exposed in Wall 19. The rooms had tamped-earth floors. The features attributed to the late phase included Rooms 532 and 538 , west of the rooms from the early phase (width of walls c. 0.8 m , preserved height $0.3-0.6 \mathrm{~m}$ ). The floors in these rooms were paved with rectangular basalt flagstones. A circular stone-built installation (L536; depth 0.6 m below floor level of room) was uncovered in Room 532. Remains of a wall (W15) whose function is unclear were exposed on the floor of the room. Wall 13 severed Wall 12 in Room 534; a refuse pit (L531) that contained a large amount of roof-tile fragments, which dated to the Early Islamic period, was discovered in the middle of the room. Fragments of pottery vessels from the Early Islamic period were found on the floors. All the rooms were found filled with soil mixed with potsherds from the Byzantine and Early Islamic periods.

## Area C(Fig. 4)

Three squares were opened south of Areas $A$ and $B$ and parts of rooms were exposed; two main phases and secondary additions were noted. The northern room (Loci 519,520) was partly paved with basalt flagstones that abutted Wall 8 (width 0.8 m , preserved height $1.0-1.6 \mathrm{~m}$ ). Wall 7, probably of a later phase, was built on top of the room's pavement, which consisted of different size fieldstones. Two walls (W9, W10) founded on bedrock were exposed in the two southern squares. They delimited a room (Loci 523/524) and were built of partly dressed basalt stones (width 1 m, preserved height 0.6 m ). The tamped-earth floor of Room $523 / 524$ was deposited on top of the leveled bedrock. A basalt vat ( $0.78 \times$ 1.17 m , depth 0.45 ) embedded in the floor of the room to a depth of 0.5 m was exposed alongside W9. A basalt weight $(0.75 \times 0.80 \times 0.80 \mathrm{~m})$ was discovered on the floor. The vat and the weight belonged to an olive press and were probably in secondary use. The end of Wall 11 and the remains of plaster that abutted it were exposed at the northwestern end of Room 523/524, at a level higher than Walls 9 and 10; it seems that W11 was added in a later phase. Another complex of rooms was apparently located beyond the limits of the excavation area (Loci 522, 525), where a basalt pavement (L522) was exposed. The potsherds overlaying the floors dated to the Early Islamic period. All the rooms were found filled with soil that contained potsherds dating to the Byzantine and Early Islamic periods.

The ceramic finds from the excavation dated to the Byzantine-Early Islamic periods and included bowls (Fig. 5:1-3), a krater (Fig. 5:4), cooking pots (Fig. 5:5, 6), jars (Fig. 5:7-14) and a juglet (Fig. 5:15). The stone artifacts included mill stones (Fig. 6:1-3) and a pounding stone (Fig. 6:4).

Based on the finds from this excavation and from others that had been conducted at the site in the past (HA-ES/ 117), it seems that the architectural remains belonged to a rural settlement from the Byzantine and Early Islamic periods.


1. The excavation areas, plan.



2. Area C, plan.


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3. Stone artifacts.

4. Survey map and route of Highway 6 in the Tamra-Yasif Junction segment.

5. Site 9 , a milestone on the Roman road, looking south.

6. Sites 12, 13, Be'er TiratTamra, looking west.

7. Site 18, a hewn burial cave, looking south

8. Site 40, a survevor's mark from the Roman period. looking west.

## (Volume No. HA-ESI 121 (2009

## Tamra-Yasif Junction, Survey

Final Report
Yoav Lerer
During November 2005, a survey prior to development was conducted along the section of the road between Tamra and Yasif Junction (Permit No. A-4602; map ref. NIG 2140-60/7490-580; OIG 1640-60/2490-580), on the route where Highway 6 will be paved. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Cross-Israel Highway Ltd., was directed by Y. Lerer, with the assistance of E. Stern, R. Abu Raya, R. Frankel, Y. Dagan, M. Peilstöcker, N. Getzov (survey), A. Shapiro and L. Barda (GPS), O. Marder (survey and prehistoric consultation), I. Roll and E. Bar'on (advice regarding the route of the Roman road).
An alternative route that would shift the direction of Highway 6 eastward, next to Highway 70, was examined at the request of the planner. The road crosses the 'Akko Valley from south to north along the foothills of the Lower Galilee. The valley is covered with an alluvial layer and is intensively cultivated. The region was surveyed by Z. Gal and Y. Olami (Map of Shefar'am [24], Jerusalem, 2003) and M. Peilstöcker and G. Lehmann (Map of Ahihud).

Twelve sites (the numbers given at the request of the planner are for administrative use) were inspected and within them, forty-one antiquity sites were measured (Fig. 1).

## Site 620, Nahal Evlayim

The site, dating to the Neolithic period (c. 10 dunams), was surveyed near to Makhtesh Dolina. Among the lithic artifacts found at Sites 1 and 2 were an axe with transversal blows, a Yarmukian chisel, an elliptical axe, three bifacial tools, an arrowhead fragment, blades, a perforated stone disk and a stone bowl fragment. The site was occupied in the Late Pottery Neolithic period and probably in the Pre-pottery Neolithic B period as well. Sites 3 and 4 are the presumed southern border of the site, based on the flint scatterings. Flint fragments that turned out to be natural were found at Site 5.

## Site 621

A circle of large stones (diam. 3.5 m ), probably the base of a watchman's hut, is located northwest of the Evlayim Junction (Site 6), c. 10 m west of an opening to a natural cave (Site 7).

Site 622, the Roman Road from 'Akko to Z Zippori
The planned route for Highway 6 crosses that of the Roman road that led from 'Akko to Zippori. Sections of the ancient road are used today by local farmers (Sites 8-11). Six mile stones were discovered in the region of Site 23; the earliest are dated to the year 120 CE and the latest is from the reign of Constantine, at the beginning of the fourth century CE. I. Roll suggested that a way station was positioned there, to mark the ninth milestone from 'Akko (Antiquities of the Western Galilee, 1986, pp. 297-303). A fragment of a milestone without an inscription (diam. 0.5 m , height 0.95 m ; Fig. 2) was found alongside the road at Site 9, c. 500 m northwest of Site 23 . Flat stones scattered nearby were part of the roadbed that had been damaged in the past when the area was prepared for planting an olive grove.

## Site 623, Be'er Tirat Tamra

A saqiye well (Sites 12,13) that was used until the time of the British Mandate but its foundations were probably ancient (Fig. 3), was recorded. Potsherds dating to the Hellenistic, Roman and Byzantine periods and the Middle Ages were found in the region (Site 14).
Site 624, Horbat Tirat Tamra
A multi-period site (Sites 15-22; Site 17 was canceled) where pottery that dated to the Hellenistic, Roman and Byzantine periods and the Middle Ages (Site 19) was found. Three burial caves (Sites 15, 16, 18; Fig. 4), winepresses, quarries and cisterns (Sites 20, 21, 22) were discovered.

## Site 625, Dabbat el Khan

Bedrock surfaces with rock-cuttings (Sites 25, 27), a cistern (Site 24) and a hewn cave (Site 26) were documented. The collected potsherds dated to the Hellenistic, Roman and Byzantine periods. The installations were probably associated with the nearby Roman road

## Site 626

Tesserae (Site 28; diam. c. 40 m ) found inside a plowed field were probably the remains of an industrial installation that was covered with alluvium

Site 627, Khirbat Rujm
Remains of a building from the Byzantine period, located inside an olive grove (Site 29).
Site 628
Potsherds and flint tools, probably from the southern fringes of Horbat ‘Uza (Sites 30-32), were found.

## Site 629

A prehistoric site (Site 33), wherein numerous flint artifacts with a yellowish patina were scattered across an area of c. 80 dunams (c. 10 artifacts per sq m ). Most of the artifacts were medium-large in size ( $>5 \mathrm{~cm}$ ) and most of the flint was found in secondary deposition due to erosion. The assemblage included Levallois cores, Levallois points and a few tools. A hand axe, which is an extraordinary find, was discovered. The homogenous assemblage is probably from the Middle Paleolithic period.

## Site 630

Burial caves (Sites 35, 36, 38), a winepress (Site 40) and quarries (Sites 37, 39) were discovered in the low limestone hills north of the 'Akko Valley. A surveyor's mark from the Roman period was discerned on a bedrock surface, close to a small winepress (Fig. 5).

## Site 631, Horbat 'Uza

A multi-period site (Site 41) that was excavated in 1991, prior to the widening of Highway 85. Twenty-one settlement layers from the Neolithic until the Mamluk periods were identified (N. Getzov, ES/ 13:19-21).

The finds from the current survey join the finds from previous surveys, as well as excavations and historical sources that indicate the 'Akko Valley was settled continuously from prehistoric times until the modern era. The remains of the Roman road found in the survey lie on the same route of the road that was apparently used before the Roman conquest and later used by Napoleon's army on his march to Mount Tabor. During the Ottoman period, the road was dubbed Darab elHawarna and camel caravans that transported wheat from the granaries of the Huran and northern Gil'ad to 'Akko traveled along it (B. Oded. Eretz Israel 10:191-197). To this date, the 'Akko Valley serves an important and main transportation artery.


1. Survey map and route of Highway 6 in the Tamra-Yasif Junction segment.

2. Site 9, a milestone on the Roman road, looking south.

3. Sites 12, 13, Be'er Tirat-Tamra, looking west.

4. Site 18 , a hewn burial cave, looking south.

5. Site 40, a surveyor's mark from the Roman period, looking west.
(Volume No. HA-ESI 121 (2009
Tel Aviv, the Exhibition Grounds
Final Report
Sigal Golan

6. Pottery.

7. Pottery and stone vessels and a bronze chisel.

During June 2000, a salvage excavation was conducted along the route of the railroad track in the Exhibition Grounds in Tel Aviv (Permit No. A-3255; map ref. NIG 181718/676787; OIG 131718/176787). The excavation, on behalf of the Israel Antiquities Authority, was directed by S. Golan, with the assistance of P. Fogel (area supervision), V. Essman (surveying), M. Sharvit (mollusks), L. Kupershmidt (metallurgical laboratory) and M. Shuiskaya (pottery drawing).
The site had previously been excavated by J. Kaplan (HA 41-42:26-27 [Hebrew]) who discovered settlement remains from the Chalcolithic Period (the Ghassulian phase), the Early Bronze Age and Middle Bronze IIA. Another excavation exposed fragments of pottery vessels that belonged to a settlement from the Middle Bronze Age (HA-ESI 114:120*).
Geomorphologic tests indicated that a swamp was located to the east of the site and it seems that part of the excavation was actually a slope that had slid down toward an ancient wadi channel.

Five squares were excavated. One square was devoid of finds. Potsherds were found in two squares, which according to the geomorphologic tests were swept over from an adjacent site and in two other squares complete, poorly preserved pottery vessels from MB IIA were discovered. The petrographic analysis of the vessels indicated that they were produced at the site. Other finds in the excavation included animal bones, mostly those of sheep/goat and cattle, stone vessels, a bronze chisel and shells of Murex, Glycymerididae and Cassidae mollusks, which frequently occur along the country's coastline.

A clay layer on top of stones contained pottery vessels, some stood on their base and others were upside down, animal bones, particularly jaws and vertebrae of sheep/goats and cattle and a bronze chisel (Fig. 2:4). Pottery vessels, stone vases and animal bones were found on top of another clay layer that was exposed below the top clay layer. The pottery vessels included open and carinated bowls (Fig. 1:1-5), kraters (Fig. 1:6-9), cooking pots (Fig. 1:10-13) and jars (Fig. 1:14-19), as well as a basin (Fig. 2:1), fragments of a basalt bowl and grindstones (Fig. 2:2, 3) and bones that consisted of vertebrae, ribs, a complete skull of sheep/goat and a horn.

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1. Pottery.

2. Pottery and stone vessels and a bronze chisel.

3. Aerial view of the
excavation areas, looking south.

4. Area D5, aerial view, looking south.

5. Upper Area D1, the
'Monument' building and the stylobate that had cut it. looking south.

6. Upper Area D1, kiln, looking south.

7. Area D4, terra-cotta pipe. looking south.

## llan Sharon, Ayelet Gilboa and Yiftah Shalev

During June-July 2005, the twenty-third season of excavations was conducted at Tel Dor (the third season of excavations of the renewed expedition to the site; License No. G-60/2005). The excavation, undertaken on behalf of the Institute of Archaeology of the Hebrew University of Jerusalem and the Zinman Institute of Archaeology of Haifa University, in cooperation with the Weizmann Institute of Science, the University of California at Berkeley and the University of Washington at Seattle and under the auspices of the Israel Exploration Society, was underwritten by the Berman Institute of Biblical Archaeology, the Zinman Institute of Archaeology, the Kimmel Center for Archaeological Science, the University of California at Berkeley, the University of Washington at Seattle, the Stella and Charles Guttman Foundation, the Roswell family of Baltimore and an anonymous donor. The excavation was directed by I. Sharon and A. Gilboa, with the assistance of E. Bloch-Smith (supervision Area D2), T. Goldman and A. Haeim (supervision of sub-areas in Area D2), B. Givon (recorder Area D2), Y. Shalev (supervision Area D5; former Lower Area D1), D. DiPietro and B. Haug (recorders Area D5), A. Stewart, S.C. Stroup and A. Estes (supervision Areas D1 and Upper Area D4), S Rebecca Martin (supervision Upper Area D1), R. Karberg, M. Allen and L. Cannon (square supervision in Upper Area D1), E.J. Haug (recorder Upper Area D1), M. Wells (supervision Area D4), E. Dintino, N. Arrington and J. Pearson (square supervision Area D4), D. DeVore (recorder Area D4), I. Mitler (administration), H. Karesh (photography), R. Gross (artifact registration and pottery restoration), S. Matskevich (architectural drafting), A. Behar (management of a special project of high-resolution excavation of industrial waste-pits in Area D2), S. Weiner, E. Boaretto, R. Shachak-Gross and F. Berna (mineral analysis in the field), S. Silstein (XRF and metallurgy), R. Albert (phytolith analysis), G. Bar-Oz, N. Raban and I. Zohar (archaeozoology), R. Linn (conservation), V. Damov (artifact drafting) and I. Hirshberg (director of the Center for Nautical and Regional Archaeology, Dor). Participating in the excavation were students from the Universities of California at Berkeley, Washington at Seattle, Florence and Haifa, as well as volunteers.
Other activities undertaken during the season, which are connected to the excavation, were funded by the Israel Science Foundation, the Bikura program of the Israel Science Foundation, the White-Levy Program for Archaeological Publication, the Getty Foundation's Collaborative Research Program and Bob Roswell.

The excavation season focused on four sub-areas in Area D, which is in the southwestern part of the tell (Upper Area D1, D5-previously dubbed Lower Area D1-D2 and D4; Fig. 1). The general plan for the excavation at the site included the opening of new areas to connect Areas H and D , forming one large area. As part of a longterm conservation policy, it was decided to leave the deeply excavated parts in Area D2 as they are and to excavate the area around them until the Iron II or the end of Iron I layer is exposed. North of Areas D2 and D5 other units were excavated-Upper Area D1 and Area D4-with the goal of reaching the Hellenistic and Persian strata, while leaving the northern strip in Area D1 as representative of the layer from the Roman period, together with Area H. To evaluate the possibility of exposing remains from the Bronze Age, several squares, which have not been excavated since 1997, were reopened in the southern part of Area D1. During the season, this area was referred to as Lower Area D1; however, by the end of the season it was decided to continue the excavation in this area and designate it as Area D5.
Area D5. This area was excavated in the past as part of Area D1 by a team from Canada, within the framework of excavations directed by E. Stern (ESI 14:61-71). A large courtyard (in excess of $5 \times 10 \mathrm{~m}$ ), flanked by rooms on the north and west (Fig. 2), extended throughout most of the excavation area. The walls of the rooms (width 0.9 m ) were built of fieldstones. Three layers were excavated in the middle of the courtyard. Only a very small section of the earliest layer was exposed in the southern part of the area; it included a large patch of bright red fill, probably burnt mud bricks, in whose middle was a dark area, probably ash. Fragments of a large Cypriot-style pithos were discovered in situ, inside the red fill. Overlying the earliest layer was a thick layer of thin gray phytolith surfaces. The potsherds discovered in the upper layer dated to the transition period between Iron I and Iron II (Horizon Ir1/2 according to terminology of Dor excavations). The upper layer included a series of surfaces, usually composed of a kurkar foundation and covered with a thin layer of phytoliths. These surfaces were deposited unevenly so that a gap of up to 0.15 m between two surfaces was created on one side and on the other side they were compacted into a single surface. However, the general topography of all these surfaces was identical and they all sloped from south and west toward the center, where a trough-like depression was created. A sliding board-like installation with a U-shaped cross-section descended from the north toward this depression, bisecting the northern part of the area. The dozens of olive pits that were gathered from one of the surfaces may point to the function of this installation. The use of the inclined surfaces as installations is uncertain and it cannot be completely negated that the steep slopes of the surfaces were caused by some post-depositional processes. The ceramics gathered from these surfaces dated to Iron IIA (Horizon Ir2a), or slightly earlier than that (Horizon IR1/2). Several large pits from the Persian period had cut through the phytolith surfaces and the walls of the building in the northern part of the area.
Area D2. The key to understanding the stratigraphy in the area lay in two massive perpendicular ashlar walls (W10606, W04D2-065; Fig. 3) that were exposed in previous seasons. The two walls were built of large dressed kurkar stones $(0.35 \times 0.55 \times 1.00 \mathrm{~m})$, set in place as headers;
W10606 was slightly lower than W04D2-065. The juncture point where the two walls met had not yet been excavated and therefore, it is still not possible to determine if they were built together as part of a large ashlar building, or if W04D2-065 was later than W10606. When W10606 was excavated, it was noted that it covered the walls of a building whose latest floors dated to Iron IIA (Horizon Ir2a) and therefore, it was clear that W10606 also belonged to this period or postdated it. During this season, a series of thick crushed kurkar floors was exposed on both sides of W04D2-065; remains of a stone pavement were preserved on several of these floors. The connection between the floors and the wall is unclear due to later pits in this area (see below); however, contact between the floors and the wall was noted in several places. No artifacts were discovered on the floors but the ceramic finds from the fill between the floors mostly dated to Iron IIA (Horizon Ir2a), with only a few potsherds possibly dating to a slightly later period, i.e., the beginning of Iron IIB (Horizon $\operatorname{Ir} 2 \mathrm{a} / \mathrm{b}$ and $\operatorname{lr} 2 \mathrm{~b})$. Among the ceramic finds were several Cypriot potsherds that dated to the Cypro-Geometric III period (CGIII).

The ashlar walls and the adjacent floors were cut by several pits, whose internal stratigraphy and ceramic changes indicated that the pits were used over a long period of time. Three pits (L05D2-517, L05D2-544, L05D2-802) were exposed: Pit 05D2-517 severed Pit 05D2-544 and both were earlier than Pit 05D2-802, which was discovered replete with ceramics that included complete vessels, mostly Phoenician commercial jars from the seventh century BCE. The bowls from Pits 05D2-517 and 05D2-544 were carinated and had a flat rim and a wheel burnish or bowls with a red slip (fine Samaria bowls). The bowls discovered in Pit 05D2-802 were mostly curved bowls with a folded rim; some were in the Assyrian style. The jars from the two early pits were cylindrical and had a short ribbed neck and a rounded rim (Hazor jars), contrary to the jars from the later pit that had a square-rim and no neck. Assyrian influenced pottery types or types that are known from Assyrian destruction assemblages in the country were almost completely absent from the two early pits, indicating that they were filled-in prior to the Assyrian conquest of Dor, whereas Pit 05D2-802 postdated the destruction. This pit, which actually consisted of a series of pits and installations (diam. in excess of 10 m , depth 1.5 m ), was excavated intermittently from 1988 onward. It was full with industrial debris and a large quantity of pottery vessels. A methodical and detailed excavation of the pit this season showed that about a third of the excavated area included high concentrations of metal and vitrified sediments, while the rest of the area in the same levels, was mainly composed of layers rich in phytoliths and concentrations of pottery, without any hint of metal. The waste in the pit pointed to hightemperature industries and included materials that underwent vitrification and calcification, as well as many hundreds of metal slag, which mostly had a high percentage of iron and a low percentage of copper. The large quantity of slag and its
high iron content distinguished the finds in this pit from those found in the recycled copper region of the Early Iron Age in Area $G$ at Tel Dor. The excavation findings are being studied in an attempt to learn about the kinds of industry represented in the debris of the pit and to gain further knowledge with regard to the formation and composition of the phytolith layers.

The excavation this season also entailed the removal of several walls that were ascribed to later phases. It resolved the chronological issue of the architectural complex that included the buildings designated as the 'Persian Palace' in Area D1 and the so-called 'Big Mama Building' in Area D2. These structures were first dated to the Persian period, although it was suspected that their dates should be pushed forward to the Hellenistic period. It has been known for a long time that no clear connection was discovered between the walls of the 'Persian Palace' and the floors from the Persian period, exposed inside and around it, which gave it its name. The post-Persian period date was evidenced by potsherds of the Hellenistic period, several of which were inside one of the walls of the building and below it. However, since the potsherds were discovered in a wall that stood exposed for many years, the chronological issue remained open until this season, when the removal of the wall revealed a pit that was sealed beneath it. The pit contained finds from the Hellenistic period, including three intact vessels: a lamp and two potholders. These finds have conclusively settled the date of the wall that sealed them and provided a terminus post quem for the construction of the 'Persian Palace'. It was definitely ascertained that this assemblage is dated to the Hellenistic period and probably to its later part.
Upper Area D1(West; Fig. 4). The aim of the excavation was to complete the exposure of the building from the Hellenistic period, dubbed the 'Monument', which was excavated intermittently from 1995 onward. This structure included two massive ashlar walls (W16020 and W16850) whose bases were molded and stuccoed. For this purpose, the excavation squares were opened north of the area that had been exposed in the previous seasons. Due to its close proximity to surface and later construction, only the bottom course of the building's foundation was preserved. The northern continuation of W16850 was uncovered and the width ( 12 m ) of the structure was ascertained. The building's foundations were built of large ashlars, arranged widthwise. This method of construction and the use of architectural elements fashioned in the Greek tradition are unique to the construction of the Hellenistic period at Tel Dor, which is mostly Phoenician rather than Greek in character. The building's foundations had cut through layers of fill from the Persian period. The bases of the walls were shaped and molded, indicating that the building was planned as a single free-standing structure, as was the custom in Hellenistic architecture. However, it was quickly absorbed into the agglomerative local tradition, when walls in the Phoenician ashlar-pier style had abutted it with complete disregard to the molded decoration and the open space between it and the complex to its west was converted into a series of rooms
A small section of a paved Roman street and the beginning of a sewage channel below it were discovered north of the northern end of the 'Monument'. This may be the continuation of a north-south street that bisected Areas F and H or a section of an east-west street that intersected it. The end of the street corresponded to the northern wall of the 'Monument' and therefore, it seems that this structure also continued to be used in the Roman period or another building was built on its foundations.

The large Roman-period building that severed the 'Monument' was also examined this year. The two long walls of the building, aligned north-south, were constructed from flat stone slabs that were set on a foundation of fieldstones and probably served as a stylobate for a row of columns. A course of stone slabs in the eastern of the two walls protruded eastward from the foundations that were built of roughly hewn stones; it is possible that the floor east of this wall was one step lower than the floor to its west. If this was indeed the case, it may be possible to reconstruct the building as a stoa that faced east. This stoa probably replaced an earlier stoa that was erected in the Monument Building of the Hellenistic period. A wide concrete floor that was built on a foundation of pebbles was exposed west of the building's western wall. Two levels of similar superposed floors were exposed to the east of the western wall and it seems that the earlier floor of the building was superseded with a floor at an identical elevation as the one to the west of the wall. The artifacts discovered below these floors dated to the Roman period.
A courtyard floor was exposed east of the building and a large well-preserved and stone-built kiln was discovered below it (Fig. 5). The kiln's opening faced north and its firebox was divided into two clay-lined basins, where the clay was baked by the heat of the fire. Another installation, also lined with stones, was exposed below the floor to the west of the building's western wall, yet it displayed no signs of the use of fire.
Upper Area D1 (East). This area was entirely plundered; numerous robber trenches crisscrossed it and not a single wall was preserved in place. Nevertheless, two construction phases from the Roman period were discerned in the area this season. Each phase may possibly comprise several secondary phases. The later phase included several sections of concrete floors and sections of wall foundations that consisted of a conglomerate of concrete and fieldstones. The early phase was characterized by horizontal, un-tamped levels and dry-built stone walls that incorporated column drums and capitals in secondary use. It seems that these architectural elements originated in the colonnaded building from the Hellenistic period (the 'Monument' or another building that has not yet been uncovered). At this point, it is unclear which of the many levels of the early phase are floors, floor beddings, or constructive fill.

Area D4. The excavation in this area, as part of Area D1, began in 2004 and a large building from the Roman period was exposed (Fig. 6). The walls of the building extended in the direction of Area D2; however, it constituted an independent unit both from an architectural and stratigraphic standpoint. Hence, it was decided to accord this area a separate number. The large size of the building (width in excess of 15 m ) and the depth of its foundations seem to indicate that this was an important public building. Thick floors of hydraulic concrete, coarse white mosaic floors and several drainage channels and basins in the building indicate that liquids were extensively used in it. Two very different proposals were offered for the use of the building in 2004; one said it was a public building, probably a bathhouse, and the other suggested it was a large industrial building.
To evaluate the plan and use of the building, it was decided to excavate additional squares north and east of the dug area. Four other rooms of the building were uncovered. A terra-cotta water pipe (diam. 0.15 m ; Fig. 7) was exposed in the northeastern room. It was lying in the robber trench of the room's western wall and was set beneath the room's concrete floor. A spout that faced upward was discerned in the middle of a section of the pipe. Close to it were the remains of an installation, probably a vat of some sort in the concrete floor of the room. The southern end of the pipe was robbed. At a later phase of the building or after it was no longer in use, two installations that had cut the concrete floor were exposed. A circular hollow (diam. 2.5 m ) was preserved in the southern installation and had cut the floor down to its pebble foundation. A hole in the center of the depression was surrounded by a raised stone pavement. During a visit to the excavation, Y. Dray suggested that this installation was the base of a Pompeian mill ('donkey mill'). The northern installation was a large tabun (diam. 0.9 m ) dug into the ground and preserved to almost its entire height (c. 1.2 m ). The tabun was ventilated by means of a terra-cotta pipe of the same type and diameter as the destroyed pipe from the first phase in the room. The exposure of a water pipe below the floor of the building reinforced the supposition that large quantities of water were used in it. The pipe was identical to the main water supply pipe of Tel Dor, discovered in Areas A and C , which led from the terminus of the aqueduct, located further south in Area B. The presumed water level at the end of the aqueduct was 12 m above sea level. This elevation did not facilitate the direct transfer of water to the top of the tell, whose elevation today is 14.5 m above sea level. It is believed that the pipe in Area E passed along the foot of the northwestern corner of the tell, where a bathhouse was discovered, and continued to Area F, where a section of the pipe was discovered opposite the main entrance to the temple complex. It is possible that a terminus of the circuitous route of the pipe was in the southern Area D. It is therefore feasible that the building was used as a public bathhouse or as a spring house from which the water was distributed to different pools and installations. Part of the building may have been adapted for use as a commercial bakery in the later phase.

Several pyrotechnical installations were discovered in the adjacent room to the west. One was a domed installation, lined with clay, whose shape resembled a tabun. This installation was smaller than the tabun in the eastern room and it seems to have been built on the floor rather than embedded into it. The second installation, built of a heap of small stones and
hypocaust tiles, did not seem to have had a lining. The northwestern room was different than the two others. Two floor levels were exposed in it; the upper one consisted of shells (glycimeris) and the lower was a plaster and crushed kurkar floor. Overlying the floors and between them was a rich assemblage of pottery vessels and a few coins that dated the use of the building to the end of the first and second centuries CE.
Only a small part of the southeastern room, which had a thick concrete floor, was exposed.


1. Aerial view of the excavation areas, looking south.

2. Area D5, aerial view, looking south.

3. Area D2, two ashlar walls and a pit that severed them, looking west.

4. Upper Area D1, the 'Monument' building and the stylobate that had cut it, looking south.

5. Upper Area D1, kiln, looking south.

6. Area D4, looking east.

7. Area D4, terra-cotta pipe, looking south.

8. Area G. Phase G/9. northeastern rooms of Early Iron Age Courtyard Building. looking north.

9. Area D2, Phase 5b, Persian-period Archaic terra cotta of a gorgoneion.

10. Area D1, Hellenistic and Roman walls above Phase D/3 Persian Palace, plan.

11. Area D1, part of mosaic garland and pomegranate design.

12. Area D1, meander design of mosaic.

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30/12/2009
The seasons reported here mark a transition of management, and to a certain extent, of strategy and aims in the Tel Dor project. The last field season of the former expedition, headed for twenty years by E. Stern of the Hebrew University of Jerusalem, was in 2000 (License No. G-98/2000). Following Professor Stern's retirement and a decision by several of the remaining staff to continue the project, the consortium was re-established in the following years, directed by I. Sharon and A. Gilboa. The new expedition conducted limited field operations in 2002 and 2003 (License No.G-40/2003), pending a fuller field season in 2004. The institutions participating in the project (past and present) included the Institute of Archaeology of the Hebrew University, Jerusalem (E. Stern, 2000; I. Sharon, 2003); the Zinman Institute of Archaeology, Haifa University (A. Gilboa, 2002, 2003); the Kimmel Center for Archaeological Science at the Weizmann Institute of Science (S. Weiner, 2002, 2003); the University of California at Berkeley, Department of History of Art (A. Stewart, 2000, 2003); the Department of Classics, University of Washington in Seattle (S. Stroup, 2003); the University of South Africa (W. Boshoff, 2000). Non-academic affiliates in 2000 included a large contingent from Germany organized by W. Haury and B Steiner. The expedition's senior staff included J. Berg (senior field archaeologist) E Bloch-Smith and A. Estes (field supervisors), B. Har-Even, N. Kranot, S. Buchwald, T. Goldman, Y. Shalev, J. Yeldin-Sloan, C. McGowan and D. A. Estes (field supervisors), B. Har-Even, N. Kranot, S. Buchwald, T. Goldman, Y. Shalev, J. Yeldin-Sloan, C. McGowan and D.
Stitz (area supervision), S. Matskevich (surveying and drafting), A. Killebrew (cultural heritage and conservation), R. Linn (field Stitz (area supervision), S. Matskevich (surveying and drafting), A. Killebrew (cultural heritage and conservation), R. Linn (field
conservation), O. Cohen (mosaic restoration), N. Vilozhni and M. Lavi (fresco restoration), L. Bartosciewicz and N. Raban conservation), O. Cohen (mosaic restoration), N. Vilozhni and M. Lavi (fresco restoration), L. Bartosciewicz and N. Raban
(archaeozoology), E. Boaretto (radiocarbon dating), R. Shachak-Gross (micromorphology), F. Berna (sediment chemistry), R. (archaeozoology), E. Boaretto (radiocarbon dating), R. Shachak-Gross (micromorphology), F. Berna (sediment chemistry), R.
Alberts (phytolith analysis), S. Shalev (archaeometallurgy), R. Rosenthal-Heginbottom (Persian-Roman pottery), A. Choyke (bone tools), B. Guz-Zilberstein (Persian-Roman pottery and museum curator), Y. Hirshberg (photographer and museum director), U. Smilansky and A. Karasik (ceramics shape-analysis), V. Rosen (artifact drawing), R. Gross (pottery restoration), R. Assis (administration), A. Haiem (administration and ceramic counts). The expedition was supported by the Israel Exploration Society, The Berman Foundation for Biblical Archaeology, the Kimmel Foundation for Archaeological Science, and was hosted by the Pardes Hanna Agricultural School, Qibbuz Nahsholim and the Nahsholim guest house. Conservation work was carried out with the support and collaboration of the Israel Antiquities Authority's conservation department (A. Freundlich) and the Israel National Parks and Nature Protection Authority.

The main objectives of the expedition during the 2000,2002 and 2003 seasons were to advance the publication of the previous expeditions' results, to test new procedures and to explore facets of the site and of archaeological fieldwork, hitherto not dealt with at Tel Dor.

Members of the Kimmel Center for Archaeological Science of the Weizmann Institute studied a series of sections in Areas D2 and G. These studies, together with more extensive lab analyses were aimed at understanding aspects of the archaeological record that could be extracted from the various microscopic components of the sediments.
Using various scientific instruments in the field allowed for on-site analyses, which were intended to obtain some answers interactively. Such a process could affect archaeological decision-making in the field, as well as direct the sampling and testing program for in-depth lab analyses during the year. In addition, experiments with new methods of field-recording, artifact registration, and data processing toward publication, were undertaken during the limited 2003 season.

Area G (Late Bronze and Early Iron Ages)
Phase G/12 (Late Bronze II). This is the earliest level excavated in Area G, which was exposed in previous seasons in two test trenches below the earliest Iron Age construction (Phase G/10, the Ir1a [early] horizon). The deposits did not evidence occupation surfaces, or architecture. They consisted of sloping debris layers of mud bricks (some burnt), ash, charcoal chunks, and industrial wastes, which provided the earliest attestation for a tradition of industrial activity in thearea. Unlike the earliest Iron Age industrial activity in Phase G/10, which was clearly metallurgical and conducted within a structure, the nature of the Late Bronze Age activity is, as yet, undefined and seems to have been performed in open air. These debris layers were covered with intentional fills that were perhaps meant to level the area.
Preliminary ceramic analysis dated the debris layers and the fills that covered them to the mid-thirteenth century BCE. In addition to the Cypriot and Mycenaean imports, typifying this age especially along the coast, a fair amount of Egyptian containers was uncovered, heralding the substantial import of Egyptian jars and their contents to Dor in the early Iron Age.
It is not clear if this area was within the city bounds of the Late Bronze Age. One theory says the Late Bronze Age town was enclosed solely along the westernmost coastal sandstone (kurkar) ridge, running below the westernmost part of the mound. Only in the early Iron Age it extended over the sand tombolo, connecting the kurkar ridge to the mainland. In that case, Area G, in the center of the present-day tell, might have been outside town limits and the excavation may have been on the slope of the tell. The counter argument contends that the layers incline in the wrong direction-northeast to the south and west, rather than west to east.

Phase G/11 (Late Bronze II and possibly later). Subsequent activityin the area left a series of superimposed 'surfaces' on the slope, created by the Phase G/12 fills, which irregularly descended to the south and west (Fig. 1). Most of the buildup comprised lenses of fine-grained, apparently heat-altered sediments (thickness ranging from very thin to 0.12 m ) that contained slag and charcoal, interspersed with thin phytolith-rich surfaces. Two copper implements were found on these surfaces: a dagger, and a ploughshare/adze. An isolated enigmatic installation, which was the sole architectural feature in Phase G/11, was constructed late in this phase. Its exposed portion had shell bedding under the floor and consisted of two stone-lined basins: a higher basin with a channel, leading down into the lower basin. Further patches of shell bedding suggested additional basins or platforms. Other than the shell bedding, which was laid for drainage or insulation purposes, no indication of the installation's function was discerned.
This continuous build-up also spanned Late Bronze II, judging by preliminary pottery reading; however, it seems later than the Phase G/12 assemblage, probably ending in the Late Bronze/Iron Age transition (late thirteenth-early twelfth centuries BCE). A few potsherds at the topmost surfaces dated to the early Iron Age, but it is unclear whether they should be related to Phase G/11, or associated with the Phase G/10 construction. The date of this pottery ( $\mathrm{G} / 11$ ), versus that of the previous $(\mathrm{G} / 12)$ and subsequent $(\mathrm{G} / 10)$ phases, will be one of the main considerations in assessing the nature of transition from Late Bronze to Iron Age in this area.

Phase G/10 (Ir1a [early]). This was the first clear Iron Age level in Area G (for Early Iron Age chronological definitions at Dor, see Gilboa and Sharon. 2003. BASOR 332:7-80). It was marked by continuity in the area's function, as well as by some notable changes. Micromorphologically, the deposits of Phases $\mathrm{G} / 11$ and $\mathrm{G} / 10$ were similar, that is heat-altered quartz and calcite, interspersed with thin 'white surfaces', primarily of phytoliths. However, the 'layers' were now thinner and the 'surfaces'-more numerous. The first appearance of architecture in Area G was the significant innovation of Phase $\mathrm{G} / 10$. It is not yet clear whether this marked the initial expansion of the town into hitherto unoccupied areas (see above), or if the absence of architecture in Phases $\mathrm{G} / 12$ and $\mathrm{G} / 11$ was merely a result of small-scale exposure. The Courtyard Building was constructed in Phase G/10 and survived through many alterations and at least a single destruction to the Ir2a horizon. Two to three sub-phases were distinguished in most of its rooms. The upper sub-phase (Phase G/10a) saw industrial activity, namely small-scale recycling of copper alloys, undertaken in the central courtyard of this structure. Although the nature of this activity was guessed-at in previous seasons (HA-ES/ 111), the sampling of sediments in 2002-2003 proved these assertions, indicating that their distinctive chemical 'signature' was obtained when they were subjected to high temperature, probably in excess of $1000^{\circ} \mathrm{C}$. The necessary level of pyro-technology was adequately accounted for by finds in the field. Crucibles, tuyères and a bellows-drum had been found in this structure in
previous seasons (HA-ESI 111). Using analogous artifacts to those recovered from the excavation, temperatures reached up to $1400^{\circ} \mathrm{C}$ in field experiments.

Phase G/9 (Ir1a [late]). Architectural continuity and development through the end of Ir1a was demonstrated in this phase. While the walls followed the earlier orientation, they belonged to a more massive construction with larger building stones. The walls were excellently preserved, in spite of being a single stone thick, some standing over 2 m high to date, having been reused in several successive phases after their initial construction in Phase G/9. The Courtyard Building suffered a violent destruction (HA-ESI 111), which preserved roof beams and residues of overlying crisscrossed thatch that had fallen on the plaster floor. Two of its northeastern rooms that were excavated in 2000 (Fig. 2) reached Phase G/9 floors, which were overlaid with ceramics in primary deposition and had no other clear evidence of destruction. Excavation in one of its western rooms in 2003 stopped at what was apparently a collapsed roof, yet with little or no evidence of burning. This corroborated the conclusion reached in previous seasons that the Ir1a (late) destruction at Dor had apparently been a site-wide phenomenon, but only part of the town was consumed by fire. Even in the Courtyard Building, only the southern part was burnt, traces of fire dwindling, and eventually disappearing altogether toward the north and west. In one of its northern rooms, two, possibly three, in situ and partially preserved Cypriot 'wavy-band' pithoi, were uncovered. When complete, these pithoi must have occupied the better part of this room. They provided another hint, regarding the industrial/storage capacity of this building, gleaned from other rooms as well. The specific functions of the Courtyard Building in Phase G/9 seem to have differed from Phase G/10, involving, inter alia, the abandonment of metallurgical activity. The change in function, as well as the transition between Phases $\mathrm{G} / 10$ to $\mathrm{G} / 9$, was reflected in the micromorphology and composition of sediments, from mainly altered quartz-rich sediments to sediments composed of roughly equal amounts of quartz and clay. Despite the dramatic visual evidence of burning and destruction in Phase G/9, experimentation with burning of similar sediments (mud bricks) has shown that the temperatures at the center of the conflagration were $\mathrm{c} .900^{\circ} \mathrm{C}$. This is an extremely high temperature for open fire, yet still much lower than the temperatures achieved during metallurgical activity in Phase G/10. Indeed, the vivid sight of destruction, including fallen beams and carbonized materials, indicate that the fuel substances were incompletely spent.

Phase G/8 (Ir1a/b). The Courtyard Building's plan was maintained, with only minor modifications. The excavation of the northeastern rooms in 2000and the western rooms in 2003 added more rooms to the Ir1a/b plan.

## Area D2

Area D2 was divided, spatially and thematically, into two main sub-areas.
D2 Lower was the main, deep sub-area in the south-central part of Area D2, where Early Iron levels were excavated Excavation in 2000 continued in the early Iron Age Monumental Building, which occupied its eastern part, as well as to its west, as in previous seasons (see HA-ESI 112).
D2 Upper was a ring of extension-units, opened in later seasons around D2 Lower on the west and north, as well as several units to the south, not excavated in 2000-2003, which contained remains from the Late Iron Age to the late Persian/Early Hellenistic period.

## D2 Lower - Early Iron Age

## Excavations West of the Monumental Building

This area was bounded on the west by the 'Bastion', which is a monumental north-south boulder wall, founded on bedrock, exposed for c. 15 m and preserved c. 4.8 m high. It ran alongside the eastern margin of the western kurkar ridge and curved westward at its southern end, possibly to encompass the (postulated) acropolis on the southwestern part of the mound. The date of the Bastion, which was the earliest architectural element in Area D2, is problematic. All early Iron Age remains in the area abutted it and the possibility that the Bastion antedated them cannot be ruled out. For many years it was posited that the Bastion was of Late or even Middle Bronze Age date, i.e., the eastern wall of the presumed Canaanite acropolis. However, in two previous excavations conducted by J. Garstang in the 1920s and by A. Raban in the 1980s, floors underlying the Bastion carried, inter alia, ceramics of the early Iron Age. Thus, it seems more likely to attribute the massive Bastion, at present, to the early Iron Age.

Phases 15 and 14. The earliest construction on bedrock, east of the acropolis, comprised a few patches of kurkar floors (Phase D2/14), which either rested directly on bedrock, or on a very shallow fill (Phase D2/15). The scanty potsherds above and below those floors were definitely not earlier than the early Iron Age.

Phases 13 and 12 (Ir1a [late] and Ir1a/b?). A substantial fieldstone structure (the Burnt Stone Building; Figs. 3, 4), otherwise known as 'Nati's Stone Building' after its excavator (HA-ESI 112:32*), having at least, two major construction stages, was uncovered over the Phase 14 floors. The building abutted the Bastion on the west, providing a terminus ante quem for the latter's construction. It was bounded on the south by an east-west oriented wall (width 1 m ), c. 8 m north of the present-day waterfront. The construction of this wall was somewhat peculiar and, as yet, unclear. Its southern exterior face was built in a regular, vertical manner, but the bottom of its northern interior face was wider than the top and seems to have been stepped. The limits of the Burnt Stone building on the north and east are still undefined; it certainly extended northward beyond the excavated area, and possibly eastward, under the Monumental Building (see below). Its exposed part comprised sections of four roomsand it retained the same basic plan throughout its two stages. The alterations involved the rebuilding of walls on the same, occasionally somewhat different lines, and the shifting of entrances. Plastered installations in the southwestern room were uncovered in both stages. The early phase (D2/13) seems to have ended in a sudden event? Several artifacts found, in situ, on its floors included a painted zoomorphic vessel and an incised scapula. A disturbing end is also applied to the second phase (D2/12), although no artifacts in primary deposition were uncovered, but deep ash layers filled the eastern room, covering its walls and spilling into the open area to the south. The chronology of the Burnt Stone Building's two stages is crucial for any assessment that concerns the first expansion of the Early Iron town eastward. Preliminary observations indicate that the pottery from the early stage (Phase D2/13) resembles that of the major, Ir1a (late) conflagration in Areas B1 (Phase B1/12) and G (Phase $\mathrm{G} / 9$ ). Thus, its end may have been afflicted by the same event. The pottery from the later stage appeared slightly later than that of all three contexts. These preliminary conclusions require corroboration by a careful study of the pottery.

Phases 11, 10, 9 (lr1b). Following the desertion of the Burnt Stone Building, the area witnessed some ephemeral construction (Phase D2/11; HA-ESI 112). Subsequently, it was built anew on a grand scale, including the Monumental Building (below), the Sea Wall, which connected between the building and the Bastion and the Brick Building that occupied the space between the three architectural elements, above the Burnt Stone Building of Phases 13 and 12. The two phases of the large construction activity were named Phases 10 and 9 (see HA-ESI 112). The southern part of the Brick Building, which had been excavated in previous seasons, consisted of three narrow halls with no entrances that contained numerous fragments of commercial containers. The building was therefore interpreted as a storehouse. It became evident that the three halls were just part of a much larger mud-brick complex, which extended to the north and east, flanking the Monumental Building on two sides. The northern part of the Brick Building had apparently a different function than the southern one. In Phases 10 and 9 this area was mainly occupied by a large courtyard, which contained different stone and brick installations. Thus, in addition to storage in the southern halls, it seems that some industrial activity was carried out as well. The courtyard extended below the new structures of Phase 8c of the $\operatorname{lr} 1 / 2 \mathrm{a}$ transition (Benny's House; ESI 20; HA-ES/ 111), some of whose walls reused the courtyard's walls.

## Excavations in the Monumental Building

Small-scale excavations confirmed last season's observations that part of the building's exterior boulder walls had two construction stages, with two, possibly three, sets of inner walls (HA-ES/ 112). Some of the lower stage mud-brick walls seem to have been cut by the foundation trench of the building's exterior wall in the upper stage. The stratigraphic relationship between the Monumental Building and the constructions to its west is not entirely clear. It had been assumed
that the Monumental Building was constructed in Phase 10 (Ir1b). Yet technically, it was earlier than the Phase 10 constructions, since one ashlar capstone of the Phases 10-9 drainage channel had a small square recess just where it abutted the ashlar corner of the Monumental Building, which seems to have been cut on purpose, to fit this corner. In turn, the Brick Building was partly built on top of the drain's side wall, i.e., the Brick Building was either later than, or contemporary with the Monumental Building. The Brick Building also abutted the east-west Sea Wall on its south, which in turn, abutted the Monumental Building on the west. Thus, the early stage of the Monumental Building, the Brick building, the Sea Wall and the drain were interpreted as components of a single building operation. However, excavation inside the Monumental Building revealed stratigraphic situations that are inconsistent with this interpretation. The Sea Wall abutted the west wall of the Monumental Building, but east of the west wall was an apparent continuation of the Sea Wall, which was cut, at least its upper stage, by the west wall (Fig. 5).
The relationship between the Monumental and the Brick Buildings thus requires further study. The correlation between the construction stages of the Monumental Building and the architectural phases outside it is also still unresolved. Assuming the Monumental Building was built in Phase 10, its two to three construction stages spanned at least three architectural phases (10-8, and possibly even 7) on its exterior, i.e., from mid-Iron I (the beginning of our Ir1b) to late within Iron IIA (Phase 8a) and possibly into Iron IIB (Phase 7), which probably ended with the Assyrian destruction. However, changes inside and outside the building were not necessarily concurrent; independent dating of the floor levels inside the Monumental Building is difficult, as they are almost invariably devoid of primary finds.
Additional data, relating to the nature and function of the Monumental Building, was gathered in $2002-2003$. Micromorphology analyzed a detailed series of thin-sections, covering all the sedimentary units visible in the section at the southern balk of Area D2, which had cut through the building. The base of the section was composed of an unaltered clay layer, presumably from mud bricks and possibly from a construction fill. Overlaying it was a crushed-kurkar floor that contained calcite and shell-derived aragonite and belonged to the early construction stage of the building. The floor and most of the gray sediment above it (thickness 0.8 m ) consisted of altered clays, quartz and calcite. The gray sediment contained abundant microscopic and macroscopic fish bones, which may indicate some role in the fishing industry, such as storage or processing of fish. A whitish layer in the middle of this sediment was very rich in unburned phytoliths, which came from diverse plants and in some cases, were still articulated. It is assumed that this was originally a layer of dung that contained a copious quantity of spherulites, indicating this dung was most probably bovine or caprine. The occurrence of large dung volumes within one of the most monumental early Iron Age structures known in our region is enigmatic. Was the cellar of the edifice used to stable cows, sheep and goats? Was that space part of a courtyard, extending eastward beyond the excavated area? Was the structure abandoned at some point and its ruins used as an animal pen? Was dung used as a construction material for the building's superstructure, or as a fill inside it?
D2 Upper - Late Iron Age to Late Persian/Early Hellenistic Periods
While D2 Lower yielded a sequence relating to Phases D2/15-8 in 2000-2003, excavation in D2 Upper concentrated on Phases D2/6-4. The highest phases in the area (D2/3-1; the Hellenistic-Roman periods) were completely excavated in earlier seasons and largely removed.

Phase 6 (Late Iron Age). The earliest remains thus far excavated in D2 Upper date, most probably, to the seventh century BCE. No living horizons were discerned and remains consisted of thick deposits, primarily industrial discards, including tuyère fragments and much slag, below the Phase 5b floors (see below). This is probably the top of the late Iron Age iron industry discard heaps that were excavated in the central section of Area D2 in previous seasons (ESI 18).

Phase 5 (The Persian and Early Hellenistic Periods). The main objective of excavating D2 Upper in 2000 was to clarify the Iron Age/Persian period transition, which had, so far, eluded us. Two sets of floors were discovered below the public building of Phase 4 (see below). The upper set consisted of 'cement-like' hard gray floors that were overlaid, in places, with ash, shells and red mud-brick-like material, mixed together and sealed below them was the lower set of floors, riddled by many pits. Both floor sets were closely packed, separated by less than 0.5 m . The walls of these two structural stages, which included a few ashlar piers left as stubs, were badly preserved. In many cases, they could only be traced by their robber trenches, which together with those of the Phase 4 structure above them, tended to cut the floors indiscriminately, precluding exact plan reconstruction for each set. However, each set seemed to have a distinctly different architectural plan, numbered 5 a and 5 b. Phase 5 a was tentatively dated to the transitional Persian/Hellenistic horizon (fourth century BCE) and Phase 5b was early Persian.
The most significant find in this area came from one of the Phase 5b pits. It was a fragmentary Archaic polychrome architectural terracotta head mask of a Gorgoneion (Fig. 6). The grotesque face, which has a grinning mouth, bared teeth, lolling tongue flanked by huge fangs, deeply wrinkled brow and staring eyes, is typical of East Greek gorgoneia. The physical characteristics generally resemble Bes or Humbaba, which may explain the appeal of gorgoneia to a Phoenician setting.
This find, the second of this type from this area, may come from an antefix to a cover-tile from a pitched roof.
Phase 4 (Early Hellenistic Period). Part of a differently built structure was uncovered in 1999, below the Hellenistic residential insulae (HA-ES/ 112). The building comprised wide walls that consisted of varied Phoenician headers and stretchers construction (Fig. 7). The shallow remains of this extensive structure, which was certainly of a public nature, extended westward into Area D1 (see below) and northward, beyond the excavation area. The dismantling of the thick ashlar walls in 2000demonstrated that this structure was not Persian, as previously published, but Hellenistic. The series of thick gray cement-like floors below the structure, initially thought of as belonging to it, were found to extend underneathsome of its walls, and in other cases, were clearly cut by them. Accordingly, all the meticulously-built thick walls of the Phase 4 structure were simply the lowest foundation courses of this building, whose original floors were not preserved. Hellenistic pottery was found in the make-up of the walls, as well as on and in the floors of the previous stratum (see above, Phase 5a, and below, Area D1).

## Area D1 - the Persian and Hellenistic Periods

Excavating this area in 2000 had two objectives:
(1) To continue the excavation of the Phase D1/3 Persian Palace structure, in particular the two eastern halls and the northern corridor that were not completely cleared in previous seasons (Fig. 8) and to clarify its plan and date. This was achieved by dismantling later walls built over and inside the structure's wide hallways and establishing the dates of the structure's earliest occupation phases, as well as the latest ones preceding them.
(2) To extend the area toward the east, north and northeast.

The most significant feature of the Persian Palace structure was revealed during the clearing of its northeastern corner in 2000. It was established that the putative northernmost and eastern walls of the structure did not meet, but rather, abutted upon the corner of another massive, wide-walled building. Judging by orientation, size, construction method and elevation, it was patently clear that this wall was one and the same as the wide east-west ahslar wall of the Phase 4 structure in the northernmost three units of Area D2 (above). Independent evidence in Area D2 proved that this wall was built in the Hellenistic period, rather than in the Persian period, and continued to be used later, as previously thought. This confirmed our previous observation (HA-ESI 111) that the Persian Palace was not Persian, but the massive foundation of a Hellenistic building, cutting into Persian-period deposits. It provided a stratigraphic link between Areas D1 and D2 and also established that both the Persian Palace and the Big Mother Wall were part of a vast architectural complex, which extended some 25 m in an east-west direction, overlooking the southern bay and the open sea on the southwestern corner of the tell. To find out how far it continued to the north of the currently excavated area will be investigated in future seasons.

Over the past seasons, fairly extensive reuse of architectural elements in later walls was noted in Areas D1 and D2. The dismantling of later walls in 2000, above the so-called Persian Palace in Area D1, yielded a number of architectural
elements in secondary use, whose original stratigraphic horizon could not be established, nor whether they belonged to one structure, or even a single phase. However, several elements from secure Hellenistic contexts, such as fills sealed by the earliest Roman floors, pits whose latest finds were late Hellenistic, or reused in the foundations of late Hellenistic/early Roman walls (Stewart and Martin, 2003, Hesperia 72:121-145), were recovered. The elements included the statue of Nike (Fig. 9) found in Pit 1 (see Fig. 8) which, by size, posture and finish, must have been the left-hand akroterion of a small pediment. Other elements were column drums, Doric capitals and an lonic anta capital. All were of a similar scale and would fit, together with the akroterion, a temple, propylon, or porch (width 6-9 m), with a tetrastyle facade (diam. 0.6 m ; height 4.5 m ). The style and proportions of the statue and columns fit early- to mid-Hellenistic canons, and indicate a Greek-style building, either a temple or part of a palace, probably built in the third-early second century BCE and dismantled by the late second-early first century BCE. Its architectural elements were dumped or reused as building stones in subsequent structures. Actual foundations that fit the postulated dimensions of this structure were not yet found in the area. However, searching for a building that may have housed these architectural elements turned our attention to a wall, previously exposed below surface in the north balk of Area D1. The remarkable feature of this particular wall was its molded base. This wall was dismissed as Roman when discovered, due to its position below surface and the surmise that 'Greek style' architectural ornament at Dor should be Roman. Nonetheless, it turned out that (a) Roman foundations had cut this wall, and (b) an apparently Hellenistic wall abutted it on the north. To investigate the structure to which this wall belonged, Area D1 was extended one unit ( 5 m ) northward. It was discovered that the wall with the molded base was the southern limit of a podium. North of the wall was a packed fill of the podium's core and several foundations. Due to the structure's proximity to surface, no floor was discovered and the podium's southern part was preserved a single course high. Disappearing altogether 2-3 m to the north, it survived by robber trenches. It does not seem likely that the podium had contained all the architectural elements. First, the Doric order was not usually associated with molded bases. Second, the foundations were not wide enough to support columns that are 0.6 m thick. Third, the most likely stratigraphic placement for the podium would be in the very last Hellenistic phase of Area D1, coeval with walls that already contained reused Doric architectural elements. The molded podium may thus be the base of a small shrine, the side of a large altar, or some similar installation. Be that as it may, there is yet another indication that this area was used for public, possibly cultic structures, ornamented in Greek style. The Gorgoneion mask in Area D2, the Persian Palace itself (see below), the still-unfound Doric Building and the Molded-Base Structure indicate that the function of this area can be spanned from the early fifth century BCE to the end of the Hellenistic period, prior to the 'migration' of the cultic area northward and the construction of the monumental Temples H and F in the Late Roman period (HA-ESI 112).

A large pit (Pit 2; see Fig. 8) was discovered under some flimsy remains of Late Roman architecture in the eastward extension of Area D1. The pit contained torn-up mosaic remains in hundreds of fragments (size ranging from c. $0.3 \times 0.4$ m to $\mathrm{c} .5 \times 5 \mathrm{~cm}$ of tesserae). The painstaking restoration process resulted in one figurative panel (Fig. 10), which together with several additional sections, suggest the original composition of a mosaic floor or floors (Stewart and Martin, 2003, Hesperia 72:121-145). Although the pit was Roman and its contents were mixed Persian-Roman, the mosaic itself is stylistically Hellenistic.
This fragmentary mask-and-garland mosaic is the finest example of opus vermiculatum in the Levant; the only other example of this technique in Israel is a fragmentary mosaic from Tel Anafa that had never been fully published. The mask-and-garland motif is fairly common in mosaic floors of the Hellenistic and Roman eras. The extant fragments at Dor include a single, nearly-complete mask of a pale, wavy-haired, effeminate youth, typical of the Dionysian masks of the New Comedy, which is a composite of two types, dating 150-50 BCE, as well as small parts of at least one other mask, several sections of beribboned and garlanded ivy sprays, pine cones, olives, pomegranates, wild roses (Fig. 11) and sections of geometric meander design in perspective (Fig. 12). This splendid mosaic testifies to the presence of a sophisticated Greek and/or Hellenized community, or at the very least, some wealthy philhellene patrons in second century BCE Dor
The best parallels to our mosaic come from the reception/dining rooms of some of the second century BCE houses in Delos, and the House of the Faun in Pompeii (late second century BCE).

## Area H - Roman Period

Excavations in this area had three objectives:
(a) To discover the foundation trench of Temple H—the southern, smaller of the two temples on the mound's western perimeter.
(b) To clarify the function of the large kilns/ovens in the industrial zone on the eastern side of the area (HA-ESI 112).
(c) To probe floors of selected rooms in Roman houses of the area's central part, dating their construction.

A probe beneath the floors of two of the Early Roman rooms in the Dolphin House, which preceded the construction of the temple in central H (see HA-ESI 112), yielded dateable late Hellenistic material, providing a terminus post quem for the construction of the insula. The most spectacular finds were an Early Roman gemstone engraved with a satyr's head and a thin gold band, perhaps a bracelet.
East of the Roman main north-south street (the Embarcadero), the excavation of a series of large kilns, which were found in 1999 and whose function is uncertain, was completed. Each kiln had several phases and evidence of hightemperature firing. Unfortunately, no diagnostic slag or other recognizable clues as to their use (bread ovens? glass furnaces?), was found. Investigating the foundations of the large building to the north of the kilns produced sound stratigraphical evidence of several occupation stages in its Early Roman phase, which were reflected in changes to the building's use and internal rearrangements. A bonus find was a splendid Corinthian marble capital, dumped in a later robber trench.

On the west side of the tell, the foundation trench of 'Temple H' was discovered and excavated. It contained enough dated pottery and lamps, which placed the temple's construction later than c. 150 CE. Further study of the temple's plan determined that it was almost certainly a peripteros sine portico, i.e., a western-type temple with a colonnade on three sides and the extension of the cella's back wall on the fourth side. This temple type, which originated in republican Italy and spread throughout the Western Roman Empire and into North Africa, is apparently unknown, to date, east of Cyrenaica.

## Conservation

Tel Dor is currently in the process of being declared a national park. The wealth of archaeological and historical data, gathered in twenty-five years of excavation at the site, would be the cultural assets of this park, along with the natura resources of the unique beaches and the flora and fauna of the Dor-Ha-Bonim coast. First steps toward implementing a long-range conservation strategy for the site called for an evaluation of the conservation needs and identification of the role and concerns of Tel Dor's various 'shareholders' that include archaeologists, local communities (e.g., Qibbuz Nahsholim, Moshav Dor, Fureidis, Zikhron Ya'aqov), local institutions (e.g., the CONRAD Museum, local and regional councils), national institutions (the Israel National Parks and Nature Protection Authority, the Israel Antiquities Authority), as well as private enterprises and commercial interest groups.
During the 2003 season, a conservation survey of the site, coordinated by A.E. Killebrew and R. Linn on behalf of the expedition and A. Freundlich on behalf of the Israel Antiquities Authority, was conducted. This joint conservation report is a preliminary condition survey that outlines the main preservation problems on the tell and recommends steps for the initial stabilization of the site. It is the basis for more detailed condition reports that will be worked out area-by-area during future seasons and forms part of the development and presentation plans for the site.


1. Area G, Phases G/10 and G/9 walls (Ir1a) above Phase G/11 sloping surfaces, looking north.

2. Area G, Phase G/9, northeastern rooms of Early Iron Age Courtyard Building, looking north.


Phases 13-9 שלבים

Phases 13-12 שלבים

Phases 10-9 שלבים
3. Area D2, Phases 13-12, Brick Building and Phases 10-9 Monumental Building, plan.

4. Area D2, Phases 13-12, Brick Building, looking south.

5. Area D2, possible east extension of Sea Wall (W17155) cut by west wall of Monumental Building (W5340), looking southwest.

6. Area D2, Phase 5b, Persian-period Archaic terra cotta of a gorgoneion.

7. Area D2, Phase 4, Hellenistic ashlar walls, aerial view.

8. Area D1, Hellenistic and Roman walls above Phase D/3 Persian Palace, plan.

9. Area D1, Architectural elements, including statue of Nike, looking east

10. Area D1, central panel of mosaic.

11. Area D1, part of mosaic garland and pomegranate design.

12. Area D1, meander design of mosaic.


1. Aerial view of excavation areas, looking north.

2. Area D1 (west), aerial view of 'Monument A' (blue) and 'Monument B' (green), looking north.

3. Area D1 (west), plan.

4. Area D5, broken pithos, insitu, with wavy-band decoration.

5. Area D5, Western wall of Courtyard Building and foundation trench, looking north.

Ayelet Gilboa, Ilan Sharon and Yiftah Shalev
30/12/2009
During June-August 2006, the twenty-fourth season of excavations at Dor was conducted (The fourth season of the new expedition to the site; License No. G-62/2006). The excavation was undertaken on behalf of the Institute of Archaeology of the Hebrew University in Jerusalem (HUJ) and the Zinman Institute of Archaeology of the University of Haifa (HA), in cooperation with the Weitzmann Institute of Science (WIS), the University of California at Berkeley (UCB), the University of Washington in Seattle (UW) and the University of South Africa (UNISA). The excavation season, under the auspices of the Israel Exploration Society, was funded by the Berman Institute for Biblical Archaeology, the Zinman Institute of Archaeology, the UCB, the UW, the Stella and Charles Guttman Foundation, the Roswell family from Baltimore and an anonymous donor. Additional activities that are associated with the excavation were funded by the Israel Science Foundation, the Bikura program of the Israel Science Foundation and the White-Levy Program for Archaeological Publications. The excavation was directed by I. Sharon and A. Gilboa, with the assistance of J. Berg (senior field archaeologist), S.R. Martin (senior registrar), A. Stewart and A. Estes (Area D1 supervision), R. Karberg and J. Sloan (Area D1 sub-area supervision), I. Milliken, R. Boehm and D. Dipietro (Area D1 square supervision), N. Child and R. Chao (Area D1 registration), E. Bloch-Smith (Area D2 supervision), V. Boshoff, B. Lorantzen and J. Fu (Area D2 square supervision), A. Pescovitz (Area D2 registration), C. Scheepers, A. Haeim, T. Goldman and Y. Shalev (Area D5 sub-area supervision), B. Monikandem-Givon and D. Carlisle (Area D5 registration), S. Weiner and E. Boaretto (heads of the WIS group), R. ShachakGross (micromorphology), A. Behar (archaeochemistry and archaeometallurgy), N. Raban-Gerstle and L. Sapir-Chen (archaeozoology), U. Smilansky (archaeomath), A. Karasik (computerized imaging), S. Matzkevich (architectural drafting), R. Linn (conservation), N. Marom (administration), H. Karesh (photography), R. Gross and H. Ben Bassat (find registration and restoration), V. Demov (find drawing), Y. Farhi (numismatics) and I. Hirshberg (director of the CONRAD [Ha-Mizgaga] Museum). Participating in the excavation were volunteers and students from UCB, UW, UNISA and HA.

The excavation was carried out in four sub-areas of Area D, at the southwestern corner of the mound (Areas D1 west, D1 east, D2, D5; Fig. 1). Except for the research aims of the season, the excavation was intended to lower the height of the square balks and to terrace the excavation toward the sea in the south. In doing so, it will be possible to conserve and present the entire stratigraphic sequence of the site.

Area D1 (West; the Hellenistic and Roman periods)
The exposure of the building from the Hellenistic period, known as the 'monument', continued. The full width of this building was exposed in 2005 ( 12 m ) and it consisted of two ashlar-built walls (W16020, W16850) whose bases were molded and shaped in stucco. Work also continued on the east-west street that was discovered last season. It became obvious at the beginning of the current season that the pavement north of the 'monument' is indeed a Roman street (Phase D1/2). The pavement was cut through the center, apparently to rob the drain beneath it. A wall, which extended to the west from a built corner exposed next to the northern edge of W16850, was entirely looted. It appears then that two separate buildings exist - 'Monument' A $(6 \times 10 \mathrm{~m})$, the southern building with the stuccoed base and - 'Monument' B $(5 \times 10 \mathrm{~m})$, the northern building (Fig. 2). The two buildings have a rectangular plan and thick walls. 'Monument' $B$ is later than 'Monument' $A$, at least from the constructional point of view, yet both were built in Phase D1/3; the use of 'Monument' B continues in Phase D1/2 (see below). 'Monument' A, founded on the remains of a large building from the latter Hellenistic period, which was constructed in Phase D1/4 and erroneously named the 'Persian Palace' in the past (see below), had at least two construction levels in Phases D1/1-2 (Fig. 3). The northern wall of 'Monument' B is flush with and at the same elevation as the paved street from the Roman period. A wide built step was exposed near the southwestern corner of 'Monument' B (Fig. 4), indicating that the building could be accessed from the street; hence, it appears that the use of 'Monument' B continued in the Roman period. Two very thick foundations abutted the east side of 'Monument' B. These could have been part of a staircase leading up to it; however, since they are slightly off-center and off-orientation, it is more likely that they are a later addition to the structure and not a part of its original plan. The function of these 'monuments' is still moot. They may have been twin temples that preceded the pair of Late Roman monumental temenos temples exposed in Areas F and H.
One of the two square and stone-lined installations, exposed in 2005, was further investigated. These dug and stonelined kilns were dated to the Roman period (Phase D1/2). Only a few traces of vitrified slag and no wasters were found in their vicinity last year, insufficient to determine their function. Extensive sampling from the kiln and its vicinity was taken this season; it contained large concentrations of lead and copper. The sampling analysis suggests that this installation was used for the casting of bronze sculptures, although metal production seems to have been a secondary usage of the installation.
A large square structure ( $8 \times 8 \mathrm{~m}$ ), built in the Late Roman period (Phase D1/1) upon the earlier remains, had an additional space to its west and an open courtyard to its east. The courtyard apparently separated between the square structure and an industrial building from the Roman period that had been exposed in recent seasons in Area D4. Two floors, directly below surface (Phase D1/0), were exposed in the structure and the courtyard. Initially, the floors were thought to belong to the structure, yet the finds underneath the upper floor included a marble fragment with a Greek inscription, apparently dating to the Byzantine period. Hence, it is feasible that the upper floor belonged to a later phase whose walls were not preserved. It could have been part of an entryway into a Crusader fort that stood in the southwestern side of the tell, or it may even be later than that.

## Area D1 (East; the Hellenistic period)

The main building excavated in recent years (Phase D1/4) was the so-called 'Persian Palace'. During the last season, it was confirmed that its date is the Hellenistic period, based on several coins of Ptolemy II (284-246 BCE) that were found sealed below one of the building's walls. By the end of the 2000 campaign, it became obvious that this structure ( $13 \times 24$ m ; in excess of 300 sq m ) was only one wing at the southwestern side of a much wider structure whose southern wall was traced over a distance of c. 15 m (W17562=W26000 in Area D2).
The main objective of excavations in this area since 2004 was to locate the western wall of this building, as well as its continuation northward, so as to get an idea of its overall size.
Removal of the later remains revealed yet another large robber trench of the western wall, oriented north-south. The mud-brick material found in the trench contained potsherds from the Persian and Hellenistic periods.
A section of a wide wall was discovered at the bottom of the rubber trench. It was built of small ashlar stones (c. $0.12 \times 0.25 \times 0.35 \mathrm{~m}$ ), similar to other walls of the building and its width was three 'headers' (Fig. 5). Unlike the southern wall of the building that was built in the 'interlocked boxes' technique, the western wall consisted of typical ashlar construction in the 'compartment building' method, in which the rectilinear ashlar-stone frames were filled with fieldstones and mud/mortar. The rubber trench of the western wall extended northward to the end of the excavation area, whereby the extant of the building exceeded 500 sq m (in excess of $18 \times 26 \mathrm{~m}$ ). Together with the smaller building to its southwest, this appears to be one of the most extensive public buildings from the Hellenistic period in the Levant (at least $27 \times 48 \mathrm{~m}$ ). Several walls that belonged to later phases, as well as a small section of mosaic that was part of the opulent mask and garland mosaic from the Hellenistic period, discovered here in 2000, were exposed throughout the excvation in the area.

Area D2 (Iron IIA period)
It was ultimately clarified in this season that the two large ashlar walls (W10606, W04D2-065) and the kurkar levels next to them did not pertain to a single building or a single construction phase (Fig. 6). Wall 04D2-065 and the kurkar levels associated with it belonged to Phase D2/7a, whereas W10606 belonged to Phase D2/7b. It was revealed that the extension of at least one kurkar level, associated with W04D2-065 on the south, sealed the southern edge of W10606. Another kurkar level was exposed to the north of W04D2-065, above the line that continues the W10606 outline, with no
hint of a rubber trench. Although this evidence shows that the two walls belonged to two separate stratigraphic phases that entirely differed in their architecture, it is difficult to determine the exact stratigraphic division of Phase 7. It mainly concerns the association of the many kurkar levels with the various sub-phases. While as many as four kurkar levels were discovered at one spot, only one or two were exposed in others. These levels are intermittent and slope in different directions, but generally north-south and west-east. At least in one spot, the levels merged together into a thick kurkar chunk and as they separated out, they were intertwined within lenses of brown brick material.
The nature of these kurkar levels and the finds within them, usually small potsherds in secondary depositions, indicate that these were constructional fills. It is possible that the upper levels served as a base for the construction of the building, one of whose walls was W04D2-065. However, it should be said that the kurkar levels were interspersed with phytolith layers, wind-blown sand, as well as pockets of erosion and alluvium. These attest to periods of exposure during the accumulation process, which lasted a very long time. The potsherds from the upper kurkar levels dated mostly to Iron IIA. The lower levels contained potsherds that mostly dated to the transition Iron I to Iron II (Ir1/2 horizon) period.

## Area D5 (Iron I to the Roman period; formerly Lower Area D1)

The excavation of the deep section in the center of the area continued throughout this season. New excavation squares were opened in the area's western side, continuing squares that were excavated in the 1990s, and in the eastern side.
The earliest stratum in the section was a fiery destruction layer (Phase D5/11), which so far is not associated with significant architectural remains. Overlaying the floor of the destruction layer were many pottery vessels, in-situ, complete or broken and mostly jars, among them two pithoi with Cypriot-like wavy-band decoration (Fig. 7), whose exposure had begun in the last season, as well as an accumulation of weights. Below one of the pithoi was a heap of lentils-probably the contents of the jar. While this destruction layer should definitely be dated to Iron I, it is not yet clear if it should be dated to the late Iron IA period (late Ir1a horizon), similar to destruction layers in other areas of Dor, or somewhat later. If the earlier date is valid, the stratification of the phytolith surfaces above the destruction layer was a long process, or remains from Iron IB period are absent, at least in the excavated portion.
Further excavation of the phytolith surfaces (Phase D5/10) revealed that the 'installations', which contained the surfaces, were initially excavated as tunnels with vertical sides. As they gradually filled up with organic materials, their surface became sloping and shallow. To retain whatever function these 'installations' served, a rim was constructed around them, using mud bricks and brick. Eventually, the rim was covered with the surfaces and it had to be rebuilt and raised several times (Fig. 8). The function of these 'installations' is not yet clear and it is presumed that at first, they were rubber trenches of walls from Phase D5/11 and later, served in a different capacity. The date of the phytolith surfaces is Iron IIA or the transition from Iron I to Iron II, which seems more plausible.
During this season, it eventually became clear that the 'courtyard building' with its massive stone walls was built in Phase D5/9, postdating other layers in the area. A clear foundation trench was observed along a north-south wall (W10817), cutting both phytolith surfaces and the destruction layer below them (see Fig. 8, left side, right of the stone wall). A single kurkar floor, which abutted the walls of the 'courtyard building' and was overlain with pottery vessels that dated to Iron IIA, was exposed in the southern part of the area.
The thick kurkar floors that belonged to Phase D5/8 and apparently sealed the 'courtyard building' were clearly visible in the high balks that surrounded the center of Area D5. When last excavated, these were thought to be Persian floors, perhaps on account of the many pits that riddled them and had not been identified in the past. It turned out that the fills above these floors dated to the end of the Iron Age in the higher western part of the area.
Several walls and floors from Phase D5/5, which formed a complex of four rooms (Fig. 9), were exposed in the high eastern part of the area. The finds above and in the floors dated them to the Hellenistic period. One of the floors contained a large quantity of mainly murex shells. This floor wad located below the installation for the production of purple dye that had previously been discovered (ESI 6:49-53) and it attests to the long time of purple-dye manufacture in the area.
A curvilinear row of stones, assumed to be part of a shallow installation that related to the walls of a structure, but now appears to be earlier, was exposed in the narrow space left between a north-south wall (W16846) and the eastern balk of the square. Upon removal of the stones, it appeared that they covered a line of bones, placed within the outline of the stones (Fig. 10). The insertion and truncation of these bones indicated intentional placement. At least four different species-horse, pig, cattle and goat/sheep were identified. At this point in time, the nature of these bones is unclear.
Meager and few remains from the late Hellenistic and Roman periods (Phase D5/3-1) were exposed in the southeastern part of the area. These remains included two sets of walls, built one on top of the other, a few installations, rubber trenches and an intricate system of pits, which comprised internal stratigraphy. Some of these pits that had cut the lower system of walls contained finds dating mostly to the Hellenistic period.


1. Aerial view of excavation areas, looking north.

2. Area D1 (west), aerial view of 'Monument A' (blue) and 'Monument B' (green), looking north.

3. Area D1 (west), plan.

4. Area D1 (west), street from Roman period and 'Monument B', looking southwest.

5. Area D1 (east), Wall 17562/26000, looking north.

6. Area D2, Walls 10606 and 04D2-065, looking east.

7. Area D5, broken pithos, in-situ, with wavy-band decoration.

8. Area D5, Western wall of Courtyard Building and foundation trench, looking north.

9. Area D5, a wall system from the Hellenistic period, looking south.

10. Area D5, row of bones, looking east.

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## Tel 'En Gev

Preliminary Report


1. Iron II remains, plan.

2. Iron II casemate wall and large building, looking southwest.

3. Iron II large building, looking east.

4. Iron II tripartite building. looking northwest.

5. Hellenistic remains, plan.

Shuichi Hasegawa and Yitzhak Paz
During August 2004, another season of excavations was conducted at Tel 'En Gev (License No. G-60/2004; map ref. NIG 2599-2601/7432-33; OIG 2099-2101/2432-33). The excavation, undertaken on behalf of the Japanese Expedition for the Archaeology of the Land of Israel and funded by the Ministry of Education, Culture, Sports, Science and Technology in Japan, was directed by A. Tsukimoto, M. Okita and N. Yamauchi. The excavation team included Y. Paz (Israeli liaison), K. Hirakawa, H. Hino, D.T. Sugimoto, H. Kuwabara, S. Miyazaki (field supervision), S. Hasegawa (registration), F. Chiwaya, Y. Iburi (surveying and drafting), H. Nakano (photography) and G. Avivi (administration). The late Prof. M. Kochavi of Tel Aviv University was one of the excavation directors and advised the Japanese team.
Two main goals were set at the beginning of the season: to expose the large building at the northeastern part of the Iron Age fortification system, which had been partially uncovered during the previous season (HA-ES/ 117) and to investigate the structure of the Iron Age tripartite pillared buildings. The stratigraphy of the Hellenistic and Roman remains was explored as well. Preservation of the Iron Age remains exposed during the previous seven seasons was conducted with the aid of the Israel Antiquities Authority.
The Iron Age Large Building (Fig. 1). A large Iron Age building (c. $10 \times 13 \mathrm{~m}$ ) was exposed at the northeastern part of the mound (Sqs O-R/5-7; Fig. 2). Its southern wall (W432) was perpendicular to the inner wall of the Iron Age casemate wall (W106) and its western wall (W492) was parallel to W106 (Fig. 3). Its northern wall is assumed to have been the inner wall of the northern casemate wall ( W 455 ; width $1.6-2.0 \mathrm{~m}$ ). The building consisted of six rectangular rooms, three on the western side (L450, L500, L502; 1.5-2.0 $\times 4.0 \mathrm{~m}$ each), two in the middle (L382-c. $2 \times 4 \mathrm{~m}$; L454-2.0 $\times 3.5 \mathrm{~m}$ ) and one on the eastern side (L374-3 $\times 9 \mathrm{~m}$ ). The layout of the rooms is similar to that of the corner towers in the casemate fortification system of Tel Yizra'el (Levant 26, 1994, Figs. 33, 40), where the towers protruded out from the casemate wall. No floors were detected in the rooms, yet the accumulated debris, which was similar to that in the casemate rooms, yielded burnt brick material and a large amount of potsherds dating to the ninth-eighth centuries BCE. It is possible that the building served as the basement floor of an upper structure that might be defined as a tower or a bastion built of mud bricks. The outer walls of the building were over 1 m wide and the southwestern part was lined with ashlars. The building postdated the casemate wall and both probably functioned as a revetment for a raised podium, on which the tripartite pillared buildings stood, yet the date of its construction is not clear.

The Early Tripartite Pillared Buildings. This building was further exposed in Sqs OP8 and P10. The northern outer wall of the complex (W431) was uncovered in Sq O8. A wall (W505), which divided the northern and the central pillared buildings, was exposed in Sq P10. It had a stone foundation, superimposed by two rows of mud bricks $(0.25 \times 0.36 \mathrm{~m})$ in three courses.
The dividing wall between the central and southern rooms of the northern tripartite building (W497; Sqs P10-11) had two phases. In the earlier phase, the wall was constructed from either rectangular or round-shaped stone pillars with cobbles placed between them. In the later phase, a stone structure was added to the northern side and it was turned into a solid wall (width 0.8 m ).
The elevation of the stone pavement (L504) in the southern room of the northern tripartite building was exposed at a higher level than the top level of the stone foundation of W505 (Fig. 4). It indicates that the stone pavement of the room abutted the mud-brick superstructure of the wall.

Hellenistic Remains (Fig. 5). A rectangular building (L464; $2 \times 4 \mathrm{~m}$ ) was exposed in Sqs OP6. Its eastern wall (W446) abutted Wall 480, which is thought to have been a city-wall during the Hellenistic period. In general, each unit of the earlier Hellenistic buildings at the site measured $4 \times 4 \mathrm{~m}$, whereas the later ones measured $2 \times 4 \mathrm{~m}$. This may suggest that Building 464 belongs to the later Hellenistic phase.
A large pit (L507; depth 1.5 m ) in Sq O5 was detected on the northern side of the enclosing wall (W480) of the settlement. A large building was partially excavated at the top of the mound (Sq P10). It was badly damaged by trenches cut during the independence war in 1948. Its northeastern wall (W490) was oriented northwestsoutheast and to its south was a flagstone-paved floor (L476). If Wall 257 (width c. 1 m ), south of this floor, formed the southern wall of this building, then the rectangular room (L476; $6 \times 6 \mathrm{~m}$ ) was the largest among all the Hellenistic building units at the site and thus might have served as a public building.

During this season, the preservation of the Iron Age remains was conducted in cooperation with the Department of Preservation of the Israel Antiquities Authority. The Iron Age remains, particularly the casemate wall and the tripartite buildings were restored and preserved for the prospective archaeological park at the site in memory of the late Gill Covo, who cooperated with the Japanese expedition as Israeli liaison for the first six excavation seasons.


2. Iron II casemate wall and large building, looking southwest.

3. Iron II large building, looking east.

4. Iron II tripartite building, looking northwest.

5. Hellenistic remains, plan.

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## Tel Eshtori

## Preliminary Report



1. Map of excavation areas.

2. Stratum III, building remains, looking southeast.

3. Stratum II, fort remains, looking east.

4. Stratum I, remains of two buildings, looking north.

5. Stratum I, Building B remains, looking north.

Walid Atrash
During August 2007, a trial excavation was conducted northeast of Tel Eshtori (Permit No. A-5218; map ref. NIG 2498/7119; OIG 1998/2119), after ancient remains were exposed in the course of digging two evaporation pools (1, 2). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the 'Of Tov' plant, was directed by W. Atrash, with the assistance of Y. Ya'aqobi and Y. Lavan (administration), V. Essman (surveying and drafting), H. Smithline (photography), A. Shapiro (GPS) and D.T. Ariel (numismatics).

Three excavation areas (A, B, C; Fig. 1) were opened in Pool 2, c. 500 m northeast of Tel Eshtori. Eight squares were excavated and remains of three settlement strata (I, II, III) were discovered. Remains of a building that dated from the Iron Age until the end of the Hellenistic period were exposed in Stratum III (Area B; $8 \times 8 \mathrm{~m}$ ). Remains of a fort that was built in the Late Roman period were exposed in Stratum II (Area C; $8 \times 10 \mathrm{~m}$ ). The remains of two adjacent buildings from the Byzantine period were exposed in Stratum I (Area A; two squares, each $8 \times 8 \mathrm{~m}$ ). The remains discovered in Pool 1 were covered over and the area of the pool was reduced in size so no excavation was conducted there.
Stratum III (Area B). Remains of a building ( $5.1 \times 5.5 \mathrm{~m}$; Fig. 2) were discovered. These included three walls (width 0.7 m ), arranged in a U-shape, which were built of travertine fieldstones and preserved a single course high. The entire length of the southwestern side of the building was open. The walls were founded on a floor of tamped earth, in which a few potsherds from the Iron Age and Hellenistic period were mixed. The floor was founded on sterile agricultural soil. A layer of soil that contained a few potsherds from the Iron Age and the Persian and Hellenistic periods was discovered on the floor.

Stratum II (Area C). Remains of a rectangular fort ( $6.7 \times 8.9 \mathrm{~m}$; Fig. 3), which was divided in the center by a partition wall into two similar units, were discovered. The outer walls (width 0.9 m ) were built of basalt fieldstones set on sterile soil and preserved two courses high. The partition wall, built in a similar manner, was preserved three courses high. The walls of the fort were preserved to a uniform level below that of the floor. The upper part of the walls was probably built of mud bricks that did not survive. The remains of the fort were covered with soil that contained a few potsherds and two coins that dated to the Late Roman period.

Stratum I (Area A). Remains of two adjacent buildings (A, B; Fig. 4) were discovered. The northern building (A; $4.0 \times 7.3$ m ; Fig. 5) included three walls (width $0.65-0.90 \mathrm{~m}$ ) arranged in U-shape that were built of basalt and travertine fieldstones and preserved a single high. The whole length of the building's southern side was open. The floor consisted of tamped earth and was founded on sterile soil. A soft limestone that had a shallow round depression in its center was exposed above the northwestern corner of the floor. A round installation that was built of small fieldstones and probably served to stand a ceramic jar was discerned in the northeastern corner of the floor. A layer of soil that superposed the floor contained potsherds from the Byzantine period. The southern building (B; $3.8 \times 4.5 \mathrm{~m}$; Fig. 6) comprised two parallel walls (each 0.7 m wide), preserved a single course high, which were built of basalt and travertine fieldstones. Two engaged pillars were incorporated in the eastern wall of the building. The tamped-earth floor was overlaid with a layer of soil that contained a few potsherds from the Byzantine period.

It seems that the exposed building remains were part of farming settlements, scattered across an extensive area. Building stones were not visible in the vicinity of the site and it was probably necessary to bring stones from nearby to construct the buildings. It appears that only the buildings' foundations consisted of stones, whereas the upper structure of the walls was built of mud bricks that did not survive. Based on the ceramic artifacts, the site was apparently first inhabited during the Iron Age and continued to be occupied until the end of the Hellenistic period. Following a hiatus, the settlement was renewed in the Late Roman period and continued to exist until the end of the Byzantine period; it was most likely abandoned due to the Moslem conquest.


1. Map of excavation areas.

2. Stratum III, building remains, looking southeast.

3. Stratum II, fort remains, looking east.

4. Stratum I, remains of two buildings, looking north.

5. Stratum I, Building A remains, looking northeast.

6. Stratum I, Building B remains, looking north.

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## Tel ‘Eton (south), Survey

## Final Report



1. Survey map.

2. Row of cairns, looking northeast.

3. An olive press crushing basin (No. 33), looking east.

4. Burial Cave 192, looking south.

5. Shaft 165 leading to a natural cave, looking north

Emil Aladjem and Simeon Gendler
During January 2007, a survey was conducted in a region south of Tel 'Eton (Permit No. A-5012; map ref. NIG 1930-40/5976-96; OIG 1430-40/0976-96), where the settlement Mirsham-Neta is slated to be built. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Construction and Housing, was directed by E. Aladjem and S. Gendler, with the assistance of S . Gal (GPS).
The survey area ( 1.2 sq km ; Fig. 1) extends between Tel 'Eton in the north, Horbat Benaya in the south, the western foothills of Har Tur en-Nimmer and the separation fence in the east and Shevil Ha-Patrolim(Patrol Lane) in the west. Two-hundred and three survey sites were documented, mostly located on a large hill south of Tel 'Eton. These include various installations and tombs and eighty-five farming terraces and enclosure walls (not marked on the map) that were largely erected on the southern and southwestern slopes of the hill; they were built of large fieldstones and some of them were preserved eight or nine courses high. Seventeen natural caves were examined and found devoid of any archaeological remains (not marked on the map). It seems that the installations and tombs should be ascribed to the ancient sites, bordering on the survey area, Tel 'Eton and Horbat Benaya, as well as Horbat 'Eton and Khirbat Hauran, to the northwest and west of the survey area.

Stone Clearance Heaps. One-hundred and four clearance heaps of small stones were surveyed; seven are large heaps (Nos. 3, 7, 14-18; diam. 5 m ), one is medium (No. 160; diam. 3 m ) and the rest are small (Nos. 34, 35, 37-42, 44, 46-52, $55-60,63,66,67,69-79,81-85,87,88,94-100,102,103,106-109,111-114,116-126,129-132,134,136,138-142$, 145-149, 152-157, 159, 161; diam. 1.5-2.0 m); Heap 161 is delineated by large stones. Three other heaps (Nos. 89, 90, 110; diam. 1.5-2.0 m), consisting of small stones, are located in natural caves.

Cairns. Twenty-one cairns, identified with certainty, are located on the hill in the middle of the survey area and along its eastern slopes. Nineteen cairns are round (Nos. 10-13, 27, 28, 30-32, 36, 45, 54, 61, 62, 65, 68, 92, 105, 218; diam. 35 m ; Fig. 3) and two are elongated (Nos. 150,$163 ; 2 \times 3 \mathrm{~m}$ ). The cairns consist of a deposit of large stones that is covered with smaller stones. A hewn burial cell ( $0.5 \times 1.8 \mathrm{~m}$, depth 0.4 m ; Fig. 4 ) was discerned below the stone heap in Cairn 218. Seven stone heaps that may also be cairns (Nos. 207, 209-214) were surveyed, although the distinction between them and the stone clearance heaps is not clear.

Winepresses. Two clusters of winepresses were surveyed: on the northern slopes of the hill, close to Tel 'Eton (No. 180, $194,198,204$ ) and near the top of the hill, in the middle part of the survey area (Nos. $43,64,80,86,93,115,151,158$ ). Another winepress (No. 6) was documented at the southern end of the survey area, near Horbat Benaya. All the winepresses were hewn on exposed bedrock terraces (depth of rock-cutting $0.1-0.4 \mathrm{~m}$ ). The treading floors and collecting vats in seven of the winepresses (Nos. 6, 43, 93, 151, 158, 194, 204) are rectangular, whereas in the other six winepresses (Nos. 64, 80, 86, 115, 180, 198), they are circular.

Cupmarks. Four cupmarks (Nos. 19, 104, 144, 162) were noted in the center of the survey area and another was discovered south of Horbat Benaya. The shallow cupmarks (diam. 0.2-0.4 m, depth 0.1-0.2 m) were hewn on bedrock terraces.

Olive Press Stones. Two stones that belonged to an olive press (crushing basins; No. $4-$ diam. 1.5 m , thickness 1 m ; No. 33 - diam. 1 m , thickness 0.8 m ; Fig. 5) were found. The connection between the stones and their location is unclear; it is possible that they were hewn nearby

Tombs. Four tombs were identified (Nos. 22, 24, 53, 205). They are oriented southwest-northeast and were probably part of a larger Muslim cemetery. Tomb 205 is rock-hewn; Tomb $53(0.5 \times 1.2 \mathrm{~m})$ is built of large stones with smaller stones between them; Tombs 22 and 24 are pit graves, adjacent to each other, with an upright stone slab standing at their southwestern end.

Burial Caves. At the foot of the hill's northern slope, close to Tel 'Eton, twenty rock-hewn burial caves (Nos. 166-171, $173-175,177,183,185-192,195)$ were positively identified and another five (Nos. 172, 178, 182, 184, 193), which may also have been used for interment, were noted. On the hill in the middle of the survey area, another burial cave (91) and a cave that was most likely used for burial (No. 137) were documented. It seems that all the caves had been plundered in the past. Since the ceilings or hewn entrances had collapsed in most of the caves it was impossible to comprehend their plan. A central chamber that gave access to three cells could be seen in Cave 167. Cave 192 (Fig. 6) had an arched opening that led to at least one burial cell and in Caves 183, 185, and 191, an arched opening led to a single burial cell. Cave 195 included a large hall that accessed another chamber; this may have been an entrance to an underground hiding complex. A stone heap (diam. c. 1.75 m ) was located in Cave 91. It seems that most of the caves were part of the Tel 'Eton cemetery.

Caves. Evidence of human activity was discerned in five natural caves (Nos. 29, 133, 176, 196, 208). Signs of rockcuttings were visible in Caves 133 and 176; Cave 208 was hewn larger, apparently to adapt it for a dwelling; columbarium niches were installed in Caves 29 and 196. Three large niches were hewn in Cave 196 and an opening that connected it to an adjacent burial cave was breached

Hewn Shafts. Seven hewn shafts that led to natural caves (Nos. 127, 165, 179, 199, 200-202; diam. 0.6-1.7 m; Fig. 7) were detected.

Building Remains. At the northern end of the survey area, close to Tel 'Eton, the tops of walls that belonged to a large building (No. 220; $15 \times 20 \mathrm{~m}$; Fig. 8) were documented. The stone collapse of a building or a built tomb (No. 2) and a rectangular watchman's hut (No. 1; length 3 m ) whose walls were built of fieldstones were also examined in the southern part of the survey area, close to Horbat Benaya.

Rock-cuttings. A quarry (No. $8 ; 3 \times 5 \mathrm{~m}$ ) and an irregular shaped rock-cutting on a bedrock terrace (No. 101) were recorded.


1. Survey map.

2. Row of cairns, looking northeast.

3. Cairn 31, looking northeast.

4. Cairn 218, looking south.

5. An olive press crushing basin (No. 33), looking east.

6. Burial Cave 192, looking south.

7. Building 220, an in situ threshold stone, looking west.

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Tel Gezer
Final Report
Ronny Reich
During August 2004, an excavation was conducted along the southern slope of Tel Gezer (License No. G-30/2004; central map ref. NIG 19260/64068, OIG 14260/14068). The excavation, undertaken on behalf of the Zinman Institute of Archaeology of the University of Haifa and underwritten by a generous contribution from Mr. Sam Turner of the United States, was directed by R. Reich.

The excavation was preceded by a geophysical survey, performed with the aid of a backhoe, which aimed to locate a possible outer opening to the ancient water system that R.A.S. Macalister had excavated inside the tell at the beginning of the twentieth century CE.

The renewed excavations of the Warren's Shaft in Jerusalem by R. Reich and E. Shukron brought about a new understanding of the system and its dating to Middle Bronze II (ESI 20:99*-100*). It has been suggested that the Gezer water system also belonged to this period and was hewn in a similar manner. A bottom outlet leading from bedrock to surface was found in the Jerusalem water system and the hypothesis that the Gezer water system had a similar lower outlet was raised.

For this purpose, a geophysical survey, carried out by M. Yazersky and A. Beck of the Geophysical Institute of Israel-Lod, was conducted in October 2003, aiming to locate possible underground anomalies in a non-invasive manner. The selected method involved continuous vertical electrical soundings along four long test lines on the southern slope of the tell. The survey detected one distinct anomaly where a presumed hewn opening was present, which constituted a basis for conducting an excavation (Geophysical Institute of Israel Report No. 03/347/278).

A long narrow trench ( $3 \times 18 \mathrm{~m}$, depth $1.85-4.20 \mathrm{~m}$ from the top of the slope down) was dug perpendicular to the slope. The excavation reached bedrock in all parts of the trench, which was carefully cleaned by hand. No signs of quarrying or other human activity were discovered throughout the excavation area, particularly at the southern end, at the bottom of the slope where the anomaly was recorded in the geophysical survey. The results of the excavation had therefore refuted the theory of a possible outlet from the water system in this region. It became clear that the geophysical survey was not at all suitable for the rock structure that was discovered in the excavation. The surface of the rock itself was quite rugged, with a small natural cavity that was actually located at the top of the slope.

No signs of building were uncovered the entire length of trench; hence, it turns out that all the examined area was located outside the boundary of the tell. The section along the trench was fairly uniform. A layer of loose brown earth (average thickness $1.0-1.5 \mathrm{~m}$ ) was on top of bedrock, overlain with a layer of gravel ( 0.5 m ), a layer of brown soil ( 1 m ) and a layer of stones that included some rectangular masonry stones, randomly placed ( $0.5-$ 0.7 m ). This upper layer is perceived as rock fall at the bottom of the slope and it was probably the result of Macalister's excavations at the top of the tell, whence he rolled the stones of the ancient walls he dismantled before backfilling his excavation with soil in his distinct method. The stones were covered with a thin layer of soil $(0.2 \mathrm{~m})$ that forms the surface. The few potsherds collected mostly from the rock fall and the soil below it dated to various periods (Middle Bronze II, Iron II, Persian (?), Hellenistic). It seems that these too had originated in Macalister's excavation.
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 north.

2. A stone wall and a floor, looking northeast.

3. Clay animal fiqurine.

Pirhiya Nahshoni and Emil Aladiem
During February-March 2006, a trial excavation was conducted west of Moshav Menuha (Permit No. A-4743; map ref. NIG 178235-63/618590-635; OIG 128235-63/118590-631), prior to the installation of a national gas pipeline. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel Natural Gas Line Company, Ltd., was directed by P. Nahshoni, with the assistance of E. Aladjem (area supervision), H. Lavi (administration) and V. Pirsky (surveying). Additional assistance was rendered by I. Peretz, K. Golan and D. Varga.
The site is located in an agricultural area, c. 150 m north of Nahal Guvrin. Remains of occupation levels and refuse pits, spread over a distance of c. 35 m , were identified in probe trenches that were dug in the area. A row of seven excavation squares was opened along the course of the gas line where the remains of a singleperiod settlement that dated to the Early Chalcolithic period (the Besor Culture) were exposed. Three phases $(1-3)$ were discerned. The first phase consisted of an accumulation of finds within depressions in the natural loess soil. The finds of the second phase included stone foundations, mud-brick collapse on occupation levels and a pit lined with segments of mud bricks. Sections of occupation levels belonged to the last phase.
The Early Phase (3). Pottery and stone vessels, as well as flint and animal bones, which had accumulated in natural hollows in the loess soil, were found in each of the excavation squares; these remains pointed to activity that preceded construction at the site.

The Second Phase (2). Remains of buildings and occupation levels were found in each of the squares. These mostly comprised mud-brick collapse of buildings that did not survive. Unmistakable mud-brick collapse was primarily exposed in Squares 1 and 2; the lines of two walls of a mud-brick building could be reconstructed in Square 1. A sloping foundation that was built of pebbles and small stones and conformed to the ancient topography was exposed in Square 4. A pit lined with segments of mud brick (Fig. 1), which contained numerous animal bones, was discovered in Square 5. The foundation course of a long massive wall (exposed length 6.5 m , width $0.70-0.85 \mathrm{~m}$ ), abutted by a floor from the west, was exposed in Squares 6 and 7; the wall was built of large wadi pebbles (Fig. 2) and its superstructure was probably composed of mud bricks. This wall was uneven and its construction corresponded to the ancient topography.

The Late Phase (1). Scant remains overlying those of Phase 2 were found: an occupation level of wadi pebbles in Square 4 and an installation, or wall, also built of wadi pebbles, in Square 5. The poor state of preservation was the result of intensive plowing.

Finds. Many pottery vessels were exposed, including jars with loop or strap handles, hole-mouths jars with up-right sides, bowls, kraters, churns and goblets. The flint tools included sickle blades and a rare flint adze. The stone objects included grinding and pounding vessels of various stones and basalt chalices. Clay figurines of animals (Fig. 3) and clay loom weights were also discovered.
Numerous animal bones were found, including those of pigs, goats, sheep and larger ruminants. No fundamental differences were discerned between the finds of the three phases at the site, which is dated to the Early Chalcolithic period, based on the pottery assemblage that is ascribed to the Besor culture.

The small settlement (c. 1.5 dunams) was situated close to Nahal Guvrin, whose many springs are copious during the summer months. The residents of the site were engaged in growing grain, as demonstrated by the sickle blades and the grinding and pounding vessels; raising animals that provided dairy products is based on the churns, and spinning wool is evidenced by the loom weights. The large number of pig bones indicates a wet environment, which is a prerequisite for raising these animals. A system of barter probably existed at the site, as can be concluded from the basalt vessels and the other stone objects that were brought from afar. All these features point to a permanent settlement.
The stratum that yielded artifacts was $0.7-1.4 \mathrm{~m}$ thick and the three phases of continuous activity at the site attest to prolonged occupation, although they belonged to the same cultural horizon.


1. Mud-brick lined pit, looking north.

2. A stone wall and a floor, looking northeast.


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## Tel Hazor - 2009

Preliminary Report


1. Area $M$ at the end of the season, looking west.

2. Area A-2, the channel, the floors and the wall of the Southern Temple, aerial view.

3. Area $A-6$, the restoration of the Ceremonial Palace facade, looking west.

## Amnon Ben-Tor and Sharon Zuckerman

During June-July 2009, the twentieth season of the 'Selz Foundation Hazor Excavations in Memory of Yigael Yadin was conducted at Tel Hazor (License No. G-26/2009). The excavation, on behalf of the Hebrew University of Jerusalem, the support of Israel Exploration Society and the financial assistance of the Antiqua Foundation (Geneva, Switzerland), the Edith and Reuben Hecht Fund, the Late Reginald David Benjamin and Esme Benjamin of Perth, Western Australia, as well as other individual donors, was directed by A. Ben-Tor and S. Zuckerman (Area M), assisted by S. Bechar, with the participation of O. Cohen, assisted by I. Strand (small excavations and conservation in Areas A-2 and A-6), D. Porotzki and V. Pirsky and A. Patchuro (surveying and drafting), M. Cimadevilla (photography); O. Harosch (registration) and S. Yadid (administration). The expedition, numbering some 40 participants from the U.S.A, Canada, Europe (Russia, Germany, France, Scandinavia and England) and Israel.

The main excavation was undertaken in Area M, with limited excavations and conservation work in Areas A-2 and A-6.

Area M. Work in this area continued in the same squares that were excavated in the last two seasons. The goals of this season were to complete the excavation of the domestic quarter, dating to the eighth century BC and, consequently, to investigate the earlier Iron Age remains from the ninth century BCE whose existence is marked by the limestone pillars found throughout the area in secondary use (Fig. 1).
All the structures are private dwellings, characterized by relatively thin walls built of small fieldstones (width c. 0.5 m ). Several installations, ovens,grinding installations and basalt artifacts were found in the various dwellings. The plan of the area is similar to that of the later phases, which was exposed in the previous season and included several domestic structures and small alleys that separated them. At least one more phase of these domestic dwellings was defined this year.
The earliest phase of the so far known domestic quarter was mainly exposed during the current season. During this phase the area consisted of three or four large domestic structures, each containing at least one tabun. The structures were well-built (width of walls 0.6 m ). The main feature of all later phases in the area-the stone-lined pit excavated in the previous season-did not exist in this phase (HA-ESI 119; HA-ESI 120), which is attributed to the early part of Iron II in the eighth century BCE, mainly on account of the structures' characteristics and the pottery assemblage. This is the beginning of a long occupation process that had already been discerned during Yadin's excavations and witnessed a gradual, although significant decline in the quality and density of domestic structures on the tell. Houses of the later part of the eighth century BCE were smaller and closer to one another; their construction was poor and they trespassed into public areas. The apex of this process occurred during the last phase of the Israelite city, preceding the Assyrian conquest of 732 BCE. This season's excavation focused on a single room from the middle occupation phase. It attempted to identify what processes a residential house underwent before, during and after its abandonment. To gain maximum data, the room was divided into 17 squares ( $1 \times 1 \mathrm{~m}$ ), each subdivided into 4 sub-squares that were excavated $5-10 \mathrm{~cm}$ at a time and meticulously documented. All the soil from these sub-squares was wet or dry sieved and samples were sent for flotation. A rich and diverse assemblage of bones, shells and flint artifacts, was identified.
A wide wall (length over 15 m , width c .1 m ), oriented east-west, was exposed in the southern part of the area during the last week of the current season. The wall was parallel to two rows of limestone pillars, exposed in the center of the area, and it probably belonged to the public building that was sealed by the remains of the later domestic buildings mentioned above. The plan of this building, as well as other earlier structures that are attributed to the ninth century BCE, will be the main goals of next year's excavation in Area M.

The main finds assigned to the Iron Age phases in the area included mainly pottery vessels, some complete and other restorable, as well as several scarabs and seals, three Egyptianized faience beads, zoomorphic and anthropomorphic clay figurines, iron and bronze objects, glass artifacts and a lid of engraved bone.
Area A2 lies between the northern and southern temples, as well as to the west of the latter, between it and the courtyard of the Canaanite ceremonial palace. The area between the two temples was partially excavated by Yadin's expedition, who removed the upper Iron Age layers. The area between the two temples was excavated this season down to the Late Bronze I paved street. It became clear that the beautiful ashlar stones placed on top of the northern and western walls of the southern temple did not belong to the original phase of the building, as had previously been presumed, but represented a later phase of the building: the temple itself went out of use sometime in the fifteenth century BCE, but its walls were preserved to a considerable height and served as foundations for the walls of a later building (a temple?) that was erected on top and of which only the foundations and the floor had survived. The ashlar stones were added to the building only in this stage, during Late Bronze II (the fourteenth century BCE) when the entire area was reorganized and the ceremonial palace was established. The raised platform in the center of the palace's courtyard was built at the same time, partially using the same ashlar stones that appeared in the structure, which was built above the southern temple after it went out of use.
A channel that drained the large courtyard east of the ceremonial palace, as well as the courtyard to its north, was excavated in three stages: its eastern end had been cleared by Yadin's expedition (Hazor III-IV [Text] 1989:18-21) and it turned out that it led the run-off water into a subterranean reservoir (L357), which was also excavated during the 1950s. The western part of the channel was excavated in the 1990s (IEJ 48, 1998:275). The northern part of the same channel, which encircled the western and northern walls of the southern temple, was excavated during the current season (Fig. 2). The channel was higher than the level of the paved street to the north of the southern temple. Thus, the dating of this channel, as suggested by the Yadin's expedition in the 1950s, to Stratum XIV (LB II), when the area was reorganized prior to the construction of the ceremonial palace, is confirmed.

## Restoration and conservation

The main restoration effort this season was focused on the southern temple in Area A-6. The northeastern corner of this building was excavated by the Yadin's expedition in the 1950s (Hazor III-IV [Text] 1989:6-22), while most of the building was cleared by the renewed excavations during the 1990s (IEJ 49, 1999:272-273). During its excavation, it became clear that the western part of the building was much better preserved than its eastern part. The walls in the west part were preserved to nearly 2 m high, whereas in the eastern part, where the entrance to the building was probably set, only the wall foundations were preserved. The lovely pebble floor, exposed in the eastern part of the building during the 1990s, was higher than the preserved foundation and therefore, it was washed away in the course of time.
The walls in the northeast and the east sides of the building were restored this season to a level slightly higher than the floor of the building and thus, its preservation was assured. The walls of the favissa in the center of the temple were consolidated, as well as the sides of the cross-section, in which the earlier floors of the building can be observed.
The conservation work of the northern section of the façade wall of the Ceremonial Palace was completed. Parts of the façade wall were leaning out in an angle that endangered their stability. The bricks that composed the façade wall were dismantled; the bedding on which they were set was cleaned and consolidated and wooden beams were inserted in place of the original ones (Fig. 3).


1. Area $M$ at the end of the season, looking west.

2. Area A-2, the channel, the floors and the wall of the Southern Temple, aerial view.
3. Area A-6, the restoration of the Ceremonial Palace façade, looking west.

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2. Tel Kinrot, aerial view of Field I at end of 2007
Season, looking southeast.

3. Tel Kinrot, aerial view of dwelling complex in Area S, looking south.

4. Tel Kinrot, selected pottery from Area S.

7. Horbat Kur, aerial view at end of 2008 Season, looking east.

8. Horbat Kur, aerial view of Area A.

## Stefan Münger, Juha Pakkala and Jürgen Zangenberg

During July 2008, the Kinneret Regional Project conducted excavations at Tel Kinrot and Horbat Kur (License Nos. G-11/2008, G45/2008, S-4/2008; Tel Kinrot map ref. NIG 250810/752848; OIG 200810/252848; H. Kur map ref. NIG 250510/754452; OIG 200510/254452). The excavations, on behalf of the Universities of Bern, Helsinki, Leiden and Mainz, were mainly sponsored by the participating universities and by several foundations, namely the UniBe Science Foundation (Bern, Switzerland), the Leiden University Funds (Leiden, The Netherlands), the Schröter-Stiftung (Neustadt, Germany) and the German Society for the Exploration of Palestine. The excavations, organized by the Kinneret Regional Project, were headed by the co-directors of the project, S. Münger, J. Pakkala and J. Zangenberg. The team members at Horbat Kur were L. Petit (co-field director; area supervision), R. Bonnie (area supervision), M. van der Enden (survey co-director; photography), G. Besuijen (registration), D. Lechner and N. Schmidt (surveying; three-dimensional modelling), SkyView Photography Ltd. (aerial photography) and P. Wyssmann (numismatics). The team members at Tel Kinrot were K. Saarelainen (area supervision), D. Vos and I. Thomsen (field assistants), I. Müller (registration), D. Lechner and N. Schmidt (surveying; three-dimensional modelling), B. Schöneweiß-Mehring (architecture), T. Tynjä (ceramic analysis), I. Gutman (pottery restoration), M. Range and C. Lennert (drawing of finds), M. Klee (paleobotany), G. Bar-Oz (paleozoology, assited by I. Thomsen), K. Maman (conservation) and W. Zwickel (project coordination and landscape archaeology). The Kinneret Regional Project wishes to thank Y. Shivtiel, U. Leibner and Y. Stepanski for their invaluable support of the work at Horbat Kur, as well as the Nature and National Parks Authority, especially A. Redvany, for maintaining the conserved architecture à Tel Kinrot.
Tel Kinrot (Tell el-'Orēme) is located on the shore of the Sea of Galilee, c. 10 km north of modern Tiberias. It has been indisputably identified with the ancient town of Kinneret, mentioned in Josh 19:35 and in Egyptian sources.
The Kinneret Regional Project has conducted excavations at Tel Kinrot in 2003-2005 and 2007-2008 (Fig. 1). The 2008 campaign, which brought the excavations in Field I (a cluster of several excavation areas $\mathrm{J}, \mathrm{U}, \mathrm{N}, \mathrm{R}$ and S ) in the lower town to a provisional halt, focused on the Iron IB habitation strata that yielded well-preserved architecture and installations in successive layers and phases (Fig. 2). These habitation strata had initially been exposed and excavated in the 1990s under the direction of the late V. Fritz (ES/ 16:33-34; 19:15*), who identified two main strata of this period, i.e., the founding stratum, labeled $V I$, and the main occupation stratum, labeled $V$. However, the recent excavations suggest that the more general term 'Iron I horizon' may be more appropriate, since the development of the city varied locally and no clear-cut settlement layers could be observed throughout the excavation areas.
The excavations suggest that Kinneret was a major town and a regional center in the Iron IB period, especially in its later phase at the end of the eleventh and possibly the beginning of the tenth centuries BCE. Although the Iron IB city and its material culture followed the general LB urban traditions of the Southern Levant, no direct continuity with the Bronze Age remains was detected at Kinneret itself. Apparently, a new population founded the city sometime during the eleventh century BCE. It now seems likely that Kinneret was destroyed in an earthquake during the first half of the tenth century bce. Similar destructions have been observed in contemporary early Iron Age settlement layers, such as Megiddo VIA or Dan IVB.

The main objective of the 2008 season was to expose the remaining northernmost part of a large domestic complex (Area S), excavated since the 1990s. The trapezoidal complex (length c. 30 m ; Fig. 3) that extended along a fairly broad road, may be considered one of the most remarkable Iron I structures in the Southern Levant. It contained several separate units that were possibly intended for different activities. Contrary to most other major domestic buildings of this period, this complex was well planned from the outset and did not show slow and gradual development. Solid lateral walls served both as internal terrace walls, necessary for the effective use of the sloping terrain and as dividers of the complex into smaller compartments. Several installations, such as benches, podia and troughs, as well as well-preserved material remains that included many small finds and a large, varied pottery assemblage,were found in the rooms. A unit with several grinding tools and ovens in the northern part of the building indicated that this part of the complex was used for food preparation. Paleobotanical analyses showed that cereals were stored in one of the subterranean rooms of this complex.
The current excavations uncovered three overlaying settlement layers, each divided into various sub-phases, north of the main Iron I building complex. Preliminary analysis of the stratigraphy suggested that these layers postdated the main Iron IB horizon. The architecture of the newly founded phases showed a different construction technique and poorly built dwellings that could represent later attempts to resettle the Stratum V city immediately after its destruction. The previous excavations had detected similar remains that postdated the main Iron IB horizon in other parts of the lower town, which at the time were defined as post-destruction squatter habitation. However, the discoveries in Area S indicate that the post-destruction habitation consisted of three layers and several phases, which seem to have been more substantial than simply squatter occupation. This conclusion is supported by the remains of a series of partly plastered floors with in situ pottery, which were associated with the newly discovered habitation layers.
Finds. Although alterations in architecture, city layout and building quality of the post-destruction phases, in comparison with the main Early Iron Age phase, were considerable, no significant changes could be discerned in the ceramic repertoire, which consisted of some small finds and notable amounts of restorable pottery vessels, including a chalice (Fig. 4:1) and jugs (Fig. 4:2, 3) from the last pre-destruction phase and flasks (Fig. 4:4-7) and a lamp (Fig. 4:8) from the post-destruction horizon. The assemblage corresponded to pottery types of the main Early Iron Age horizon and thus represented the very late phases of Iron IB. Further analysis of the pottery will clarify whether it had any connection to early Iron IIA pottery types.
The pottery of the main Iron IB phase was basically very similar to ceramic assemblages uncovered at Tel Hadar IV Hazor XII/XI, Dan IVB or Yogneam XVII. It should be noted, however, that the Iron IB habitation of Kinneret may have begun slightly earlier than the well-known Megiddo VIA horizon, because typical types of Megiddo VIB and Bet She'an Lower VI were found within the main Early Iron horizon at Kinneret, as can be seen in the decorated storage jars (Fig. 5) or the occasional potsherds of classical 'Philistine' ceramics.

Complementary Studies. A re-examination of old data enabled the extrapolation of a number of buildings from the initial Iron I city (former Stratum VI). Similar to the buildings from the main Iron I horizon, these earlier structures were equally monumental in size and corroborated the assumption that Early Iron Kinneret was well-planned and structured from its commencement.
The utilization of photogrammetric three-dimensional modeling, using aerial photographs and highly precise GPS-data, enabled the visualization of the architecture in Field I (Fig. 6). These technologies represent a further step toward the comprehensive digital recording of Early Iron material culture at Tel Kinrot.

The 2008 excavation season has shown that the post-destruction habitation layers were significant and the pottery associated with them represented the very last phases of Iron IB or the very beginning of Iron IIA.

Horbat Kur. The Kinneret Regional Project expanded its activities in this season, geographically and chronologically. Initial fieldwork at the site of Horbat Kur (Fig. 7) was intended to pave the ground for a larger research project in the coming years, aiming to better understand the rural settlement of Horbat Kur and its interaction with the changing surrounding landscape and to gain deeper appreciation of the cultural history of rural Hellenistic through Byzantine Galilee.
Horbat Kur is a c. 12 dunam large hilltop site, c. 2 km west of the Sea of Galilee. Its surface is littered with numerous stone walls, water installations, olive presses and other features. While the site has occasionally been discussed in earlier literature, it has never been systematically surveyed or excavated.

After the clearance of the site by local workmen, all visible topographic and architectural features were mapped and a regular grid was set-up across the entire site. Two probe trenches (Areas A, B) were excavated to determine the nature of the visible ruins and to clarify the chronological range of the settlement.

Area A. The trench ( $3 \times 6 \mathrm{~m}$; Fig. 8) was opened on the hill's summit where numerous larger areas delineated by visible stone walls were detected, as well as nicely carved limestone pillars and stone steps. Some of these features had been mentioned in older reports. The hilltop location and the outline of walls suggested that Area A was situated in the public section of the site, yet it was not possible to confirm the earlier assumption that a synagogue had existed at this location. The settlement sequence in Area A dated from the Early Roman well into the Early Islamic periods, with interim gaps. Scattered medieval potsherds suggest later habitation, although so far, no architectural remains were found to be associated with these late finds.
Area B. The second trench, of equal dimensions, was opened on the northern slope of a building terrace, c. 5 m below Area A. A cistern opening and a large north-south wall that probably belonged to a courtyard, invited further investigation. Architectural remains visible in the vicinity suggested that Area B was located in the domestic section of the site, thus supplementing the data expected in Area A and creating a diversified picture of the site. It is presumed that settlement activities in Area B may have begun in the Early Roman period.
The Coins. The coins recovered from Areas A and B were often in a poor state of preservation. A heavily corroded example (Fig. 9) was a surface find in 2007 and should, on the basis of the faint iconographic features still visible, be attributed to a Roman emperor, Antoninus Pius (138-161 CE). This coin has a fine comparison from Sepphoris (Y. Meshorer, City Coins of Eretz-Israel and the Decapolis in the Roman Period, Jerusalem 1985: No. 91).

Survey in the vicinity of Horbat Kur. An intensive surface survey of selected areas in a 1 km perimeter around the site was undertaken. Surface examination was often seriously hampered by the high growing and dense vegetation, so that work mainly concentrated on ploughed fields and rocky areas that afforded better visibility.
The survey was carried out in five sectors and provided valuable insight into local infrastructure and the use of the landscape around Horbat Kur.
Many rock-cut installations, such as cisterns, channels and various tombs were documented and mapped in the course of the survey. Agricultural installations were also noted, for example a winepress (Fig. 10), next to which some potsherds from the Roman-Byzantine periods were found.

The pioneer season at Horbat Kur has demonstrated the high archaeological potential of the site and its vicinity, thus making further systematic work more beneficial.


1. Tel Kinrot, map of excavation areas.

2. Tel Kinrot, aerial view of Field I at end of 2007 Season, looking southeast.

3. Tel Kinrot, aerial view of dwelling complex in Area S, looking south.

4. Tel Kinrot, a decorated storage jar from Area W.

5. Tel Kinrot, photogrammetric three-dimensional modeling of Field I.

6. Horbat Kur, aerial view at end of 2008 Season, looking east.

7. Horbat Kur, coins.

8. Horbat Kur, winepress.

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## Tel Mevorakh

## Final Report

'Abed a-Salam Sa'id


1. Pottery.

2. Squares A1, A2, plan and sections.
 north.

3. Squares A7, A8, plan.

4. Squares A7, A8, looking northeast.

During December 2006, a trial excavation was conducted c. 500 m east of Tel Mevorakh (Permit No. A-4960; map ref. NIG 19396-420/71531-8; OIG 14396-420/21531-8; ESI 19:104*), prior to the installation of a water pipe. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Meqorot National Water Corporation, was directed by A.e.S. Sa'id, with the assistance of S. Ya'aqov-Jam (administration), A. Hajian (surveying and drafting), T. Sagiv (field photography), P. Gendelman (pottery reading) and M. Shuiskaya (pottery drawing).
The excavation area was located in the eastern fields of Moshav Bet Hananya, near the High Aqueduct to Caesarea. Eight half-squares, aligned east-west, were excavated in the area where the pipe is to be laid. Remains of two phases, the early dating to the Roman and Byzantine periods and the later-to the end of the Ottoman period, were exposed.
The Early Phase (Squares A16, A38). A thick level of heavy alluvium soil (thickness 1.5 m ) was exposed in Square A16; below it was a level of tamped white soil ( $1.6 \times 1.6 \mathrm{~m}$, thickness $0.3 \mathrm{~m} ; 6.7 \mathrm{~m}$ above sea level) that contained a large quantity of shells and ribbed potsherds, mostly fragments of bag-shaped jars from the Roman period (Fig. 1:2, 4, 5). The white soil level, which extended southward in the direction of the High Aqueduct to Caesarea that is 7 m away, may have been related to the aqueduct's construction.
Collapse that consisted of various size dressed stones (L19; Fig. 2) was exposed in Square A38. It apparently originated from a breach in the aqueduct that occurred in the 1920s when the swamps in the region were being dried. The finds in the square included fragments of a bag-shaped jar (Fig. 1:1) and a Lebanese amphora (Fig. 1:3), which dated to the Early Roman period, as well as a fragment of a mortarium (Fig. 1:7) and a fragment of a ceramic pipe that was connected to Channel C of the nearby aqueduct (Fig. 1:6) and dated to the Byzantine period.

The Late Phase (Squares A1, A2, A4, A5, A7, A8). A section of a wide wall (W24), built of roughly hewn fieldstones and oriented north-south, was exposed in Squares A1 and A2 (Figs. 3, 4). A tamped soil and small stone floor (L22) abutted the wall from the east. A fragment of a round millstone (diam. 1.07 m ) was discovered west of W24.
A wall (W25) was discovered in Squares A4 and A5 (Figs. 5, 6), 5 m west of Squares A1 and A2. Wall 25 was built similar and parallel to W24 and a tamped earth floor (L23) abutted it from the east. Collapsed building stones, with some dressed ones among them (L27), were exposed to the west of W25. Three coins that dated to the late Ottoman period were discovered on Floor 23 and between the fallen stones.
Three wall foundations (W11-W13) of a square building (L15) that was erected on heavy clayey soil were exposed in Squares A7 and A8, 5 m west of Squares A4 and A5 (Figs. 7, 8). The exterior faces of the walls were built of ashlars and fieldstones, secured with bonding material and small stones were placed between them; Wall 12 was wider than the other walls. The structure extended to the south, beyond the limits of the excavation area. The artifacts recovered from the squares included fragments of a glazed bowl (Fig. 1:8) and pipes from the end of the Ottoman period (Fig. 1:10, 11), as well as pieces of roof tiles that dated to the nineteenth and twentieth centuries CE (Fig. 1:9). The building remains belonged to a flour mill (Abu Ner) that operated here in the latter part of the Ottoman period and was destroyed in 1922. To run the flour mill, a section of the adjacent aqueduct was adapted for the purpose of conveying water to the installation.

## 

$\mathrm{P}_{2} \quad \stackrel{F}{3}$
$3 \varlimsup_{5}$


1. Pottery.


2. Squares A1, A2, plan and sections.

3. Squares A1, A2, looking north.

: $\qquad$ 1 m
4. Squares A4, A5, plan.

5. Squares A4, A5, looking east.

6. Squares A7, A8, plan.

7. Squares A7, A8, looking northeast.

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## Tel Nagila (east)

 Preliminary ReportHamudi Khalaily and Ofer Marder 3/12/2009


1. Shallow pit.

2. Pottery and a sickle blade.

3. Stone figurine.

During December 2006-January 2007, a salvage excavation was conducted c. 400 m southeast of Tel Nagila (Permit No. A-4974; map ref. NIG 17715-30/60068-85; OIG 12715-30/10068-85), after ancient artifacts were discovered in an antiquities inspection, prior to the installation of a gas pipeline. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel National Gas Line Company, was directed by H. Khalaily and O. Marder, with the assistance of H. Lavi and Y. Lender (administration), A. Hajian (surveying), I. Gil'ad and P. Fabian (consultation) and G. Mazor, I. Milevski and D. Varga.
The excavation area ( $10 \times 80 \mathrm{~m}$ ) extended along a gentle slope that descends to the west, toward Nahal Shiqma. Eight squares were opened where ancient remains had been discerned; two squares in the south of the strip, three in the center and three in the north. Two spots where ancient finds had been noted were examined nearby. Nahal Shiqma flows through layers of loess and marl and exposes a conglomerate rock of the Pleshet Formation, which was a source for flint nodules. The site lies in farmland for field crops and the ElatAshdod oil pipeline passes nearby; hence, it had been continuously disturbed in the past. The inspection at the site prior to the excavation revealed numerous pottery vessels and flint implements, whose examination indicated the existence of a site that predated the Chalcolithic period.

The level that yielded the remains is an anthropogenic level, composed of brown friable loess sediment, mixed with light colored ash (thickness $0.2-0.6 \mathrm{~m}$ ). The original thickness of the level is unclear since its upper part was removed during works at the site. This level was founded on top of a thick layer of loess, rich in chalk concretions. A series of shallow pits scattered throughout the area and a habitation level paved with wadi pebbles were exposed. The pits were wide at the top and tapered toward the bottom (average diam. 1 m , depth 0.5 m ; Fig. 1). They contained knapped wadi pebbles, flint artifacts and numerous potsherds. Some of the pits contained burnt, loaf-shaped mud bricks. A habitation level ( 20 sq m ; thickness 0.25 m ) that consisted of small flat wadi pebbles and descended to the northwest was exposed in the middle of the excavation area. The pebble layer was founded on top of a wide shallow pit (diam. of opening 1.5 , depth 0.5 m ) that contained dark friable sediment, a few pebbles, many potsherds, worked limestone and a few flints. Two concentrations of large angular fieldstones, probably the remains of walls, were discovered on top of the habitation level. One concentration was in the southern part of the level and the second-in its western part. The southern concentration was elongated (c. 1 m ) and consisted of two rows of parallel stones. The western concentration was circular and consisted of elongated stone slabs. It is possible that the stone concentrations and the pebble surface were the remains of a building.

The recovered finds from the excavation included many very poorly preserved potsherds, sickle blades and stone figurines (Figs. 2, 3) that dated to the early Pottery Neolithic period (the second half of the sixth millennium BCE; Jericho IX culture). Accordingly, it is possible to determine that the site located near Tel Nagila is so far, the southernmost site dating to this culture. The excavation had shown that a temporary site, which extended across a large area and dated to a short period of time, was situated there. The residents of the site were probably nomads who engaged in animal husbandry and a little farming and lived near a central settlement that was apparently located on Tel Nagila.


1. Shallow pit.

2. Pottery and a sickle blade.

3. Stone figurine.

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Tel Par
Final Report
Eliran Oren
During July 2003, a trial excavation was conducted along the lower part of the spur where the village of Ibtin is spread out, in the southeastern Zevulun Valley, c. 1 km north of Tel Regev and c. 0.5 km south of Tel Par (Permit No. A-3960; map ref. NIG 2110-6/7414-8; OIG 1610-6/2414-8), prior to paving an access road to a cemetery. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Department of Public Works, was directed by E. Oren, with the assistance of S. Ya'aqov-Jam (administration) and Z. Horowitz.

An entrance shaft to a burial cave hewn in chalk bedrock was excavated at the site, several dozen meters north of a previous excavation conducted by E. Yannai ('Atiqot 48:9*-14* [Hebrew]).

The shaft $(1.07 \times 1.10 \mathrm{~m}$, depth 2.3 m$)$ had a square upper part and a round lower part. At the bottom of the shaft was an opening to a burial cave and next to it-a cylindrical stone that had been moved aside. The excavation was suspended before the burial cave could be properly documented. The few ceramic body fragments that were recovered from the fill in the shaft were insufficient to date the cave. However, based on a similar cave shaft located nearby that was ascribed to the Intermediate Bronze Age by its excavator, this cave should probably be dated to the same period.

## (Volume No. HA-ESI 121 (2009

## Tel Shimron <br> Final Report

Nurit Feig


1. Plan and section.

2. Excavation area, looking south.

3. Floor bedding (Loci 105, 108), looking north.

4. Walls 1 and 3 , looking north.

During January 2008, a salvage excavation was conducted at Tel Shimron, west of Timrat (Permit No. A-5334; map ref. NIG 220101-50/734657-733; OIG 170101-50/234657-733), prior to the construction of a henhouse. The excavation, on behalf of the Israel Antiquities Authority, was directed by N. Feig (photography), with the assistance of Y. Lavan and Y. Ya'aqobi (administration), R. Mishayev (surveying and drafting), R. Vinitsky (metallurgical laboratory), H. Khalaily (flint artifacts) and D.T. Ariel (numismatics).

Tel Shimron is located on the fringes of the Yizra'el Valley; the ancient road that linked Legio (Megiddo) with Sepphoris and 'Akko passed at the foot of the tell. Numerous surveys and excavations had been carried out at the site over the years and traditionally, it has been identified with the biblical site of Shimron (HA-ESI 119). The excavation area (c. 30 sq m ) was along the southwestern fringe of the tell and remains of walls and habitation levels were exposed in five strata (I-V; Figs. 1, 2).

Stratum V: Two sub-layers (Vb, Va) were discerned. Layer Vb (Loci 112, 115 116) consisted of alluvium, in which small stream pebbles and a large quantity of potsherds were mixed. The potsherds mostly comprised jars, thumb-indented ledge handles and fragments of red-slipped bowls from Early Bronze I and a few pottery fragments from the Intermediate Bronze Age. This alluvium soil was apparent throughout the excavation area (thickness $0.2-0.3 \mathrm{~m}$ ) and it seems that it slid from the top of the tell down to its foot. Layer Va (Loci 109, 114) comprised heavy brown soil (thickness 7 cm ) and lying directly above it was another layer of alluvium mixed with dense stream pebbles, some of which were large, and potsherds from EB I, the Intermediate Bronze Age, Iron II and the Persian period.

Stratum IV: A fieldstone wall (W4; exposed length 2.5 m , width c. 0.4 m ), aligned east-west and preserved a single course high, was exposed. A stone that may have been part of another face of W4 that did not survive was found adjacent to the north at its western end.

Stratum III: Meager remains of a chalk floor (L117; thickness 5-7 cm) that was probably destroyed when the later walls were built were exposed. The floor bedding consisted of very dense small pebbles and potsherds (Loci 105, 108; Fig. 3); it was discovered along the entire western side of the excavation area. It seems that the floor abutted a wall from the west, which mostly was not preserved and its scant remains were uncovered below a wall that was later built on top of it (W1; see below). Ceramic finds that dated to the Roman period and included a lamp fragment and three bowl rims were discovered on the floor and the bedding. A probe excavated beneath the floor bedding contained a thin layer of stream pebbles and a fragment of an Attic vase from the Hellenistic period (L110).

Stratum II: A wall (W1; length 9 m , width 0.7 m ; Fig. 4), oriented southeast-northwest, was discovered. It was built of large stones that were smoothed on the side facing west. The wall, preserved a single course high, was apparently meant to hold back the alluvium and it is assumed to have postdated the Roman period.

Stratum I: Wall 1 of Stratum II was made thicker with the construction of another wall adjacent to it (W3; length 6.5 m ; Fig. 4). Wall 3 was built of medium-sized stones that were placed on their wide side. Fill of stream pebbles and stones was deposited between the two walls. The new wall, composed of Walls 1 and 3 , was $1.7-$ 1.8 m wide.

The artifacts recovered from the excavation included potsherds, mostly very worn, flint artifacts, stone vessels and a coin. The flint assemblage consisted of twenty-six items, mostly flakes and chips. Noteworthy among them is a massive scraper of light gray flint, covered with a double patina, a modified drill of translucent light brown flint, which enjoyed a widespread use in settlements of the Neolithic period, and a truncated burin of dark brown Eocene flint that was used in the flint industry of the Early Bronze Age. Near the burin were jar fragments and ledge handles that also dated to the Early Bronze Age, although these finds were discovered in an accumulation of alluvium. The stone vessels, recovered from the alluvium layer above W1, included two fragments of basalt grinding bowls and two pounders of hard limestone. The rather worn coin (IAA 115107) was discovered in a soil accumulation above L110. A head is minted on one side of the coin and what appears to be an eagle is struck on its other side. It seems that the coin was struck in the Ashqelon mint during the Ptolemaic period (305-30 $B C E)$.
The only architectural remains in the excavation that dated to the Roman period were those of Floor 117 and its bedding. They probably related to building remains that were exposed c. 800 m southwest of this area (HA-ES) 119). The date of other finds in the excavation coincided with dates of remains and artifacts that had previously been exposed and documented in excavations and surveys at the site.

2. Excavation area, looking south.

3. Floor bedding (Loci 105, 108), looking north.

4. Walls 1 and 3 , looking north.
2. Southern area, looking
southeast.
3. Pottery and a marble fragment.
5. Water channel, looking north.
6. Section 1-1.
10. Two decorated bronze artifacts.


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## Tel Shiqmona

## Final Report

'Abed a-Salam Sa'id 10/6/2009
During December 2007, a trial excavation was conducted at Tel Shiqmona (Permit No. A-5315; map ref. NIG 19631-5/74786-90; OIG 14631-5/24786-90), after ancient remains were damaged during development work. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel Oceanographic and Limnological Research Institute, was directed by A.a.S. Sa'id, with the assistance of S. Ya'aqov-Jam (administration), R. Mishayev (surveying and drafting), T. Sagiv (field photography), M. Saltzberger (studio photography), R. Vinitsky (metallurgical laboratory), P. Gendelman (pottery reading), M. Shuiskaya (pottery drawing) and D.T. Ariel (numismatics).
The excavation was carried out along the eastern fringes of the tell. Two adjacent areas were excavated (Fig. 1) and three trenches, cut during the development work, were cleaned. Remains of buildings that dated to the end of the Byzantine period were exposed. Previous excavations c. 80 m southwest of the current one had exposed remains of impressive buildings and polychrome mosaics that dated to the sixth-seventh centuries CE; according to their excavators these buildings were part of a settlement that also included Christian residents (HA-ESI 115). Tombs, a large winepress and a church with decorated polychrome mosaic floors, which dated to the end of the Byzantine period, had been excavated in the past c. 70 m southeast of the current excavation; according to the excavator the church was part of an extensive building complex, possibly a monastery (HA-ESI 114).

The Southern Area (Fig. 2). Remains of a large building that was founded on bedrock were exposed beneath a thick layer of clayey soil (c. 1 m ). The building, generally aligned northeast-southwest, included a central wall (W30) that was abutted from the south by four walls (W42, W43, W49, W56). It is possible that these walls were part of a more extensive complex that extended to the southwest, but was destroyed by development work and its remains were discerned in the trenches (below). Another wall (W31) abutted W30 from the north. Wall 31 was abutted from the west by Wall 44 and together they formed a room (L32), whose western part was not excavated. The finds in this area included fragments of Cypriot bowls (Fig. 3:1, 2), bowls from Asia Minor (Fig. 3:5, 6), a Cypriot pithos with a combed decoration (Fig. 3:16), northern black jars (Fig. 3:17), a fragment of a marble table (Fig. 3:29) and fragments of glass vessels (see below) that dated to the Byzantine period (sixth-seventh centuries CE).

The Northern Area. Scant remains of walls, which were apparently related to the remains of the building uncovered in the southern area, were exposed. Three walls (W29, W47 and W48) in the southern part of this area probably delimited a rectangular room (Loci 25, 45; Fig. 4), together with W44 from the southern area. A pink earthen floor was discovered in the center of the room. A wall (W55) in the western part of the area, whose direction coincided with the general orientation of the building in the southern area, was exposed. Meager remains of another wall (W58) were discerned north of W29. A section of a water channel (W57; length c. 3.5 m ; Fig. 5), oriented southeast-northwest, was revealed in the northwestern corner of the area. The bottom of the channel was composed of flat ashlar stones and its two sides were built of dressed stones. A fragment of a bowl from Asia Minor (Fig. 3:7), which dated to the Byzantine period (fifthsixth centuries CE), was discovered in the channel.
The ceramic finds recovered from the excavation dated to the Byzantine period (sixth-seventh centuries CE) and included fragments of bowls from Asia Minor (Fig. 3:8), African bowls (Fig. 3: 9, 10), locally produced bowls (Fig. 3:12), cooking kraters (Fig. 3:13, 14), black northern jars (Fig. 3:18-20), amphorae (Fig. 3:23, 24) and northern Bet She'an-type lamps (Fig. 3:26-28).

Section 1-1 (Figs. 6, 7). A layer of dark brown heavy clay soil (L22) was documented at the bottom of the trench. Above it was a layer of soil that contained potsherds (L23; thickness c. 0.3 m ). These two deposits were severed by the foundation of a wall (W46), aligned northwest- southeast and preserved three courses high. Above the two deposits and the wall was another layer of light colored soil that contained different size stones (L63; thickness c. 0.5 m ). It is possible that this upper layer was part of the destruction level of the buildings that stood at the site. Potsherds that dated to the Byzantine period (sixth-seventh centuries CE) were collected from the trench, including fragments of Cypriot bowls (Fig. 3:3, 4), an African cooking krater (Fig. 3:15) and an amphora (Fig. 3:25).

Section 2-2 (Figs. 8, 9). A level of dark brown heavy clayey soil (L60) was noted at the bottom of the trench. Above it, a polychrome mosaic floor (L1) that was founded on gray soil was documented. Floor 1 abutted a wall (W50) that was mostly robbed and only its foundation was preserved. An accumulation of soil and stones (L28) was discerned above Floor 1. Superposing this accumulation was a layer of gray soil mixed with fieldstones (L69; possibly collapse), similar to L63 in Section 1-1. The surface, which was overlain with modern refuse, was exposed above L69. Meager remains of another mosaic floor (L2) that was slightly higher than Floor 1 were traced on the other side of W50 and probably abutted it. Ceramic finds that dated to the sixth-seventh centuries CE were found above and below the floors and included fragments of an African bowl (Fig. 3:11) and black northern jars (Fig. 3:21, 22). Two coins were recovered from L28; one dates to the reign of Justin II (572/73 CE) from the mint in Constantinople (IAA 115149) and the other dates to the time of Maurice Tiberius (584/85 CE) and is also from the mint of Constantinople (IAA 115148). Two decorated bronze artifacts that were part of a chain from a lamp (polykandelon; Fig. 10) were found in the robber trench of W50 (L35).

Section 4-4 (Fig. 11). A layer of heavy clay soil (L66) was recorded at the bottom of the trench. Above it was a layer of light brown soil fill that varied in thickness (L65; thickness 0.3-0.4 m). A white earthen floor (L3; thickness c. 4 cm ) was noted above L65 and it seems that Floor 3 was the continuation of a Floor 53, whose meager remains were discovered on the surface to the west, in the southern area of the excavation. Overlaying Floor 3 was brown soil mixed with various size stones (L64; thickness c. 0.81 m ). The surface, which was overlain with modern refuse, occurred in the upper part of the trench.

## The Glass Finds <br> Yael Gorin-Rosen

Some 160 fragments of glass vessels were discovered in the excavation, a third of which were identified and dated. Most of the vessels dated to the Byzantine period, primarily to its latter part. The vessels included several large bowls with a broad rim that was folded over crudely several times, a few wine goblets with a hollow base-ring and one fragment of a wine goblet body that was mold blown in twisted rib pattern. Also discovered was a large quantity of bowl lamps that have a solid cylindrical stem, whose bottom part is pinched to form beads of sorts. The design of these lamps is very similar and they were probably made in a glass workshop that operated at the site. An undecorated fragment of a kohl bottle that is similar to kohl bottles recovered from various excavations at the site was found. In addition, numerous fragments of relatively thick, rectangular glass window panes were discovered. Along with the vessels was a large quantity of glass vessel manufacturing debris, including small chunks of raw glass, droplets of hot glass that cooled in various shapes, as well as deformed glass vessels that included a lamp stem damaged during production.
Remains of a glass industry that were discovered in previous excavations clearly demonstrated the existence of this industry at the site. All the types of vessels uncovered in this excavation are known from earlier excavations at the site and from other sites. The glass artifacts in the current excavation are in keeping with those found in other excavations at the site.

The remains discovered in the excavation seem to be part of a large central building, only a small section of which was exposed. The building is dated to the end of the Byzantine period (sixth-seventh centuries CE), based on the finds. The walls exposed in the excavation appear to be just foundations and therefore no floors that abutted them were discovered, other than in the trenches. The finds show that the building remains were part of the same settlement whose remains had been exposed in previous excavations at the site.


1. Plan and section.

2. Southern area, looking southeast.


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3. Pottery and a marble fragment.

4. Northern area, Room 25/45, looking southeast.

5. Water channel, looking north.

6. Section 1-1.

7. Section 1-1, looking northwest.
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8. Section 2-2.

9. Section 2-2, looking northeast.

10. Two decorated bronze artifacts.


# (Volume No. HA-ESI 121 (2009 

## Tel Shor (North) <br> Preliminary Report



1. A refuse heap from the Hellenistic period, looking north.

2. A flask, in situ, looking south.

3. A jar placed at the head of the deceased, looking southwest.

4. A burial from the Persian period with jewelry and a bone cosmetic vessel (to right of head), looking east.

5. A built tomb from the Persian period with a burial from the Roman period, looking south.

Eli Yannai
During July-August 2007, a salvage excavation was conducted north of Tel Shor, in the western Jezre'el Valley (Permit No. A-5208; map ref. NIG 21552-691/72850-932; OIG 16552-691/22850-932), prior to laying a railroad track. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel Railway Authority, was directed by E. Yannai, with the assistance of V. Shlomi and A. Najar (area supervision), Y. Ya‘aqoby (administration), R. Mishayev and T. Meltsen (surveying), A. Shapiro (GPS), H. Smithline (field photography), Y. Nagar (physical anthropology), L. Porat (pottery restoration), H. Tahan (pottery drawing), A. Golani (beads, jewelry and bone artifacts) and D.T. Ariel (numismatics and seal impressions).

Tel Shor is surrounded by alluvial soil and a small spring flows to its west. The tell had been surveyed in the past (Map of Mishmar Ha-Emeq [32], Site 17) and potsherds that dated from the Late Bronze Age until the end of the nineteenth century CE were gathered there. A mausoleum that contained a stone sarcophagus from the Roman period was damaged during the course of drainage work conducted at the beginning of the 1960s along the western fringes of the tell (HA 3:20 [Hebrew]). The current excavation is the first one carried out next to the tell. Some 50 m west of the tell, an east-west oriented probe trench (length 100 m , with a 1 m ) was dug by mechanical equipment and thirty excavation squares, aligned east-west, were opened in the flat area c. 5 m north of the tell.
The probe trench was mostly devoid of archaeological artifacts; however, in a small section of its western part, close to the tell, an occupation level that contained a few fragments of pottery vessels from Early Bronze II was exposed at a depth of 1.5 m below the surface.

Two refuse heaps, 30 m apart, were discovered in the western part of the excavation area, north of the tell. The western heap was ascribed to the Persian period and contained fragments of imported vessels from Athens and Cyprus, along with locally produced pottery that included bowls, cooking pots, jars and lamps. The eastern heap was piled up during the Hellenistic period (Fig. 1) and included fragments of stamped amphorae from Rhodes and Kos and numerous potsherds of locally produced vessels.

The refuse heaps covered a cemetery that comprised dozens of pit graves, which were all oriented east-west and each one contained a single interment. A small flask (Fig. 2) was placed in one of the tombs; based on its form and quality of fabric, it should be dated to the Early Iron Age or the latter part of the Late Bronze Age. The rest of the tombs were ascribed to the Persian period: in three of the tombs were jars with a pointed base, a carinated shoulder, a pair of shoulder handles and a flat ring rim-features characteristic of the period; one of them was placed near the head of the deceased (Fig. 3). A single clay juglet was found in one tomb; a clay juglet and an amphoriskos were discovered in another tomb. A rich assemblage of jewelry was uncovered in three tombs in the eastern part of the cemetery. This included bronze earrings and bracelets, as well as iron rings and another metal that was not identified, possibly some kind of silver. Alongside the deceased in one of these tombs was a conical-shaped cosmetic container of bone, decorated with an engraved geometric pattern; the metal needle inside it was used for applying makeup (Fig. 4).

A pit ( $2 \times 3 \mathrm{~m}$, depth 1.5 m ) lined with ashlar stones was exposed at the eastern end of the northern excavation area. A rectangular tomb (length 2.4 m , width c. 0.6 m ), oriented east-west and lined and covered with ashlar stones was installed in the bottom of the pit (Fig. 5). The alignment of the tomb and its dimensions were similar to those of the other tombs from the Persian period; however, it was devoid of any artifacts. It seems that the lined pit installed above the tomb was intended to prevent the soil from caving in and covering the tomb. During the Roman period, the lined pit was cleaned and an adult individual, with glass and stone bottles placed alongside him, was interred at the bottom of the pit, atop the tomb's cover (see Fig. 5).

Although the excavated area was located outside the built settlement on the mound, the recovered finds aid in drawing a clearer picture of the settlement history at Tel Shor. It seems that the first settlement was established near the spring in Early Bronze II, as evidenced by the potsherds from this period found in the probe trench. A few potsherds from the Middle and Late Bronze Ages, discovered in the northern area, point to a presence at the site in these periods. The earliest exposed tomb was dated to the end of the Late Bronze Age or the beginning of the Iron Age and the potsherds recovered from the northern area show that the site was occupied in the latter part of the Iron Age. The large number of tombs from the Persian period clearly indicates that the tell was settled during this period. At some point in the Persian period the cemetery was no longer in use and refuse was discarded there. It continued to be used as a refuse site in the Hellenistic period, which evince the continuation of the settlement on the tell in this period. The tomb and a mausoleum from the Roman period demonstrate that the area around the tell was used as a cemetery at this time.


1. A refuse heap from the Hellenistic period, looking north.

2. A flask, in situ, looking south.

3. A jar placed at the head of the deceased, looking southwest.


4. A built tomb from the Persian period with a burial from the Roman period, looking south.

## Tel Sokha <br> Final Report

Walid Atrash
 section.

2. Square A, looking south.

3. Pottery.

During March 2008, a trial excavation was conducted north of Tel Sokha (Permit No. A-5384; map ref. NIG 243166-722/7117272045; OIG 193166-722/211727-2045), prior to construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by Qibbuz Nir David, was directed by W. Atrash, with the assistance of Y. Ya'aqoby (administration), T. Meltsen (surveying), A. Shapiro (GPS), H. Smithline (field photography), H. Abu 'Uqsa (pottery reading) and H. Tahan (pottery drawing).
Two excavation squares (A, B) were opened c. 200 m apart, c. 500 m north of Tel Sokha, between Nahal HaQibbuzim and Nahal 'Amal. Remains of an agricultural settlement (farm?) that dated to the Late Roman period were discovered. These were spread across an extensive area and comprised part of a room or storehouse (Square A) and the remains of a wall and a work surface (Square B). These remains, which had been severely damaged by modern agricultural activity, seem to be the foundation courses of mud-brick construction that was not preserved.

Square A (Figs. 1, 2). Two walls (W10, W13; width 0.9 m ), preserved a single course high, and a tamped earth floor (L16) that abutted them were exposed. The partially preserved walls were built of limestone fieldstones and founded on a layer of alluvium. The pottery vessels found inside the earthen floor included a bowl (Fig. 3:2), a cooking pot (Fig. 3:6), a jug (Fig. 3:7) and a lid (Fig. 3:12). A layer of clayey soil (L11) that overlaid the floor contained a few potsherds, among them bowls (Fig. 3:1, 3-5), jars (Fig. 3:8, 10, 11) and a lid (Fig. 3:13). The ceramic artifacts dated to the Late Roman period (third-fourth centuries CE).

Square B (Figs. 4, 5). A wall stump (W18), a tamped earth floor (L14) that abutted it and a round work surface (L21), located northeast of the wall, were exposed. Wall 18 (length 1.7 m , width 0.4 m ), preserved a single course high, was built of limestone fieldstones that were founded on a soil layer devoid of finds, as was ascertained in the probe trench (L19). A few potsherds from the Late Roman period were found within Floor 14, which abutted the southern side of W18. A layer of clayey soil (L12) on the floor contained a few fragments of pottery vessels, including a jar that dated to the Late Roman period (Fig. 3:9). Work Surface 21 (diam. 1.5 m ) consisted of wadi pebbles, placed atop a layer of sterile soil.


2. Square A, looking south.




4. Square B, plan and section.

5. Square $B$, looking east.

## Tel Te'enim

## Final Report

Israel Korenfeld and Eli Yannai

3. Pottery: carinated bowls and goblets.

4. Pottery: cooking pots.

7. Pottery: jars.

8. Clay weights.

9. Basalt items.

During September-December 2004, two excavation seasons were conducted at Tel Te'enim (Permit No. A-4155; map ref. NIG 201058-263/688684-790; OIG 151058-263/188684-790), prior to the construction of the border terminal. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by E. Yannai in the first season, assisted by E. 'Awawdy, and I. Korenfeld in the second season, with the assistance of H. Torge and A. 'Azab (area supervision), S. Ya'aqov-Jam (administration), V. Essman (surveying), M. Shuiskaya (drawing of finds), and the operations coordinator between the Ministry of Defense and the Israel Antiquities Authority.

Tel Te'enim (c. 5 dunams) is situated on a low spur (53 m above sea level) at the western end of the Samaria foothills, c. 2 km south of Tulkarm and c. 100 m west of Highway 444. Another low spur of the Samaria foothills extends south of the tell and the alluvial coastal plain is to its west. The villages of Irtah and Far'oun are situated on the western ridges of the Samaria foothills that descend east of the site, which is located alongside the Via Maris that extended the length of the Sharon plain, connecting Tel Afek in the south with Tell Shuweika in the north, as well as Tel Jatt, Wadi 'Ara and Tel Megiddo. Previous excavations at the site revealed a complex of underground caves from Middle Bronze IIB (ESI 16:80-81) and caves that contained finds from the Chalcolithic period, Early Bronze I and the Late Bronze Age (ESI 19:104*; HA-ESI 117).

Twenty-one squares were opened, revealing no building remains. It became apparent that all the settlement remains on the tell, which was probably spread across six-seven dunams, were destroyed by stone clearance and deep plowing activities that took place during the twentieth century. Only potsherd scatterings, without any clear context and for the most part poorly preserved, were discovered at the site. Occasionally, in bedrock's depressions and in the clay soil of the site, vessels were found in situ, although not in a clear context. Except for several worn potsherds from the Byzantine period, the entire ceramic assemblage is dated to MB IIB. In light of the paucity of MB IIB sites in the northern coastal plain, particularly single-period settlement sites and despite the absence of a clear archaeological context, this assemblage contributes to the knowledge of the period's material culture.

A wide variety of bowls were found. These included open bowls with a plain pointed rim, having no fold or thickening (Fig. 1:1, 2); bowls with flaring out (Fig. 1:3) and everted (Fig. 1:4, 5) rims; bowls with inverted rims (Fig. 1:6-8); and bowls with folded-in rims (Fig. 1:9-18), which constitute the most common group among open bowls; a bowl whose rim is thickened on the inside and outside (Fig. 2:1); bowls with a thickened and curved out rim (Fig. 2:2-6); bowls with a rounded profile and inverted rim (Fig. 2:7-10); a bowl with S-shaped profile (Fig. 2:11); a diverse group of rounded bowls with thin walls and a pointed rim, either vertical or inverted (Fig. 2:12-23), which is the most widespread group amongst the assemblage of small closed bowls; and a coarse open and shallow bowl (lamp?; Fig. 2:24). Found as well were carinated bowls (Fig. 3:1, 2) and trumpet-like bases of bowls with thin walls (Fig. 3:3-7) that are made of delicate, welllevigated pale yellow to whitish fabric.

The cooking pots included vessels with an everted rim that protrudes out (Fig. 4:1-7), which are made of coarse brownblack clay, containing a large quantity of white and gray inclusions; cooking pots with a curved-out rim (Fig. 4:8-14), made of brown clay with a small amount of inclusions, a few of which have handles; and cooking pots with a folded-out rim, made of brown clay mixed with a large quantity of white and gray inclusions (Fig. 5), which is the most common type of cooking pot in the assemblage. The pithoi have thickened everted rims (Fig. 6). The jars have thickened inverted rims (Fig. 7:1), a thickened curved-out rim (Fig. 7:2) or an everted one (Fig. 7:3), a mushroom-like rim (Fig. 7:4), a ridged rim (Fig. 7:5) and a rim pointed at the top (Fig. 7:6-9). Numerous fragments of small pottery vessels were found, including jugs and juglets. One of these fragments, decorated with red and black on white, belonged to a jar of a White and Blue type, and three fragments were of Cypriot White Painted VI ware.

Twenty-three mostly complete weights of fired clay were found in the excavation; these were probably loom weights (Fig. 8). Their diameter is uniform ( $4.0-4.5 \mathrm{~cm}$ ) and close to one of the ends, which in most cases is pointed and in othersdomed, a hole is perforated (diam. $2-3 \mathrm{~mm}$ ). Most of the weights are made of dark brown clay and have a black core, mixed with white and gray inclusions. A basalt bowl fragment (Fig. 9:1) was also found. A group of grooves is incised on its interior and a hole is perforated in its side. This fragment probably belonged to a Chalcolithic bowl that was utilized in secondary use as a weight in the Middle Bronze Age.

Numerous other basalt items were recovered from the excavation, including large grinding stones (Fig. 9:2, 3); a stone that was identified in Hazor as 'the bottom part of a tournette' (Fig. 9:4), but it seems, in light of its small dimensions, to have been used as a nether stone for grinding small amounts of grains or for incising small stones; and small grinding stones (Fig. 9:5-12) of fine textured basalt that were probably used to grind small amounts of fine material. Eight typical Canaanean blades and several poorly preserved bronze artifacts, including a needle, a spearhead and fragments of an ingot were found.

The large quantity of grinding stones and loom weights at the site and the small numbers of imported vessels from Cyprus, seem to indicate that the MBIIB settlement at Tel Te'enim was rural. This settlement certainly benefited from its proximity to the Via Maris. Slightly north of Tel Te'enim the road crosses the Nahal Shechem bed, thereby enabling easy reach to contemporary sites in Samaria, such as Tel Shechem and Tell el-Farah (N).


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1. Pottery: open bowls.

2. Pottery: bowls. $\stackrel{0}{10}^{0}$

$)+7$
3. Pottery: carinated bowls and goblets.

4. Pottery: cooking pots.



$\underbrace{0}_{\text {7. Pottery: jars. }} 10$


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## (Volume No. HA-ESI 121 (2009

## Tel Te'o

Final Report
Amani Abu Hamid
18/12/2009
During March 2007, a trial excavation was conducted along the eastern fringes of Tel Te'o (Permit No. A-5053; map ref. NIG 253590/781657; OIG 203590/281657), prior to development work. The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Abu Hamid, with the assistance of Y. Ya'aqobi (administration) and A. Hajian (surveying).

Tel Te'o, on the western edge of the Hula Valley, is c. 8 km south of Qiryat Shemona on the road to Rosh Pinna. The tell lies south of 'En Te'o and covers an area of c. 30 dunams. The large excavation that had been conducted at the site in 1986 revealed thirteen occupation levels that dated to Pre-pottery Neolithic B, Pottery Neolithic, Chalcolithic, Early Bronze IA, Early Bronze II and the Middle Ages (IAA Reports 13).

Two squares $(2 \times 2 \mathrm{~m}$ and $5 \times 5 \mathrm{~m})$ were opened and thre om the eighth millennium BCE and possibly even earlier. Strata II and I were devoid of finds, yet e strata were exposed. Stratum III, the principal layer, dated to the Pre-pottery Neolithic period fr they contained a few small and much worn potsherds that had penetrated from the area west of the tell.

## Stratum III

The stratum ( 68.33 m above sea level) was composed of gray clay and a few small and medium- sized fieldstones. It contained organic material, fresh-water mollusks (Melanopsis), very small and worn potsherds, blades, flint debitage and poorly preserved animal bones.

Stratum II
The stratum ( 68.98 m above sea level) was composed of yellowish brown clay, devoid of any ceramic artifacts.

## Stratum I

The stratum ( 71.80 m above sea level in the south, 69.44 m in the north) was composed of soft brown clay with a few small fieldstones and very small worn potsherds that dated to the Chalcolithic period and mostly to Early Bronze II and the Middle Ages.

Despite the paucity of finds, the eastern boundary of Tel Te'o can be drawn. The settlement remains from the Pottery Neolithic, Chalcolithic, Early Bronze I and II and the Middle Ages did not reach this area, which was covered by the lake.
The excavation has shown that human activity in the vicinity of the lake had begun in the Pre-pottery Neolithic period and perhaps even earlier. The flint blades and debitage exposed in situ confirmed this conclusion.

## (Volume No. HA-ESI 121 (2009

## Tel Yavne

## Final Report

Felix Volynsky



1. Plan and sections.

2. Square A, looking west.

3. Pottery.

4. Square B, looking south.

5. Square C, looking west.

During March 2007, an excavation was conducted at Tel Yavne (Permit No. A-5092; map ref. NIG 17570-89/64160-70; OIG 12570-89/14160-70), after ancient remains were damaged. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel Electric Company, was directed by F. Volynsky, with the assistance of S. Ya'aqov-Jam (administration), D. Porotzky (surveying and drafting), M. Shuiskaya (pottery drawing) and M. Ajami and M. Peilstöcker.
The excavation was carried out along the western fringes of Tel Yavne. Three excavation squares (A, B, C; Fig. 1) oriented east-west were opened. Squares B and C were adjacent to each other and c. 20 m east of Square A. Building remains from the Early Islamic, Mamluk and Ottoman periods and the British Mandate era were exposed. Settlement remains and tombs that ranged in date from the Iron Age until the Early Islamic period had been previously uncovered in excavations at the site (Permit Nos. A-1613, A-1798, A-3757).

Square A (Fig. 2). Remains of a residential building that was generally aligned north-south were exposed. All that survived of the building were a wall (W4) and a floor of gray plaster (L119) that abutted it from the west. Wall 4 (exposed length 2.2 m , width c. 0.3 m ), preserved five courses high (c. 0.7 m ), was built of dressed stones and medium-sized fieldstones. Soil fill discovered next to and beneath W4 yielded potsherds from the Early Islamic period, including a crude bowl (Fig. 3:1). A new building was constructed atop the remains of the ancient building (L109) in the twentieth century CE.

Square B (Fig. 4). Remains of a wall (W3) were exposed in the western part of the square. Wall 3, oriented north-south, was built of medium fieldstones without bonding material (exposed length 2.3 m , width c .0 .45 m ); it was preserved four courses high (c. 0.4 m ). Near the wall's foundation, soil fill that contained potsherds, including a crude bowl (Fig. 3:2), a glazed bowl (Fig. 3:3) and a jar without a neck (Fig. 3:4), which dated the wall to the Mamluk period, was discovered. A floor (L117) of medium-sized fieldstones was discovered in the eastern part of the square. Numerous potsherds that dated to the Ottoman period overlaid the floor, which was damaged as a result of modern activity.

Square C (Fig. 5). Three construction phases were discerned. The earliest phase consisted of a wall (W2), oriented east-west and built of medium-sized fieldstones, without bonding material (exposed length 2.7 m , width c. 0.4 m ); it was preserved four courses high (c. 0.35 m ). Close to and below the wall, soil fill that contained potsherds, including a jar (Fig. 3:5) and a body fragment with geometric decoration (Fig. 3:6), which dated the wall to the Mamluk period, was exposed. A wall (W1; length 3.9 m , width 0.5 m ) whose construction and direction were similar to those of W2 was built in the middle phase. Wall 1 abutted the western end of another wall (W5), which was aligned north-south and built in a similar manner (exposed length 2.3 m , width 0.4 m ). Potsherds were discovered near the two walls, dating them to the Ottoman period. During the last phase, at the end of the Ottoman period and during the British Mandate era, the area was covered with soil fill and an installation (L105) of red painted plaster that probably served for storing liquids, was constructed above it.


2. Square A, looking west.


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3. Pottery.

4. Square B, looking south.

5. Square C, looking west.


1. Area A, Squares 1-4, plan

2. Area A, Squares 5, 6, plan

3. Area A, pottery.

4. Area B, plan.

5. Area B, stone and pottery vessels.
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## Tel Zoran

Final Report
Shireen Mahaina
18/12/2008
During June 2003, a trial excavation was conducted in the Arab village of Khirbat Umm Sûr, c. 60 m north of Tel Zoran (Permit No. A-3916; map ref. NIG 19307-11/69000-13; OIG 14307-11/19000-13), after mechanical equipment uncovered ancient remains. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Mehadrin Company, Ltd., was directed by S. Mahajna, with the assistance of V. Essman (surveying), T. Sagiv (field photography), A. Glick (GPS), M. Avissar (pottery reading), M. Shuiskaya (artifact drawings), Y. Gorin-Rosen (glass processing) and E. Yannai.
Masonry stones were identified in the area prior to the excavation. Probe trenching by mechanical equipment exposed the tops of walls, in the wake of which seven squares were opened in two areas.

Area A. A wall built of dressed limestone and oriented north-south was exposed in Square A1 (W10; Fig. 1); part of it had been damaged in the past by mechanical equipment.
A winepress was exposed in Square A2 (L206; $2.9 \times 2.9 \mathrm{~m}$ ). The walls of its treading floor were coated with pink plaster that contained a few potsherds and only a very small segment of its white mosaic floor was preserved near the northeastern corner. Part of the collecting vat (L208) was exposed north of the treading floor; in whose northern wall a tunnel was cut in the middle, allowing the liquid to flow into the vat. The southern wall of the treading floor (W23) had been damaged in the past by mechanical equipment.
A wall built of dressed limestone (W30) and oriented north-south in accordance with the winepress walls was discovered in Square A3. A light colored tamped earth floor that incorporated a few small stones (L301) abutted W30 from the east. A tabun (L304) was exposed west of the wall. The top of the tabun was lower than the foundation of W30 and the walls of the winepress and it probably predated both of them.
A refuse pit without building remains was found in Square A4.
Remains of a circular kiln (L504; diam. 7 m ; Fig. 2) were uncovered in Squares A5, A6. Its wall (thickness 1.0-2.5 m, preserved height c. 0.35 m ) was built of dry kurkar construction. Burnt stone collapse, a few lumps of raw glass and several burnt potsherds were found in the kiln, which was probably used for manufacturing glass.

The ceramic finds were dated to the Late Byzantine and Early Islamic periods (sixth-eighth centuries CE) and included bowls (Fig. 3:1, 2), a basin (Fig. 3:3), a cooking pot (Fig. 3:4), Gaza jars (Fig. 3:5, 6), storage jars (Fig. 3:7-11), a pithos (Fig. 3:12), a Late Byzantine vessel (Fig. 3:13) and a jar stopper (Fig. 3:14).

It seems that activity associated with the glass industry occurred in the area; however, the finds were very meager and difficult to date. The exposed glass debris included mostly fragments of very fine quality raw glass and a large piece of kiln debris. The finds do not provide an accurate indication either of the workshop nature or its date; however, most of the glass fragments that could be dated were from the latter part of the Byzantine period. A few fragments were probably from the end of the Late Roman period. In general, the finds were similar to those from sites where raw glass was produced, such as Bet Eli'ezer (ESI 13:42-43).

Area B. The collapse of two walls (W70, W71) that consisted of dressed kurkar stones was discerned some 300 m east of Area A. The ceramic finds dated to the Ottoman period and included a jug (Fig. 5:1), a jar (Fig. 5:2) and a stone bowl from the Early Islamic period (Fig. 5:3).







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3. Area A, pottery.


4. Area B, stone and pottery vessels

## (Volume No. HA-ESI 121 (2009

## Tell Qasile (West)

Final Report
Alexander Glick
During November 2003, a salvage excavation was conducted at Tell Qasile (West; Permit No. A- 4033; map ref. NIG 180395-425/667640-750; OIG 130395-425/167640-750), prior to construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Glick, with the assistance of Y. Dangor and S. Ya'aqov-Jam (administration) and E. Ayash.

The site is located c. 400 m west of Tell Qasile. Previous excavations at the site exposed remains of an open settlement that dated to Middle Bronze IIA, tombs from Middle Bronze IIB, a tomb from the Persian period and settlement remains from the Hellenistic period, as well as quarries and installations ('Atiqot 38:25-32, 44:5-11, 53:65-128).
A lime pavement $(0.9 \times 1.3 \mathrm{~m})$ that was damaged due to its proximity to surface was found. No pottery was associated with the pavement and therefore, it could not be dated.
A circular pit (diam. 1.4 m , depth 1.06 m ), hewn in kurkar bedrock and filled with modern debris, was discovered. At its bottom was carbonized organic material. No potsherds were found.
Circular depressions (diam. 0.56-0.76 m) hewn in soft kurkar bedrock were found. Remains of roots were in the center of most depressions and therefore it seems that they were used for tree planting. A few potsherds from MB II and the Hellenistic and Ottoman periods, as well as a single flint flake, were found on surface and in the fill of the depressions.

## Tell Qasile (West)

Final Report


1. Location map

2. Area A, rock-hewn installations, plan and sections.

3. Area A, pottery.

4. Area A, stone vessels.

5. Area B, plan and section.

During January-February 2007, a trial excavation was conducted west of Tell Qasile (Permit No. A-4995; map ref. NIG 180175-238/667605-60; OIG 130175-238/167605-60), following the discovery of antiquities during a preliminary inspection by E. Jakoel and M. Mulokandov, prior to construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Kokhav Ha-Tsafon Project, was directed by A. Glick, with the assistance of E. Jakoel (area supervision), S. Ya'aqov-Jam (administration), A. Hajian (surveying), T. Sagiv (field photography), P. Gendelman (ceramics) and M. Shuiskaya (pottery drawing).
The site is situated on the western kurkar ridge, north of Nahal Yarqon, c. 600 m west of Tell Qasile and c. 1 km east of Tel Qudadi. Ten past excavations had been carried out in this region. Among the discovered remains were those of an open settlement, a cemetery and industrial installations, including two pottery workshops, from Middle Bronze II ('Atiqot 53:65-128; Fig. 1:3); remains of an agricultural settlement from the Hellenistic period ('Atiqot 38:25-32; 44:5-11; Fig. 1:1, 2, 4-6) and installations from the Roman and Byzantine periods (HA-ESI 120 [Permit No. A-3723], HA-ESI 120 [Permit No. A-4606], HA-ESI 121 [Permit No. A-4033] and Permit No. A4086; Fig. 1:7-10). Hewn pits were cleaned in the northern part (Area A) of the current excavation and four squares were opened in the southern part (Area B).

## Area A

Eighteen hewn pits were discovered after kurkar bedrock was exposed with the aid of a backhoe (Fig. 2); during the exposure, an intact lamp from the Hellenistic period was discovered. The pits were divided into four types: (1) large, circular and deep ( E, F, G, W; max. diam. 2.65 m , max. depth 2.2 m ); (2) medium-sized, circular and shallower (H, L, M, P; max. diam. 1.4 m ; max. depth 0.75 m ); (3) small, circular and shallow (I, J, N, O, Q, R-T, U; diam. c. 0.7 m , depth c. 0.2 m ), the likes of which had previously been uncovered in this region and some scholars suggested they were modern pits for planting trees; and (4) an irregular-shaped rock-cutting ( K ; length 2.2 m , width 1.4 m , depth 1.35 m ) whose sides were uneven and its floor straight.

The pits of the third type yielded no finds, whereas the other three types were filled with grayish black soil that attested to decomposition of organic material. The ceramic finds recovered from the fill included fragments of a bowl from MB IIB (Fig. 3:1); bowls (Fig. 3:2, 3) and a cooking pot (Fig. 3:4) from the Hellenistic period; and a bowl (Fig. 3:5) and jars (Fig. 3:6-9) from the Ottoman period. Other artifacts from these rock-cuttings included a fragment of a polished green stone with a perforation (whetstone? Fig. 4:1); a marble basin that was probably a column drum in secondary use from the Roman period (Fig. 4:2); poorly preserved glass fragments of a bracelet or handle; an iron nail; ashlar stones and animal bones. Three of the rock-cuttings (E, L, M) contained tabun fragments and a hearth was discovered at the bottom of Rock-cutting M. Although mixed finds were discovered in most rock-cuttings, the majority of finds belonged to the Hellenistic and Ottoman periods. It therefore seems that these rock-cuttings were part of the agricultural installation system of the Hellenistic settlement at the site; they were probably used as silos and in the Ottoman period, they were refuse pits.

Area B (Fig. 5)
Four squares were opened in dark soil, after fragments of pottery vessels and plaster were discovered in the backhoe probe trenches.

Square A. A triangular-shaped rock shelter was discovered in the western part of the square; it protected a semicircular hollow that was hewn to its east and contained burnt traces (L135), probably of a tabun. A bedrock floor (L133) abutted the tabun and two bowls (Fig. 6:3, 4) and a dipper juglet (Fig. 6:9) from MB IIB were found in situ above it (L141). The bottom part of a juglet and fragments of large storage jars that dated to the same period were discovered in the fill close to bedrock surface in the southwestern corner of the square. A hewn corner covered with medium-sized stones (L134), which may be the remains of a tomb, was uncovered on a bedrock ledge in the northwestern corner of the square. The fill in this rock-cutting, which contained several fragments of pottery vessels that also dated to MB IIB, was only partially excavated (max. depth 0.66 m ) due to safety precautions.
Square B. A floor of small stones, bonded with mortar and overlain with numerous fragments of pottery vessels from the Hellenistic period, was discovered in the eastern part of the square (L124).
Square C. A floor paved with several stones and overlain with fragments of pottery vessels from the Hellenistic period was exposed (L122). Remains of a clay tabun that belonged to this habitation level were visible in the square's northeastern balk (L142). A floor was discovered c. 0.15 m below this layer, almost on bedrock surface. Fragments of pottery vessels that dated to MB IIB were found on several stones that survived of the floor (L128).
Square D. A few stones that belonged to a floor (L137) and potsherds from the Hellenistic period were exposed.
Remains of two strata, dating to MB IIB (eighteenth-sixteenth century BCE) and the Hellenistic period (third-second century BCE), were clearly distinguished in Area B. These remains, as well as those from Area A, indicate that the inhabited areas in these two periods, particularly in the MBIIB, spread across a more extensive area than previously thought and various installations were hewn along the fringes of the settlements. The ceramic finds from MB IIB included bowls (Fig. 6:1, 2), a goblet (Fig. 6:5), a krater (Fig. 6:6), cooking pots (Fig. 6:7, 8) and jars (Fig. 6:10, 11). The ceramic finds from the Hellenistic period included 'fish bowls' (Fig. 7:1, 2), locally produced bowls (Fig. 7:3-6), mortarium (Fig. 7:7), kraters (Fig. 7: 8, 9), cooking pots (Fig. 7:10, 11), brazier (Fig. 7:12), locally produced amphorae (Fig. 7:13, 14), bases belonging to Rhodian amphorae (Fig. 7:15, 16), jugs (Fig. 7:17-21) and a spindle bottle (Fig. 7:22).


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2. Area A, rock-hewn installations, plan and sections.

3. Area A, pottery.

4. Area A, stone vessels.

ריבוע Square C


ריבוע Square D


Square A ריבוע


5. Area B, plan and section.


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6. Area B, pottery from MB IIB.
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7. Area B, pottery from the Hellenistic period.
(Volume No. HA-ESI 121 (2009

## Tell Qasile (West)

## Final Report

Alexander Glick
28/12/2009


1. Walls 2 and 3 , plan.

2. Wall 1, plan.

During January-February 2004, a salvage excavation was conducted at Tell Qasile West (Permit No. A-4086; map ref. NIG 180395-456/667640-697; OIG 130395-456/167640-697), prior to construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Africa-Israel Company, which rendered much help during fieldwork, was directed by A. Glick, with the assistance of S. Ya'aqov-Jam and E. Bachar (administration), V. Essman (surveying), T. Sagiv (field photography) and E. Yannai, E. Ayalon and E. Ayash (consultation).
The site is located c. 400 m west of Tell Qasile, on a kurkar ridge that is covered with dark brown alluvium. A building that stood on the site and dated to the Ottoman period was demolished prior to the excavation. Seven squares were opened where building remains that may have dated to the Byzantine period and quarries were exposed.
Two perpendicular walls (W2, W3; Fig. 1), built of small stones (up to 0.1 m long) and lined on both sides with probably Byzantine body potsherds whose ribbed side was facing out, were exposed. Analogies for this construction method were not found. The proximity of the walls to the surface and later damage made it difficult to determine their dimensions. They probably served as foundations of a building or as an installation (c. $4.0 \times 5.8 \mathrm{~m}$; max. preservation height 0.19 m ), whose plan and purpose are unclear. A number of small plaster spots near the walls indicate that parts of the installation or building were probably coated with plaster.
A concrete rectangle, which may be the foundation of another wall that adjoined W2, was exposed c. 0.2 m west of W2. Jar fragments that dated to the Byzantine period were found below the presumed floor level in the corner formed by W2 and W3, which was not preserved. A quarry that did not postdate the Byzantine period was discovered below and north of W2.

An east-west oriented wall (W1; Fig. 2) was discovered in the western part of the area. It was built of medium-sized stones (length 0.2 m ), with orange mortar and layers of lime between the two courses. The construction method and the pottery fragments near the wall indicate that it was built in the eighteenth-nineteenth centuries CE . A quarry that probably dated to the Hellenistic period, based on the potsherds it contained, was discovered beneath the wall.
A cave (depth 2 m ) was located in the northern part of the area and nearby was a modern well, not completely excavated due to safety precautions. Six pits, probably modern, were revealed and sixteen other points, thought to be ancient, were examined and found devoid of any remains.



## (Volume No. HA-ESI 121 (2009

Tell Selukiyeh
Final Report
Oren Zingboym
2/11/2009


1. The excavation area,
looking west.

During January 2008, a salvage excavation was conducted adjacent to the Selukiyeh spring, along the edge of the tell (Permit No. A-5335; map ref. NIG 268912/765434; OIG 218912/265434), prior to the installation of a water pipe. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Meqorot Water Company, was directed by O. Zingboym (photography), with the assistance of Y . Ya'aqoby (administration) and laborers from Kafr Manda.
The site is known from Schumacher's explorations and was documented within the Emergency Survey (M. Kochavi [ed.], Judea, Samaria and the Golan Heights, The 1968 Archaeological Survey, Jerusalem, 1972, Site 87). Excavations along the southern fringes of the tell (License No. K-7/1979; Z.U. Maoz) revealed fortification remains from the Roman period, as well as fragments of pottery vessels from the Chalcolithic period and the Bronze and Iron Ages. Remains of buildings from the Roman period and probably the remains of a miqwe were excavated near the spring to the north of the tell (License No. K-6/1981). Various surveys that had been performed at the site recorded potsherds that mostly dated to the Byzantine and Mamluk periods, while others dated to the Early and Middle Bronze Ages and the Iron Age, and a few dated to the Hellenistic and Early Roman periods (H. Ben David 2005, The Jewish Settlement in the Golan during the Period of the Mishnah and Talmud, p. 87). It has been suggested that because of its name the site should be identified with the Seleucid city mentioned in Josephus' writings; however, this identification is dubious due to the paucity of finds from the Late Hellenistic and Early Roman periods (M. Hartal, 2005, Land of the Ituraeans, p. 347).

The excavation area ( $4.25 \times 6.25 \mathrm{~m}$ ) was located on flat ground along the southwestern edge of Tell Selukiyeh, next to a pumping facility that was apparently the spot whence the ancient spring flowed forth (Z.U. Maoz and S. Bar-Lev, pers. comm.).

After clearing away top soil that included gray tuff and modern fill, the basaltic soil was excavated to the level of the water table (Fig. 1). Numerous potsherds that ranged in date from the Early Bronze Age until the Roman period (third-fourth centuries CE) were collected. Some of the potsherds were worn and probably originated from the tell, while some others were fresh.

It seems that the area was situated beyond the boundaries of the built-up site in the past. The recovered finds are in keeping with our knowledge of the site and they neither substantiate nor contradict the different identifications proposed for the city of Selukiyeh.


1. The excavation area, looking west.
(Volume No. HA-ESI 121 (2009
Tiberias, Ge'ulim Neighborhood Final Report
Emanuel Damati

2. Location map.

During June 2006, a trial excavation was conducted on Toledano Street in the Ge'ulim neighborhood (Shikun A) of Tiberias (Permit No. A-4834; map ref. NIG 250872/743074; OIG 200872/243074), prior to the installation of a sewer. The excavation, undertaken on behalf of the Israel Antiquities Authority and financed by the Tiberias municipality, was directed by E. Damati (photography), with the assistance of Y. Ya'aqobi (administration) and G. Bijovsky (numismatics).
Two squares were opened, one north of and adjacent to the bend in the road $(A)$ and the other at the bottom of the road, on the sidewalk to its southwest (B; Fig. 1). The two ends of this road section were paved above two parallel ancient gullies that descended from west to east. The gullies were clogged up with accumulations of soil and refuse that were dumped down the slopes descending to them. These ancient accumulations were disturbed when new fills for leveling the terrain were laid prior to paving the street.

Square A. Modern remains from the 1950s and 1960s were found, including two asphalt layers of an old road, a stone fence and a path paved with stone slabs (depth below surface c. 0.7 m ) and a cement sewer (diam. c. 0.45 m ) at a depth of 1.3 m . The excavation reached bedrock at a depth of 2.5 m . The intense construction and digging activities that had taken place in the area since the neighborhood was established disturbed the fills and no artifacts were discovered in situ. Nonetheless, potsherds dating from the Herodian period (a lamp fragment from the founding of Tiberias) through the Byzantine period and the entire Abbasid period (eighth-ninth centuries CE), were found in the fill and soil that had accumulated above bedrock.

Square B was opened as a trench $(2 \times 10 \mathrm{~m})$ along the sidewalk. The exposure of a sewer, 0.4 m below the sidewalk bedding, compelled the excavation to continue west of the sewer and only in the northern half of the trench ( $2 \times 5 \mathrm{~m}$ ). The excavation, to a depth of 3 m below surface, did not reach bedrock. Below the fills of the sidewalk's bedding was the foundation of a modern stone fence that was built at a level 0.6 m lower than the current surface and to whose east side the excavation continued. Below the foundation, two levels of accumulation-a dark brown upper stratum (thickness c. 1.2 m ) and a reddish brown lower stratum (thickness c. 0.6 m ), were exposed. The accumulation levels clearly evidenced layers of refuse that had been poured down into the gully from north to south. These accumulations, which lay on dark virgin soil that was devoid of potsherds, contained fragments of pottery vessels that dated to the Byzantine period, including numerous fragments of domestic ware, roof tiles and fragments of glass vessels, as well as the barbs of glass lamps. A coin of the Emperor Constantius II (351-361 CE; IAA 117671) was recovered from the bedding of the sidewalk.


1. Location map.
(Volume No. HA-ESI 121 (2009
Tiberias, Ha-Perahim Street
Final Report
Emanuel Damati
21/3/2009

2. Location map.

During June 2006, a trial excavation was conducted in the upper parking lot of the municipal marketplace on Ha-Perahim Street in Tiberias (Permit No. A-4820; map ref. NIG 250766-80/743547-63; OIG 200766-80/243547-63; Fig. 1), prior to construction. The excavation, undertaken on behalf of the Antiquities Authority and underwritten by the building contractor, was directed by E. Damati, with the assistance of Y . Ya'aqobi (administration).

One square was opened in a place where several stones were discerned in a probe trench, dug with a backhoe. After the removal of the asphalt and the layers of road bedding beneath it, a layer of well-tamped soil fill was excavated. A row of very large basalt rocks, arranged in an arch facing the southeast, was exposed within the fill. When the excavation reached a depth of 2.5 m below the asphalt surface in the western part of the square, adjacent to the intrados, it became clear that the rocks were placed in this manner to stabilize the layer of fill and to help leveling the ground surface, which descended to the east. Ancient remains were not discovered, perhaps due to the extreme thickness of the fill, which was not excavated to its full depth.

The fill contained several fragments of pottery vessels that dated from the Early Roman period until the British Mandate time, as well as a fragment of modern glass. It seems that the soil fill, which was deposited when the parking lot was constructed, was brought from a field located far beyond the city limits.


1. Location map.

2. Square 1A, looking south.

3. Square 1B, looking east.

4. Areas 2, 3 and 4, aerial view, looking southeast.

5. Square $2 A$, the room and the stone pavement, looking south.

6. Square 2B, aerial view, looking south.

## Moshe Hartal

During March-May 2007, a trial excavation was conducted south of Hammat Tiberias (Permit No. A-5062; map ref. NIG 25228-56/74076-99; OIG 20228-56/24076-99), in the wake of planning a course for the new saltwater carrier pipe. The excavation, on behalf of the Israel Antiquities Authority, was directed by M. Hartal (photography), with the assistance of G. Cinamon, A. Shapiro and Z. Daniel (area supervision), N. Getzov (probe trenches), Y. Lavan (administration), T. Meltsen (surveying), P. Partush and D. Gahali of SkyView Photography Ltd. (balloon aerial photography), Y. Arnon (pottery) and workmen from Tiberias.
The excavation area extends along the saltwater carrier south of Hammat Tiberias. Remains of a pottery workshop from the Early Islamic period had previously been excavated in this area (E.J. Stern, 'Atiqot 26:5759). Four areas, described from north to south, were opened in the current excavation. Area 1 consisted of five squares where remains dating to the Early Islamic period were uncovered; Area 2 had three squares, in which remains from Early Bronze I and the Early Islamic period were exposed; Area 3 comprised two squares where finds from the Early Islamic period were discovered and of the two squares in Area 4, one contained remains that dated to the Early Islamic period.
Area 1 (G. Cinamon)
This area extended from the southern end of Hammat Tiberias to the access road of the Ganē Menorah Hotel (Fig. 1). Two alternative courses were investigated for the proposed route of the pipe: one course was west of and adjacent to the existing saltwater carrier tunnel and the other was parallel to Highway 90
Three squares were excavated along the course parallel to Highway 90.
Square 1A. Three strata were exposed in this northern square (depth 4.1 m ; Figs. 2, 3). Stratum 3 yielded a section of a building, in which the remains of a kiln (diam. 0.7 m ) were found. Around the kiln was a large quantity of industrial glass debris and it seems that glass vessels were manufactured in the structure. The artifacts from Stratum 3 dated it to the Umayyad period (eighth century CE). A building whose floor covered the kiln of Stratum 3 and its walls were constructed from different size fieldstones was exposed in Stratum 2. A pit (diam. 0.8 m , depth c. 1.2 m ; Fig. 4) dug in the floor of the building had penetrated into the Umayyad layer and severed it. The pit contained a rich assemblage of pottery vessels, lamps and fragments of bronze, glass and bones, all from the Abbasid period (eighth-ninth centuries CE). A new structure built of roughly dressed stones was erected in Stratum 1, above the Abbasid building (Fig. 5). Two rooms and a courtyard that belonged to this building were partly exposed. A tabun and a rolling stone nearby were found in one of the rooms. The artifacts recovered from this stratum included numerous fragments of pottery vessels, the latest of which dated to the eleventh century CE. In addition, a large quantity of glass vessels and industrial glass debris was found and it seems that manufacture of glass vessels continued in the Fatimid period as well. The building, abandoned and destroyed in the eleventh century CE, was filled up with the stone collapse of its walls.
Square 1B ( 35 m south of Square 1A) was located at the top of a modern, artificial slope. About one third of the square was covered with collapse that was partly removed. A single-layered building that dated to the Early Islamic period and its four exterior walls were preserved (max. height 1.4 m ; Fig. 6) was exposed. A wall (preserved height c. 0.8 m ) that partitioned the building comprised ashlar stones set widthwise at fixed intervals above the bottom courses. These were apparently pillars that enclosed 'windows', through which light and air entered the narrow room, as customary in the Hauranian building tradition. The 'windows' wall divided the structure into two rooms of unequal size: a wide room in the east and a narrow room in the west. The wide room was meticulously paved with small fieldstones. An arched-shaped installation (length of span c. 2 m ; Fig. 7), whose purpose is unclear, was built of a single course of medium-sized fieldstones on this floor. A number of iron horseshoes and tools were discovered on the floor in the installation's northwestern part, as well as fragments of a lamp and a few fragments of pottery and glass vessels that dated to the eighth-eleventh centuries CE. These finds raise the possibility that this structure was used for shoeing horses or some other work associated with horseshoes. The narrow room probably served as a stable.
Square 1C ( 30 m south of Square 1B; max. depth 3.5 m ) was opened adjacent to the pottery workshop published by E.J. Stern. The bottom stratum, which was excavated in a small part of the square $(1.0 \times 1.3 \mathrm{~m})$, consisted of alluvium mixed with small stones that contained fragments of eroded glass and pottery vessels from the Late Roman and Early Islamic periods, without any architectural remains. Overlying this stratum were the remains of a building (preserved max. height 2.8 m ; Figs. 8, 9) that had no doorway in its exposed walls. Four rooms, a large northern room and three smaller rooms to its south, were discerned. Two floor levels were exposed in the northern room. The beaten earth lower floor was overlain with a considerable amount of potsherds that dated to the ninth-tenth centuries CE , including a glazed bowl fragment with a complete bronze ring inside a repair hole, glass fragments, including two small intact bottles, large iron fragments and a coin. The upper floor was overlain with fragments of pottery and glass vessels that dated to the tentheleventh century CE. The three southern rooms were partly excavated (to a depth of 1 m ) and contained mixed ceramic material that dated to the Byzantine and the Early Islamic periods. The upper part of the structure was blocked with alluvium. It seems that the structure was built in the eighth century CE and remained in use until its abandonment in the eleventh century CE. Since only part of the building was excavated it is not possible to define its nature, purpose or size. Two squares were excavated along the course, west of and next to the saltwater carrier.

Square 1D ( $3 \times 7 \mathrm{~m}$; c. 20 m west of Square B1; Fig. 10) was opened next to the access road, leading to the Rabbi Me'ir Ba'al Ha-Nes compound. The digging of the saltwater-carrier trench had severely damaged the remains, yet in the center of the square two walls were discovered (preserved height c. 0.4 m ). The walls, built of roughly hewn basalt stones and set on a fieldstone foundation, formed the corner of a building. A layer of hard-packed whitish soil in the building seemed to be a floor; however, it was disturbed and the mixed ceramic material overlaying it dated to the Late Roman and the Early Islamic periods. Another wall, oriented east-west, was uncovered at the northern end of the square, but all that remained of it were the two outer stone faces of the wall without the core. Mostly alluvium that contained mixed ceramic material similar to that on the floor was found in the western part of the square.
Square 1E (c. 50 m west of Square 1A; Fig. 11). Two strata were identified. The square was bisected by a wall, which was built in two phases and extended in a northeast-southwest direction (exposed length 2.65 m , high 0.77 m ). In the firs phase, another wall, a bedding of small fieldstones and a column base, were joined to its southern side. The other wall was abutted by floors from the west and east, which were overlain with potsherds that dated to the ninth-tenth centuries CE. In the second phase, the wall was made higher and a new floor of flagstones was installed. The finds on this floor were similar to those found on the lower floor. Mixed ceramic material that dated to the ninth-eleventh centuries CE was found in the collapse that filled the structure. Bedrock covered with heavy brown soil, devoid of any finds, was exposed north of the wall that bisected the square. This soil was overlain with a crushed hard-packed chalk floor that incorporated a pavement of flat medium-sized fieldstones. A square installation coated with white plaster was incorporated in this floor The scant finds recovered from the floor were similar to those found on the southern side of the wall. The limited excavation area precluded the determination of the building's size or its function.

## Area 2 (A. Shapiro)

This area extended south of the access road to the Ganē Menora Hotel and parallel to Highway 90. Three squares (2A2C) were excavated at 30 m intervals (Fig. 12).
Square 2A revealed a room (Figs. 13, 14) that had a doorway in its southern wall. The walls (preserved height c. 0.7 m ) were built of large basalt stones with small limestone and basalt stones filled among them. The room was partly paved with basalt flagstones. The pavement did not abut any of the walls and superposed a surface of small stones that was also discovered outside the room; thus, it seems that the pavement was installed prior to the construction of the building.

A number of broken pottery vessels were discovered at the same elevation as the stone pavement in the southeastern corner of the room. Otherwise, a few potsherds, glass fragments and fresh water mollusk shells were recovered from the room. A layer of basalt gravel, devoid of potsherds, which covered basalt boulders that were apparently bedrock, was discovered in a sounding beneath the floor's foundation. An installation, dug into the gravel layer and lined with small and medium stones, was uncovered east of the room; its purpose is unclear. The scant finds recovered from this square dated the building to the ninth-tenth centuries CE.
Square 2B wasbadly disturbed by modern earth-moving activities. These works severely damaged the buildings in the square, which had survived by meager foundation remains and a segment of a plastered elliptical pool that dated to the Early Islamic period. Two buildings were partly exposed below later fills, removed by mechanical equipment. The buildings, constructed from basalt fieldstones, had a rectangular plan and rounded corners (Figs. 15, 16). They contained a rich pottery assemblage that included vessels decorated with band slip, 'crackled ware' bowls, as well as numerous flint implements. The artifacts dated the buildings to the second phase of Early Bronze I. Settlement remains of the same period, in which a basalt tournette was found (Fig. 17), were discovered in a probe trench, cut west of Square 2B and next to the saltwater carrier channel.
Square 2C (Figs. 18-20). After the removal of modern fill (thickness c. 2 m ) by mechanical equipment, remains dating to two periods were found. A wall and a floor from Early Bronze I were exposed in the lower stratum. This stratum was only exposed in a small area, which was disturbed by the walls of the upper stratum. An alley, flanked on either side by buildings (preserved height 1.5 m ), was revealed in the upper stratum. The buildings' walls that bordered the alley and small sections of their rooms were exposed. A column and a column base were found parallel to the building that delimited the alley from the south. A system of channels was discovered beneath the floor of the alley. The channels, covered with basalt slabs, had probably functioned as a sewage or drainage system and consisted of a main channel that ran the length of the alley and shorter channels that emerged from the buildings and drained into it. The numerous finds discovered in the alley enabled the dating of its construction to the eighth or ninth centuries CE and its use up to the eleventh century CE.

Area 3 (Z. Daniel)
Two squares were excavated in this area, southeast of the Ganē Menora Hotel.
Square 3A (Fig. 21). A rectangular installation was found directly below surface. The installation was enclosed within stone walls and atop it was a small fieldstone floor, overlain with a limestone slab that was surrounded by roughly hewn stones. The southern wall of the installation continued eastward and was intersected by a channel (Fig. 22), which sloped from north to south and was built of flat basalt stones. Several pieces of ceramic water pipes were found in the continuation of the channel northward. Perpendicular to the northern side of the southern wall was a wall with an opening set in it (width 0.5 m ). The foundation of a wall, oriented southeast-northwest, was in the southeastern corner of the square. It was poorly preserved and only a short section of it was exposed. This wall was abutted by floors that were overlain with a few artifacts that dated to the ninth-tenth centuries CE. It seems that the complex was industrial, rather than residential. The soil into which the wall foundations were dug contained a few worn potsherds, dating to the Roman period and the Early Bronze Age; however, these were insufficient to date the complex.
Square 3B. A basalt wall, oriented north-south (length 5.1 m , preserved height 0.6 m ; Fig. 23), was found. Gray soil to the east of the wall contained a few potsherds from the Abbasid period. Parallel to the wall was a stone collapse mixed with some potsherds dating to the Abbasid period. A thick accumulation of alluvium was found below the collapse. The purpose of the wall is unclear, but it may be connected to the road leading to Tiberias from the south. Backhoe probes conducted south of Square 3B did not reveal any other settlement remains.

Area 4 (Z. Daniel)
This area (c. 100 m south of Area 3) was located on a low hill opposite the Sycamore Beach. A gorge and an area devoid of any settlement remains are located between these two excavation areas. Potsherds that dated to the Early Islamic period were gathered in a survey conducted at the site. A strip of boulders (width c. 5 m ) was discerned in backhoe-dug trial trenches and potsherds from the Early Islamic period were noted nearby. Two squares ( 40 sq m ) were opened.
Square 4A. A floor of stones with plaster was exposed directly below surface. It was delineated by walls to the north and west (Fig. 24). The southwestern corner of the floor was severed by a pit and near it was a plastered installation. The floor was set on a layer of soil, which contained a few potsherds that dated to the Roman period; these probably do not attest to an ancient settlement here. A few potsherds from the tenth-eleventh centuries CE were found above the floor, which was probably used as a treading floor of a winepress from the Early Islamic period.
Square 4B, south of the floor, yielded only potsherds without architectural remains.
The trial excavations south of Hammat Tiberias have contributed important data to the history of the site. The first settlement was established in the second phase of Early Bronze I. Nothing was known about this EB I site until the current excavation because it was covered with accumulations of buildings from later periods and a layer of modern debris. These settlement remains were only excavated in Area 2 but they continued eastward and were also identified to its west. The exposed tournette indicates that pottery vessels were produced at the site during this period.
Following the abandonment of the EB I settlement, the area south of Hammat Tiberias remained unoccupied for thousands of years until the Islamic period. Remains from the Umayyad period were found mostly in Square 1A, closest to Hammat Tiberias, while in the rest of the squares remains from the Abbasid and Fatimid periods were discovered. During these periods Hammat Tiberias expanded southward in a narrow strip, parallel to the Sea of Galilee. The finds indicate that the area was mainly used as an industrial zone. The production of glass vessels was evidenced in Square 1A and remains of a pottery workshop had previously been found next to Square 1C. Large quantities of ceramic cones that were used to separate the vessels during firing were found in Areas 1 and 2. All these notwithstanding, residential buildings were probably also in the area, such as those on both sides of the alley in Square 2C. It seems that the southern border of Tiberias and Hammat in the Early Islamic period was located in Area 3, because no settlement remains were detected in the trial trenches to its south. The floor in Area 4 probably belonged to an agricultural installation that was not part of the city.
The southern border of the tenth and eleventh centuries CE city has been identified in the current excavation, c. 200 m south of Hammat Tiberias. The northern border of this city was identified in the municipal park, in the center of modern Tiberias (HA-ESI 120). These excavations and others that were conducted in the southern part of Tiberias revealed no buildings from the end of the eleventh century CE. Hence, it seems that Tiberias reached its peak in the tenth and eleventh centuries CE, whereas at the end of the eleventh century CE, the city substantially diminished in size and was limited to the precincts of today's Old City.


1. Area 1 , aerial view, looking southwest.

2. Square 1A, aerial photograph, looking east.

3. Square 1A, looking east.

4. Square 1A, pit, looking east.

5. Square 1A, looking south.

6. Square 1B, aerial view, looking west.

7. Square 1B, looking east.

8. Square 1C, aerial view, looking south.

9. Square 1C, looking east.

10. Square 1D, aerial view, looking west.

11. Square 1E, looking east.

12. Areas 2, 3 and 4, aerial view, looking southeast.

13. Square 2 A , aerial view, looking south.

14. Square 2 A , the room and the stone pavement, looking south.

15. Square 2B, aerial view, looking south.

16. Square $2 B$, looking north.

17. Area 2, tournette.

18. Square 2C, aerial view, looking east.

19. Square 2C, the alley, looking west.

20. Square 2C, the system of channels, looking west.

21. Square 3A, looking south.

22. Square 3A, the wall of the installation and the channel, looking north.

23. Square 3B, aerial view, looking east.

24. Square 4A, aerial view, looking east.

# (Volume No. HA-ESI 121 (2009 <br> Tiberias, the Courtyard of the Jews <br> Preliminary Report 



1. Area A. plan.

2. The front of the city wall and the gate, looking southwest.

3. Proposed reconstruction

4. Fragment of a decorated lintel to the left, the wall blocking the gateway area.

5. Fragment of a lintel decorated with a wreath of Hercules.

## Yosef Stepansky

 24/8/2009During April-May and August-September 2003, two excavation seasons were conducted in the Jewish Quarter of Old Tiberias (The Courtyard of the Jews; Permit No. A-3893; map ref. NIG 30115/74364; OIG 25115/24364), in the wake of development plans by the Government Tourism Corporation. The excavations, on behalf of the Israel Antiquities Authority, were directed by Y. Stepansky, with the assistance of Y. Ya'aqobi and A. Dadosh (administration), V. Essman and Y. Stark (surveying and drafting), N. Getzov and E.J. Stern (stratigraphic and ceramic consultation), T. Sagiv (field photography first season), T. Meltsen (reconstruction drawing), H. Tahan-Rosen (pottery drawing), the Tourism Infrastructure Administration of Tiberias, Rushrush Company and Avney Derekh Company (technical assistance).

The excavations were carried out in an area adjacent to the Ez Ha-Haiyym Synagogue in memory of Rabbi Haiyym Abulafiya and the Rabbi Yohanan Mativta Synagogue of the Karlin Hasidim.

Area A. The area ( 60 sq m ; Fig. 1) was located in front of the Ez Ha-Haiyym Synagogue complex. A section of the city wall, oriented east-west (length 6 m , width 3.4 m ), which included the remains of a gate (width 3 m ) in an excellent state of preservation (Fig. 2), was exposed. The wall's façade that faced north was revealed to a height of 4 m , extending as far down as the water table at the time of the excavation (minus 210.10 m ), without exposing its base.
The wall was built of ashlar stones, one of which having a boss and drafted margins, and dressed basalt stones that were carefully matched and bonded together with hard plaster in an irregular header-stretcher pattern. Two Roman cornice stones were incorporated in the wall's façade, east of the gate and below its floor level; these may have served as consoles/arch supports to the north or as decorative elements in the wall's façade.
The historical, architectural and ceramic data indicate that the building complex can be identified with a section of the northern wall of the Crusader fortress from the twelfth century CE (Fig. 3) in Tiberias, which was conquered by Saladin on July 5, 1187, the day after the Battle of Hattin (Y. Stepansky, 2004, The Crusader Fortress of Tiberias, Qadmoniot 127:50-57 [Hebrew]). Other short sections of the southern side of the fortress were discovered in excavations of the 1970s (HA 61-62:9-10 [Hebrew]).
A fragment of a decorated limestone lintel ( $0.8 \times 1.1 \mathrm{~m}$, thickness 0.6 m ) that probably originated from a large public building (synagogue?) of the Roman or Byzantine periods was incorporated in the western doorjamb of the gate. The stone is adorned with a relief of a panel, depicting a wreath and an inflorescence of acanthus leaves, set within an intertwined frame (Fig. 4). The center part of the original lintel, decorated with a wreath of Hercules $(0.6 \times 0.6 \times 0.7 \mathrm{~m}$; Fig. 5), was discovered upside down in the soil fill at the front of the gate. Comparisons can be drawn between ours and other lintels from the synagogues at Capernaum (S. Loffreda, Recovering Capharnaum, Jerusalem 1993, pp. 17, 41), Horbat 'Amudim and Horbat Qazyon (Z. Ilan, Ancient Synagogues in Eretz Israel, Tel Aviv 1991, pp. 58 [Qazyon] and pp. 134-135 [Horbat 'Amudim]).
The soil fill in front of the gate and the later fill of the gate contained other ancient elements including, a basalt ashlar stone $(0.45 \times 0.45 \times 1.40 \mathrm{~m})$ with a crude relief of a five-branched menorah (?; Fig. 6), a capital, stone fragments of a cornice and frieze, a fragment of Italian marble and a limestone masonry stone that bears a V-shaped stonemason's mark. Two slots installed opposite each other in the gate's doorjambs were the tracks for an iron portcullis, a common element in the gates of Crusader fortresses. Diagonal dressing, which is characteristic of Crusader construction, was discerned on some of the stones in the gate's doorjambs, together with the secondary use of ancient architectural elements. The bases of the doors' pillars in the gate were fashioned in a half-round style, symmetric with each other and the flagstone floor was provided with a step brake for the doors. Two round sockets of the doors' bolts survived below the step, on either side of the gatehouse. The flagstones of the gate's floor terminate in a straight line south of the gate, toward the interior of the fortress. A short section (length 3 m ) of a tamped-earth floor, without pavement, was exposed at the elevation of the gate's floor level (later pavement stones from the Ottoman period were discovered at higher levels in this area). Still within the Crusader period or after the Ayyubid conquest in 1187, the gate was blocked in two phases, as evidenced by the two stone walls in the Crusader-Ayyubid style, with plaster-filled interstices that protrude above the stone surface and are characteristic of the twelfth-thirteenth centuries CE. These walls were built breadthwise across the gate and negated its use (Fig. 7). Over the course of time and after the gate was blocked, the area filled up with soil and stones, which at the beginning of the eighteenth century CE, served as a bedding for the initial buildings of the Jewish quarter of Tiberias that existed until 1948.
A stone wall, aligned north-south, was discovered in front of and abutting the Crusader city wall; it consisted of at least two construction phases. The ceramic finds collected at the base of the wall indicated that the two phases of the wall, which may be a retaining wall of a septic pit, dated to the Ottoman period. Fill that consisted of stones, alluvium and finegrain sediment was discovered on either side of the wall and beneath its base.

Floors, walls, traces of a street or pavements, contemporary with the city wall and the gate and extending northward from the gate, were not found. A section of a wall/pillar (W505; length 3.5 m , width 1.4) was discovered 3 m from the front of the city wall and parallel to it, opposite and north of the city wall section and east of the gate. Wall 505 was built of five courses (height 1.7 m ) of dressed stones; basalt and limestone column drums were incorporated in it length-wise and width-wise. The wall ends in the west exactly in-line with the gate's eastern doorjamb. It was cut in the east by the eastern balk of the excavation area. The ceramic material recovered from the foundations of W505 dates it to the time of the city wall and gate, i.e., the Crusader period, but its function and relation to the city wall and gate are unclear.
Northwest of W505 and 7 m from the gate, at a higher elevation, was the square base of a large pillar or sealed structure $(2.4 \times 2.6 \mathrm{~m})$, which was built of headers and stretchers and was not dated.
The excavation at the front of the city wall and gate corroborated the assumption that had previously been raised by $Z$ Razi and E. Braun (The Lost Crusader Castle of Tiberias, in B.Z. Kedar (ed.), The Horns of Hattin, Jerusalem 1992, pp. 216-227), who suggested that a moat filled with water from the Sea of Galilee surrounded the fortress. Wall 505 , which was parallel to the city wall, and the base of the square structure to its northwest, were probably incorporated in the fortress' defenses. They may have been part of the approach way that led to the gate, via a wooden bridge that spanned the moat and could be raised.

Area B was c. 25 m south of Area A. A small area $(2.5 \times 3.5 \mathrm{~m})$ was excavated in front of the Karlin synagogue where a section of a wall (length 3.5 m , width 1.2 m ), aligned north-south, was discovered. The western face of the wall was built of four courses of dressed stones and a few fieldstones (height 1.35 m ). A floor section of plaster and stones was exposed west of the wall. Part of a basalt sarcophagus was found east of and adjacent to the wall, at a depth of 0.5 m below surface. Most of the sarcophagus was buried below the eastern balk of the excavation area; it was not in situ and not in its original use. A short section (length 1 m ) of another wall that extended west from the northern end of the first wall was exposed.
The potsherds recovered from Area B were from the Ottoman period; hence the discovered walls were used for a long time. Nevertheless, it is difficult to determine the date of their construction; they may have been built in the Mamluk period or even in the Crusader period.



2. The front of the city wall and the gate, looking southwest.

3. Proposed reconstruction.

4. Fragment of a decorated lintel to the left, the wall blocking the gateway area.

5. Fragment of a lintel decorated with a wreath of Hercules.

6. Basalt ashlar decorated with a relief of a menorah (?)

7. Blockage walls across the Crusader gateway; looking south.

## Tiberias

Final Report

## Abdalla Mokary

7/10/2009


1. Plan and sections.

2. Pottery.

3. Plan of the fortress.

During March 2005, a salvage excavation was conducted on the Yigal Alon Promenade in Tiberias (Permit No. A-4400; map ref, NIG 25107-20/74370-85; OIG 20107-20/24370-85), following the discovery of ancient building remains during the installation of light poles. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Government Tourism Corporation, was directed by A. Mokary, with the assistance of A. Hajian (surveying) and H. Tahan (pottery drawing).
Building remains that apparently belonged to the Crusader-period fortress were exposed in the excavation area ( $2.5 \times$ 9.0 m ; Fig. 1). A wall segment (W13; length 7.8 m , width 0.9 m ) built of ashlar stones was uncovered. A triangularshaped construction that consisted of ashlar stones with a core of debesh and hydraulic mortar was built adjacent to the eastern side of the wall, facing the sea. The earthen fill above the building remains contained potsherds from the Ottoman period, including bowls (Fig. 2:1, 2) and a cooking pot (Fig. 2:6). The fill surrounding the remains included a glazed bowl from the Early Islamic period (Fig. 2:3), as well as bowls (Fig. 2:4, 5), cooking pots (Fig. 2:7, 8) and jugs (Fig. 2:9-11) from the Ottoman period.
Wall 13 appears to have been the eastern wall of a northeastern corner tower in the Crusader fortress and the adjacent construction to its east served as a glacis and a breakwater (Fig. 3; Y. Stepansky, Qadmoniot 127, 2004, p. 54 [Hebrew]).


1. Plan and sections.

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2. Pottery.


## Tiberias, Promenade Garden

Final Report
Abdalla Mokary
24/12/2009


1. Plan.

2. Pottery.

During September 2005, a salvage excavation was conducted in the Promenade Garden in Tiberias (Permit No. A-4608; map ref NIG 25115-9/74370-7; OIG 20115-9/24370-7), following the discovery of building remains. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Government Tourism Corporation, was directed by A. Mokary, with the assistance of V. Essman (surveying) and H. Tahan (pottery drawing).
The excavation area is located next to the waterfront, within the precincts of Old Tiberias, which is surrounded by the Ottoman city wall. One excavation square was opened, revealing the remains of a building that dated to the Ottoman period. Two massive walls (W13, W14; width 2 m ; Fig. 1) that were perpendicular to each other and built of dressed basalt building stones with a core of bonding material and small stones, were exposed. Wall 14 was built above an underground cavity that had a vaulted ceiling and was not excavated. No remains of floors that abutted the walls were found and the fill on either side of W13 contained fragments of bowls (Fig. 2:2-4) and cooking pots (Fig. 2:10, 11) that dated to the Ottoman period. The walls were built above a layer of pebbles and sand that contained fragments of bowls (Fig. 2:5-8), cooking pots (Fig. 2:12-15), jugs (Fig. 2:20-22) and fragments of clay pipes, all dating to the Ottoman period.
A fragment of a glazed bowl (Fig. 2:1) from the Crusader period together with a bowl (Fig. 2:9), cooking pots (Fig. 2:1618) and jar (Fig. 2:19) that dated to the Ottoman period were found below the building's foundations.

The walls exposed in the excavation were probably part of the Zemah Zadiq synagogue that appears a Mandatory map


1. Plan.


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## Tirat Karmel

## Final Report



1. Plan and sections.

2. Winepress, looking south.

3. Stratum III, pottery.

4. Strata I, II, pottery.

5. Stratum II, blockage in collecting vat, looking west.

## Orit Segal

14/2/2009
During September-October 2003, a salvage excavation was conducted at Tirat Karmel (Permit No. A-3993; map ref. NIG 19795/74080; OIG 14795/24080), prior to the construction of a public building. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Almog Company, was directed by O. Segal, with the assistance of S. Ya'aqov-Jam (administration), V. Essman and V. Pirsky (surveying), T. Sagiv (field photography), E. Belashov (drafting) and M. Shuiskaya (pottery drawing).
The excavation was carried out within the precincts of the ancient site of Tirat Karmel where a settlement sequence that dated from the third century CE onward was exposed (ESI 14:51-52).
The excavation area was a building lot ( $8 \times 12 \mathrm{~m}$ ), whose western part was next to the eastern wall of an ancient mosque, used today as a synagogue and a religious college. The mosque was apparently built on top of the remains of a Crusader church that had survived by columns and Corinthian capitals (Map of Haifa-West [22], Site 131:68-69). Three strata from the Byzantine, Early Islamic and Ottoman periods were exposed (Fig. 1).

Stratum III (Byzantine Period)
A winepress (Figs. 1, 2) that consisted of treading floors paved with mosaics (Loci 514,542) and collecting vats (Loci 509, 523), arranged in L-shape, was exposed. Walls built of elongated ashlar stones (W510, W512) delimited the trapezoid-shaped area of the collecting vats, which dictated their plan and indicated they were built at the same time. The western collecting vat (L523) had an elongated trapezoidal shape and its sides and floor were coated with hydraulic plaster; a settling pit was cut in the southern part of the floor (Fig. 1: Section 2-2). Attached to the western side of Collecting Vat 523 was a wall (W530) built of a single row of ashlar stones to a height of a single course. It seems that W530 served as a step, upon which covering slabs were placed.
The eastern collecting vat (L509) was also trapezoidal, had plastered walls, a circular settling pit in the northeastern corner and steps next to the western side (Fig. 1: Section 1-1).
The upper part of W512 was lined with mortar, whereas the tops of the other walls (W527-W529) and the steps alongside W527 were covered with white mosaics $(2 \times 2 \mathrm{~cm})$. No direct connection was discerned between the collecting vats; however, it is assumed that a connection was below W543 that was ascribed to Stratum II (Fig. 1: Section 1-1).
Sections of mosaic-paved treading floors (Loci 514,542) were excavated in the eastern part and extended beyond the limits of the excavation. A robbed wall (W544) separated between the southern (L542) and the northern (L514) treading floors. Mosaic bedding that abutted W528 was in the western part of Treading Floor 514. Two repair phases were noted in the mosaic $(3 \times 3 \mathrm{~cm})$ of the northern treading floor. No connection was found between Treading Floor 514 and Collecting Vat 509 to its west, but a channel probably existed in the upper part of W528.
Treading Floor 542 was lined with a white mosaic $(2 \times 2 \mathrm{~cm})$ that was laid down in different directions and included a blue frame. It was founded on top of elongated ashlar stones, similar to the walls of the collecting vats to the north. The southern part of the treading floor was severed by a modern drainage channel (W541) and an Ottoman drainage pipe that was located beneath the paved Ottoman road, which also damaged the mosaic (see Stratum I below).
West of Treading Floor 542 and south of the collecting vats was an open area (L520) enclosed from the west by the southern part of W530, which was the continuation of Wall 538. Its northern and eastern walls (W510, W535) were built of elongated ashlar stones, coated with plaster on their exterior. Plaster was discerned on the eastern corner of W510 and in the connection between W510 and W535. A small section of a plaster floor that abutted W510 survived in this corner.
It seems that this area, where no walls or floors were discerned, was used as an open work area whose floor did not survive due later disturbances. This work area was also trapezoidal, a feature that characterized the entire industrial facility.
The western side of the excavation was partially excavated, revealing a plaster floor (L536) and wall foundations (W531, W534) that were built of one row of elongated ashlar stones. All of these elements can be ascribed to another work surface that was, in all likelihood, paved with tamped plaster (L536).
A tamped plaster floor (L522) north of W531 was also attributed to Stratum III. Another floor (L519) of small and medium fieldstones could either be ascribed to one more work surface that was north of the collecting vats or it could have been a road that led toward the winepress. West of Floor 522 and next to the western boundary of the excavation was another wall (W537) whose nature is unclear.
The ceramic finds included bowls (Fig. 3:1-4): the bowls in Fig. 3:1 dating from the end of the fifth-middle of the seventh century CE and in Fig. 3:3 dating to the sixth century CE, originated in Phocaea in Anatolia; a Cypriot bowl in Fig. 3:2 dated to the fifth-seventh centuries CE and the bowl in Fig. 3:4 was of Egyptian provenance and dated up to the eighth century CE, a Bet She'an-type krater (Fig. 3:5) and jars from the Byzantine period (Fig. 3:6-9).

## Stratum II (Early Islamic Period)

Wall sections and a floor of tamped earth that were located north of the winepress from Stratum III were ascribed to this stratum. Walls (W524, W525), built on top of Floor 519 to the north of the winepress, consisted of ashlar stones; and were abutted by fragments of a tamped earth floor (L506). The northeastern part of Floor 506 was damaged by an Ottoman pit and its southern part was apparently severed by the robber trench of W512. The stratum could not be dated with certainty due to these later disturbances and the meager amount of recovered ceramic finds. Nevertheless, the excavation of the Floor 506 uncovered Byzantine potsherds and a very small number of glazed sherds (splash ware) of bowls that dated to the ninth-tenth centuries CE (Fig. 4:1-3).
These fragmented remains indicate that the collecting vats from Stratum III were converted into covered pools for storing water in this stratum. The cessation of use of the Byzantine winepress is consistent with the ban on wine consumption during the Islamic period. The staircase in the eastern Collecting Vat 509 was negated and W543, which was built on top of the steps and next to W527 (Figs. 1: Section 2-2; 5), served as a foundation for a vault, whose continuation was located in the eastern balk of the excavation (W540). The flat stone covering in the western Collecting Vat 523 continued to be used in this stratum. The storage pools contained an abundant fill that comprised cattle bones and potsherds from the Mamluk and Ottoman periods, including handmade pottery with geometric decorations (Fig. 4:7, 8), jars of reddish brown clay from the Ottoman period (Fig. 4:5, 6), Gaza ware, including a jar (Fig. 4:4) and flask (Fig. 4:9), a small gray pipe that is dated to the seventeenth century CE (Fig. 4:11) and a hookah (Fig. 4:10).
The geometric-decorated handmade pottery prevalent in the fill and the Ottoman pottery dominating the upper layers of the fill indicate that the pools were converted into refuse pits during the Mamluk and Ottoman periods, once their original use was no longer practiced.

Stratum I (Ottoman Period)
A stone-paved road (L500; Figs. 1, 6), which was partly located along the surface north of an adjacent synagogue, was excavated. The road consisted of medium-sized limestone and was exposed for a distance of 24 m (max. width 3 m ). It seems that the road, as well as the drainage pipes beneath it, damaged the ancient remains

The excavation revealed a winepress from the Byzantine period (Stratum III) that had two treading floors and two collecting vats, the function of the elongated vat (L523) is insufficiently clear. The meager remains ascribed to Stratum II
and dating to the Early Islamic period indicate that the collecting vats of Stratum III were converted into water-storing pools in this stratum. The handmade geometric-decorated pottery found in the fill of the storage pools shows that the pools, no longer in use during the Mamluk period, were converted into refuse pits until the Ottoman period, to which the paved road can also be attributed.

2. Winepress, looking south.



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4. Strata I, II, pottery

5. Stratum II, blockage in collecting vat, looking west.

6. Paved Ottoman road, looking east.

# (Volume No. HA-ESI 121 (2009 

## Tur'an

Final Report
Abdalla Mokary
30/12/2009


1. Plan and sections.

2. Pottery.
 west.

During October 2003, an excavation was conducted in the Tur'an village, in the Lower Galilee (Permit No. A-4026; map ref. NIG 233980-4025/742300-425, OIG 183980-4025/242300-425), prior to private construction. The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Mokary, with the assistance of V. Essman (surveying) and H. Tahan (pottery drawing).
An area ( $4 \times 5 \mathrm{~m}$; Fig. 1) that consisted of building remains from the Mamluk and Ottoman periods was excavated down to bedrock in the built-up section of the village, east of the old mosque. A rock-hewn pit that contained fragments of pottery vessels from the seventh century CE was revealed beneath the Mamluk construction.

Early Islamic period (seventh century CE). A pit (diam. of opening 0.7 m , diam. at base 1.5 m , depth 1.7 m ) that was hewn in the limestone bedrock was exposed. It contained fragments of black jars decorated with white paint and the rim of a jug whose fabric was of a light color (Fig. 2:5) that dated to the seventh century CE. Fragments of glazed bowls (Fig. 2:1-3) and a jug (Fig. 2:4) from the Mamluk period (fourteenth century CE) were also found.

Mamluk period. Wall remains of a building (W14, W16) were found above bedrock. They were built of dressed limestone, formed a corner and a crushed chalk floor abutted them. A plastered water channel was installed into the floor. Potsherds dating to the Mamluk period (fourteenth century CE) were found above the floor and included bowl fragments (Fig. 2:6-10), a jar (Fig. 2:11) and a cooking pot (Fig. 2:12).

Ottoman period. The remains of a wall (W12), abutted by a crushed chalk floor, were exposed (Fig. 3). The wall's foundations were set on bedrock and damaged the Mamluk remains.


2. Pottery.


## (Volume No. HA-ESI 121 (2009

## Yafo, Clock-Tower Square

## Preliminary Report



1. General plan of the excavated areas with the Mamluk burials

## Martin Peilstöcker

During January-March 2005, three seasons of salvage excavations (Areas I and II) and during July-August 2005, another salvage excavation (Area III) were conducted at the Clock-Tower square in Yafo (Jaffa; Permit No. A-4312; map ref. NIG 17695-723/662427; OIG12695-723/1624-27), prior to renovations in the area and in continuation of the archaeological investigation of the fleamarket compound (HA-ESI 118; HA-ESI 120), whose completion required the excavation of three additional squares. The excavations, undertaken on behalf of the Israel Antiquities Authority and funded by the Tel Aviv municipality (Ha-Mishlama Le-Yafo), were directed by M. Peilstöcker, with the assistance of L. Rauchberger, A. Glick, R. Haim (area supervision), E. Cohen, O. Burstein, R. Ben-Ezra (find registration), S. Ya'aqov-Jam (administration), V. Essman and V. Pirsky (surveying), T. Sagiv (field photography), Y. Nagar (physical anthropology), A. Peretz (conservation and preservation) and M. Ajami and D. Barkan (IAA Tel Aviv District). Additional assistance was provided by T. Shaham (director of the Jaffa Museum of Antiquities) and A. Yoseph, who worked with the late Y. Kaplan in Yafo and contributed important information about the former unpublished excavations in the area.

The excavation was carried out according to a local grid in Areas I and II, which was re-established when resuming the excavation in Area III (Fig.1). In addition, three trenches (L799, L800, L801) were dug with mechanical equipment and later enlarged manually to the west of Area III. The excavations were restricted in several squares by water pipes and cables and in others, had to be suspended due to safety precautions. For the same reason, a distance from existing buildings, such as the Clock Tower itself, was maintained to avoid undermining their foundations. An additional obstacle was imposed by ultra-orthodox religious circles, whose pressure precluded the excavation of the tombs discovered in all areas. Work had stopped once a burial was identified and earlier archaeological remains could not be exposed.

The area of the Clock-Tower square, established in the beginning of the twentieth century CE, is northeast of Tell Jaffa. It is bordered on the west by the Ottoman police-station and the Mahmudiyyeh Mosque, built in the early nineteenth century CE by Abu Nabut. The New Saraya (governors palace), built at the end of the nineteenth century CE, borders the excavated area on the east. During the excavations, a local stratigraphic sequence was created (Table 1) and later, it was synchronized with the general stratigraphy of the eastern quarters of Jaffa (Table 2).
Table 1. The local stratigraphy in the Clock-Tower Square


* Pottery only

Table 2. General stratigraphy of the eastern quarters in Yafo

| Stratum | Period |
| :--- | :--- |
| V | Modern |
| I | Mandatory |
| II | Ottoman |
| III | Mamluk |
| IV | Crusader |
| V | Early Islamic |
| VI | Byzantine |
| VII | Roman |
| VIII | Hellenistic |
| IX | Persian |
| X | Iron Age |
| XI | Lates Bronze Age |

Since the excavated areas were shaped as long and narrow trenches, in most cases only parts of buildings and other features could be exposed. The following preliminary report summarizes the most important finds according to the archaeological strata, beginning with the earliest remains.

Strata IX and X. Floors and pottery dating to Iron II were found 4.5 m below current surface in a small trial trench (Sq C4). Unfortunately, it was impossible to enlarge the excavated area due to safety problems. The discovery of such an early layer in this area raised questions about the size of Yafo in this period, which seems to have been larger than previously thought. Persian-period pottery was found in a layer that covered this stratum and in subsequent layers, indicating a presence in this area during the Persian period as well.

Stratum VIII. Pottery dating to the Hellenistic period was found in large amounts at various locations of the excavated area. However, only the final pottery analysis will show if a Hellenistic layer can be defined.

Stratum VII. At least two locations of the excavated area yielded stone formations that postdated the Hellenistic and earlier layers but predated the remains of Stratum VI. Due to restrictions imposed by the Ministry of Religious Affairs an excavation of these structures, presumably tombs, was impossible. Yet, it should be mentioned that in an unpublished excavation by J. Kaplan, tombs dating to that period were found in an area north of the Clock-Tower square.

Stratum VI. Large amounts of pottery dating to the Byzantine period were unearthed in Areas I and II. These could not be associated with any specific architectural elements, but point to activities in this period.

Stratum V. Remains dating to the Early Islamic period were found in all excavated areas. Parts of a structure in Area I were built in the terre-pisée technique, which is known from earlier excavations in the flea-market area (HA-ESI 118) and the Ganor compound (ESI 20:47*-49*). Although the plan of the structure was not complete, the walls seem to belong to a massive building, similar to those discovered previously in the flea-market and Ganor excavations.

Stratum IV. This layer can be divided into two phases. During the first phase, a street was prepared, oriented roughly north-south and flanked on both sides by buildings. The street was constructed from crushed kurkar sandstones and showed various repairs. In the second phase, several walls in and around the buildings were repaired or modified. The
initial analysis of pottery finds indicates that the first phase can be attributed to the twelfth century CE and the second, to the thirteenth century CE .

Stratum III. Activities dating to the Mamluk period were restricted to burials, which in many cases had cut into the Crusader remains. The burials had a uniform east-west orientation. They all consisted of single burials in stone cists, covered with stone slabs. Building stones were sometimes reused in the construction of these tombs. The deceased were laid down with their head in the west, facing south in a typical Islamic manner. Only a limited number of burials were excavated because of strong opposition by Islamic circles that brought the excavation to a halt.

The excavations confirmed the observation that settlement had been much larger in the Iron Age than previously assumed. Although little can be said about the remains dating to this period, it seems that from the Iron Age onward the area was part of a lower town that existed, with a gap in the Roman Period, until the destruction at the end of the Crusader period. When the area was not settled, it served as a burial ground. The cemetery established first in the Mamluk period subsequently moved northward with the new growth of the city, in particular after the city walls went out of use in the last third of the nineteenth century CE.


1. General plan of the excavated areas with the Mamluk burials

## (Volume No. HA-ESI 121 (2009 <br> Yafo, Ganor Compound Preliminary Report

Martin Peilstöcker and Aaron A. Burke
From April to September 2007 and during January 2008 excavations were conducted in the Ganor Compound in Yafo (Permit No. A-5084; map ref. NIG 176806-7189/661962-2380; OIG 126806-7189/161962-2380). The excavation, on behalf of the Israel Antiquities Authority, was directed by M. Peilstöcker (IAA) and A.A. Burke (UCLA), with the assistance of A. Gorzalczany, H. Torge and Y. Arbel (assistant field directors), R. Assis, H. Ben-Ari, R. Korin, L. Rauchberger, R. Chaim, G. Pierce, K. Keimer, M. Mulokandov and L. Talmi (area supervision), O. Ashkenazi (find registration and data entry), V. Essman, V. Pirsky and D. Porotzky (surveying), T. Sagiv and O. Chaim (field photography), the Sky View Co. (balloon photography), Y. Nagar (physical anthropology), O. Ackerman (geomorphology), K. Strange Burke and E.J. Stern (Islamic and Crusader pottery reading), J. Negeur and R. Abu-Diab (conservation and preservation) and Y. Levi, M. Ajami and D. Barkan (IAA Tel Aviv Office), who assisted in various stages of the project. Find sorting and storage was carried out in the facilities of the Jaffa Museum and thanks are extended to N. Meirovitz, director of the museum and to Y. Klein of the Old Jaffa Development Co. for their assistance.
The excavations were the first field activity of the Jaffa Cultural Heritage Project (JCHP), headed by the excavation directors.

The current excavation is a renewed project in an area that had previously been labeled Area E, which is located east of the upper tell and west of the Flea Market. Area E is the northernmost and the only part of a housing project related to the Ganor Compound, which is situated east of Yefet Street and has not yet been built up. Excavations in this area had begun in 1994 and nearly 16 dunams have been investigated in various seasons of excavations (Table 1). In 1996, forty squares were excavated in Area E, which was subdivided into E1 and E2. This excavation was suspended before completion due to budget restrictions. In 1999, the area was backfilled by the owner at the request of the IAA after a limited part in the northern section of Area E1 (six squares) was excavated down to bedrock. A small excavation was conducted in 1999 within a building known as 'Bet November', prior to the reinforcement of its foundation. Between 2000 and 2006 several additional excavations were carried out, revealing a Byzantine bathhouse in Area H, situated in the southeastern part of the Ganor Compound.

Table 1. Excavations at the Ganor Compound

| Area | Permit | Year | Institution | Excavator | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A, B, C | A-2118 | 1997 | IAA | A. Feldstein | Trial excavation |
| A, B, C, D, E | A-2374 | 1995-1996 | IAA | M. Peilstöcker | ESI 20:47*-49* |
| Bet November | A-3163 | 1999 | IAA | M. Peilstöcker |  |
| E | A-3135 | 1999 | IAA | M. Peilstöcker | Shooting the movie 'The Body" |
| F | B-211 | 2000 | TAU | A. Fantalkin |  |
| F | B-245 | 2002 | TAU | A. Fantalkin |  |
| H | A-3908 | 2003 | IAA | M. Peilstöcker and A. Gorczalzany |  |
| H | A-4751 | 2006 | IAA | M. Peilstöcker and A. Gorczalzany |  |
| E | A-5048 | 2007 | IAA and UCLA | M. Peilstöcker and A.A. Burke |  |

Before resuming the excavations in 2007, modern buildings situated close to Yefet Street were dismantled. The 1995 excavation grid was reinstated and the refill that covered the old squares was manually removed. The area was subdivided again, this time using Roman letters, into Area El (square rows 23-27) and Area Ell (square rows 17-22; Fig. 1). More than 60 squares were excavated and the following description gives the preliminary excavation results according to the general stratigraphy in its local field setting (Table 2).

Table 2. Stratigraphy of Area E (2007 season)

| Stratum | Period | Dates | Phase | Remarks |
| :---: | :---: | :---: | :---: | :---: |
| 0 | Modern | Post 1947 |  |  |
| I | Mandatory | $\int^{1917-1947}$ |  |  |
| 11 | Ottoman | \|1517-1917 | 2 | Late phase: architecture |
|  |  |  | 1 | Early phase: argriculture |
| III | Mamluk | $l^{1250-1517}$ |  | Tombs only |
| IV | Crusader | 1099-1250 | 2 | Thirteenth century Ce |
|  |  |  |  |  |
| V | Early Islamic | $\begin{aligned} & 638-1099 \\ & \hline C E \\ & \hline \end{aligned}$ |  |  |
| VI | Byzantine | 324-638 CE |  |  |
| VII | Roman | $\\| 63 \text { BCE- } 324$ | 2 | Settlement remains identified only during the 2007 season |
|  |  |  | 1. | Tombs only |
| VIII | Hellenistic | $\begin{aligned} & \begin{array}{l} 332-363 \\ \text { BCE } \end{array} \\ & \hline \end{aligned}$ |  |  |
|  |  | 586-332 |  |  |


| $\mid X$ | Persian | BCE |  |
| :--- | :--- | :--- | :--- |
| IC | Stratum identified in the 2007 season only |  |  |
| $X$ | Iron Age | $1200-586$ <br> BCE |  |
| $X$ | Late Bronze <br> Age | $1530-1200$ <br> BCE |  |

## The Late Bronze and Iron Ages

Contrary to the results of the 1996 season, no tombs or architectural finds from these periods were discovered. Yet, a limited amount of Iron Age pottery was found during the excavations and it seems that the area excavated in this season was not occupied during these periods. It should be stressed that in both neighboring areas, D and B, excavated in 1995, as well as in recent excavations in neighboring streets (Permit Nos. A-4675 in 2005; A5463 in 2008), architectural layers of Iron II were identified (Y. Arbel and O. Segal, pers. comm.).

## The Persian Period (Stratum IX)

Although large quantities of Persian pottery had been found in previous excavations of the Ganor Compound, architectural remains that could be associated with a Persian-period phase were exposed only during the current season. Remains of a massive building, whose foundations penetrated into kurkar bedrock, were found in Sqs $\mathrm{KL} / 20$, 21. Little can be said about its function, due to the limited area of exposure, yet the massive walls suggest a public capacity.

## The Hellenistic Period (Stratum VIII)

A layer dating to this period was identified; pottery was recovered from all the excavated squares, but architecture was preserved only in the southern part. It seems that later construction, particularly during the Byzantine period, seriously damaged earlier architectural remains in this area. Narrow walls built of fieldstones showed the same characteristics, as seen in previous excavations, pointing to domestic architecture. A destruction layer marked the end of this occupation. Future analysis of the finds will hopefully assist in dating this layer and link it to particular historical events that occurred in Jaffa at this period.

The Roman Period (Stratum VII)
The construction of Caesarea's port and the growth of Apollonia-Arsuf coincided with a settlement crisis at Jaffa It seems that the excavated area was no longer settled but used as a cemetery, as several tombs indicated. Since these tombs had cut into earlier layers and were covered by later layers, their stratigraphic position was clear.
Most were cist tombs of different sizes, but simple pit burials and a sarcophagus burial were found as well. The finds in the tombs included pottery and glass vessels that dated to an early phase of the Roman period.
The use of the area as a burial ground in this period was evidenced in former excavations, yet it became clear in this season that the re-occupation of the area as a domestic quarter had begun in the Roman period. A layer of architectural remains, which could be dated by pottery found on floors to the third or early fourth centuries CE (Stratum VIIB), was excavated.

## The Byzantine Period (Stratum VI)

An intensive occupational layer that featured mosaic floors and dated to the Byzantine period was excavated in 1996. Additional excavations in the vicinity produced remains of public activities, namely a bathhouse in Area H and industrial activities, i.e., winepresses in the Flea-Market area.
The mosaic floors in the area were completely excavated, conserved and removed during this season. The process revealed that the floors belonged to a public building, whose walls had been robbed. The robber trenches enabled a reconstruction of a three-winged basilica-type building whose central room had an apse. Since the building was oriented east-west and contained numerous fragments of marble architectural elements, its interpretation as a church seems plausible. Opposite the building were the remains of a plastered courtyard whose limits remained uncertain. The marble architectural elements scattered in the area included stone vessels, column bases and capitals together with a large quantity of roof tiles. A limekiln dating to the Crusader period offered another explanation for the presence of marble elements in the excavation. Jaffa lies in a region of kurkar sandstone, which is unsuitable for plaster production, whereas the marble elements were a viable raw material for producing lime, as known at other sites, such as Caesarea. Unlike the bathhouse and the winepresses mentioned above, it seems that the building went out of use soon after the end of the Byzantine period, as indicated by several wall fragments and installations dating to the following period.

## The Early Islamic Period (Stratum V)

The Umayyad and Abbasid periods were heavily represented in the ceramics, coins, glass vessels, bone tools and other small finds recovered from the Ganor Compound. The architectural remains, however, were very badly preserved and consisted mostly of parts of installations that had been located below the floor levels of their buildings, which could not be identified. In all likelihood, this situation was the result of leveling activities undertaken at the beginning of the Crusader period.

## The Crusader Period (Stratum IV)

Crusader remains were discovered in every excavated square and at least two phases were discerned in the architectural record, although the ceramic evidence suggested an uninterrupted occupation until the end of the period. The architectural remains show a high degree of urban planning, although in many cases only the robber trenches or the lowest foundation courses of walls were found. It was further noted by the absolute floor elevations that several terraces were established to accommodate the natural slope, which descended from southeast to northeast, prior to the construction of the buildings. No specific function could be determined for the buildings, but the width of the foundations and the size of some buildings indicate monumental architecture of public nature that most probably was more than one story high. This impression differed from the one that emerged from earlier excavations at the site, whereby most of the architecture probably belonged to domestic complexes, as also indicated by the ceramics.

## The Mamluk Period (Stratum III)

Following the Mamluk destruction of Jaffa, the excavated area was abandoned. The Crusader-period remains were found covered by an almost sterile layer of sand. The field geological analysis determined that these sands accumulated naturally over a long period of time, due to the abandonment of the area. However, it seems that the area was used sporadically as a burial ground and possibly as a garbage dump, since it was located outside of what was then the small settlement of Jaffa. A similar situation was observed in the Flea-Market excavation.

During an early phase of the period this area was used for agriculture, as attested by irrigation channels that were found during the 1996 season. This use was also documented in historical maps, showings wells and indicating the agricultural use of the land. During a later phase, a building was constructed in the northeastern part of the excavated area. It marked the eastern side of Yefet Street and was built on vaulted foundations, typical of this period. It most probably dated to the late nineteenth century CE after the medieval fortification system, which consisted of a wall and a ditch, went out of use. The ditch was filled up (today's Yefet Street) and buildings were constructed on both sides using the stones of the dismantled city wall.

The Mandatory Period (Stratum I)
During the reorganization of the Flea-Market area in the middle of the 1930s, which was initiated by the government of the British Mandate, the Ottoman building was replaced by a new complex, built on solid concrete foundations that were removed during the excavations. It was observed then that earlier remains had been disturbed in various places.

The 2007 season in the Ganor Compound continued the investigation of the largest area excavated in Jaffa to date. The results of this excavation need to be understood in conjunction with earlier excavations in the Ganor Compound and in the nearby Flea Market. It became obvious that the Persian or early Hellenistic settlement included well-planned, massive architecture that implied the existence of public buildings in this part of the city. Another important result of the renewed excavations was the identification of a Late-Roman horizon. Although the precise dating of this layer remains obscure until the final analysis of ceramics and coins is performed, it seems that after a settlement hiatus at the beginning of the Roman period when the area was used as a burial ground, the vicinity was resettled before the beginning of the Byzantine era.


1. Area designations in 2007 and remains of the Roman, Crusader and Ottoman periods.

2. Location of Qishle compound in Yafo's modern town center.

3. Aerial view at the conclusion of the excavations.

4. Hellenistic corner incorporated into Crusader wall, looking east.

5. The Crusader period. leopard depicted on imported glazed ceramic vessel.

6. Rounded protrusion (left) of late eighteenth century fortification, looking south.

## (Volume No. HA-ESI 121 (2009

## Yafo, the Qishle Preliminary Report

## Yoav Arbel

During March-April, June-August and September-November 2007, a salvage excavation was conducted at the Police Compound (Qishle) in central Yafo (Jaffa; Permit No. A-5037; map ref. NIG 177076-154/662605-667; OIG 127076-154/162605-667), prior to the construction of a new hotel. The excavations, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Orchidea Hotel Group, was directed by Y. Arbel, with the assistance of L. Rauchberger, M. Cohen, I. Kornfeld, R. Korin, L. Talmi and D. Golan (area supervision), S. Ya'aqov-Jam (administration), V. Essman, V. Pirsky, R. Mishayev and T. Meltsen (surveying), T. Sagiv and C. Amit (photography), Y. Nagar (physical anthropology), A. de Vincenz, E.J. Stern, G. Finkielsztejn, K. Burke and P Gendelman (ceramic finds), O. Barzilai (flint finds), Y. Gorin-Rosen (glass finds), R. Kool (numismatics), K. Rafael (metal finds) and M. Sade and I. Kotlav (zooarchaeology).

The Qishle compound is located at the northwestern corner of the modern Clock-Tower square in central Yafo (Fig. 1). The compound consists of three orthogonal two-storied buildings and two yards (Fig. 2). It was built during the 1880's and 1890's by the Ottoman authorities as police headquarters and prison, retaining these functions under the British Mandate and the State of Israel. In 2005, the Israeli police moved elsewhere and the Qishle was subsequently sold to a private investor for the construction of a boutique hotel. The site has never been excavated, but extensive archaeological work in its vicinity exposed remains dating from the Iron Age to the Ottoman period.

The excavations at the Qishle compound were conducted under the floors of rooms in the three main buildings that were singled out for conservation as part of the hotel, and throughout the front and back yards, once they were cleared of makeshift structures built by the British and Israeli police. Architectural remains and artifacts from the Hellenistic (Stratum VIII; fourth-second centuries BCE), Crusader (Stratum IV; twelfth-thirteenth centuries CE) and Ottoman periods (Stratum II; eighteenth-nineteenth centuries CE) were exposed (Figs. 3, 4). The strata numbering follows the general stratigraphic sequence of Yafo (HA-ESI 121). While the Hellenistic and Crusader remains indicated a civilian domestic occupation, the Ottoman architecture was of a military nature and corresponded to textual, cartographic and artistic records left by travelers and officers who had visited Yafo during the late eighteenth and nineteenth centuries $C E$.

## Stratum VIII

The relatively poor representation of remains from the Hellenistic period is probably due to lack of preservation and later construction that damaged the earlier remains. The true scale of utilizing the area during this period remains unclear. The foundations of several modest walls built of roughly cut local kurkar stones were found at the back yard of the compound, as well as fragmentary remains of brick-built structures. The remains could not be integrated into a feasible plan of a specific building and no floors survived. Some of the walls were incorporated into buildings of the Crusader period (Fig. 5). This secondary utilization of Hellenistic masonry stones for medieval construction partly explains the fragmentary preservation of Hellenistic walls. The finds consisted of pottery, including several stamped handles and fragments of a figurine, as well as two coins, one of Ptolemy II (285-246 BCE; IAA 119144) and a later Hellenistic coin that could not be dated. A relatively large stone-built pedestal (diam. 1.2 m ) of Hellenistic date was discovered in the front yard of the compound, along with remains of a hearth. The presence of trees and later graves prevented a thorough exposure that might have placed these features within a more comprehensive context.

## Stratum IV

Most architectural remains of the Crusader period were discovered in the back yard of the compound, after the removal of a massive fill that was deposited during the late Ottoman period. The remains comprised several walls, stone and packed-earth floors and two water cisterns. Medieval historical records attest to several battles between the Crusaders and the Muslims by the eastern walls of Jaffa. However, no traces of fortifications from this period were found in the Qishle compound and the medieval wall line is apparently farther west and closer to the ancient mound.
No cohesive plan of any building could be formed from the surviving architecture. Still, the preserved walls corresponded to the general outline of domestic Crusader houses in medieval occupation layers elsewhere in Yafo (HA-ESI 117; HAESI 120). Roughly dressed local kurkar stones were used for construction, with some mortar added for consolidation. Most floors were of packed earth, usually on bedding that was solidified with masses of shells. A single floor at the southern part of the back yard was paved with large and finely cut slabs of beach rock and kurkar. An underground water cistern that had a round opening with a ring of stones above it was in the center of the floor and a stone-lined drain system was fitted below the pavement (Fig. 6). Another vaulted cistern was discovered in the western part of the back yard. A Crusader wall and two plastered installations from the same period were exposed at the front yard.
The Medieval artifacts consisted of an extensive and varied ceramic assemblage, several local and foreign coins and some arrowheads. The pottery vessels included both local and imported wares, which showed European, Near Eastern and North African production centers (Fig. 7). Most of the coins were minted by local and European Christian rulers, although some Ayyubid and Mamluk mints were also noted. The relatively poor preservation of the Crusader occupation in the Qishle compound can be explained by the systematic Mamluk destruction, as attested by historical sources of the period, as well as by intensive defensive construction in late Ottoman times.

Stratum II
The Mamluks had completely razed Jaffa, as was their custom in many of the towns and fortresses they had conquered from the Crusaders. The city was left in ruins until the seventeenth century CE and regained its full status as a commercial center only during the second half of the eighteenth century CE, when it was also fortified. The remains of two fortification phases were exposed. The earlier phase was dated to the late eighteenth century CE and consisted of a rounded protrusion from the walls (Fig. 8), the likes of which appear in the Jacotin map, drawn by a military engineer with Napoleon's army that besieged and conquered Jaffa in early March of 1799.
The later phase of Ottoman fortification was part of an early nineteenth century CE octagonal bastion at the northeastern corner of the city walls (Fig. 9). These new fortifications were constructed by the Ottoman authorities with British assistance after Napoleon's retreat, to replace the earlier walls that were attacked and subsequently destroyed by the French army. The bastion appeared in drawings and maps from the 1840s to the 1860s. Along with the rest of Jaffa's fortifications it became derelict during the second half of the nineteenth century CE and was mostly dismantled prior to the construction of the police and prison compound in the 1890s.
The extensive work invested in leveling the ground for this latest construction was clearly attested to throughout the excavations, represented by c. 4 m of intentionally deposited fill, which was rich in artifacts from the later part of the nineteenth century CE. The latter included characteristic Gaza Ware pottery, numerous fragments of European porcelain that had datable producer marks in many cases (Fig. 10), glass and stoneware bottles, iron scarps and coins minted by various Ottoman Sultans, as well as nineteenth century coins that arrived at Jaffa from Europe and North Africa. The three main structures of the Qishle compound were built, as soon as the ground reached a satisfactory elevation. The walls were erected on structural foundation arches-an architectural phenomenon that prevailed in late Ottoman construction in Jaffa. In some cases, the foundations destroyed earlier graves that were probably part of the cemetery, which existed north of Jaffa from at least the late eighteenth century, and had spread into the Qishle compound during the decades between the abandonment of the fortifications and the construction of the police compound.

## Stratum I (the twentieth century CE)

Once having occupied Jaffa in 1917, British authorities established their own local police headquarters and prison at the Ottoman Qishle compound. During their 30-year occupation, they made significant utilitarian alterations to the buildings. Concrete towers, balconies and staircases were added where necessary, with little or no consideration for Ottoman decorative efforts. Military buttons, coins and various types of containers and mechanical particles of glass, tin and iron were associated with this stratum, as well as a cache of $c .80$ guns found buried in the back yard (Figs. 11, 12). The cache included British, German and American issues, as well as dozens of double-barreled shotguns. These weapon types were in standard military and civilian use during the late nineteenth and early twentieth centuries CE. The guns were purposely crippled and some were burned. This detail and the location of discovery within the police compound suggest that the rifles were confiscated and systematically disposed of. This might have occurred during sweeps for illegal arms carried out in the early 1920s, when unrest and violence transpired between Jaffa's local Arab inhabitants and the British forces after Jewish residents were attacked and murdered.

The Qishle excavations allowed a viable reconstruction of the history of this central site in Jaffa. Despite its proximity to the mound and the harbor, no evidence for a pre-Hellenistic occupation was discerned. The area may have been left vacant because the roads, leading to and from the harbor, intersected it. The apex of the Hellenistic phase was during the fourth and third centuries BCE, although may have lasted, in poorer form, into the second century BCE. No traces of habitation during the Hasmonean and Roman periods were found. Only a few scattered potsherds and coins from the Byzantine and Early Islamic periods surfaced in the Qishle compound, unlike various industrial activities from these periods that were revealed in the excavations of the adjacent Flea Market compound. During the Crusader period, the compound was once again fully occupied, probably by domestic units and affiliated gardens, storage facilities and smallscale industry, until its destruction during the Mamluk takeover and subsequent abandonment. The last two centuries of the Ottoman period saw an important segment of the Ottoman fortifications that defended the access to the harbor in the compound, until developments in political and military conditions rendered them unnecessary. By then, it was determined that military and police functions in Jaffa would be better served by headquarters and prisons that were built where the bastion previously stood.
The excavations of the Qishle compound filled a significant gap in our knowledge of the history and archaeology of Jaffa's modern center, linking data that accumulated in excavations of its immediate environs. It is now intended to incorporate the main architectural features in the future hotel and hopefully to display assorted finds in its premises.


1. Location of Qishle compound in Yafo's modern town center.

2. Aerial view at the conclusion of the excavations.


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4. Back courtyard, plan and sections.

5. Hellenistic corner incorporated into Crusader wall, looking east.

6. The Crusader period, stone-paved surface, cistern and underground drain, looking south.

7. The Crusader period, leopard depicted on imported glazed ceramic vessel.

8. Rounded protrusion (left) of late eighteenth century fortification, looking south.

9. Northeastern part of nineteenth century bastion, looking southwest.

10. Fragment of French porcelain dish.

11. Gun cache at discovery.

12. Rifle from the gun cache.

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## Yafo, Kikar Qedumim

 Preliminary Report

Tel Yafo, map of main excavations' areas.

2. Area C, location of probes within Visitor's Center.

3. Probe 1 at beginning of excavation; Probe 2 at bottom behind southern face of W1005, looking southwest.

4. Probe 1 at end of
excavation; note
discoloration of W1005
where debris below
L1000/L1007 was located.
looking north.

Aaron A. Burke and Martin Peilstöcker
12/3/2009
During July 2008, the first season of excavations was initiated by the Jaffa Cultural Heritage Project (JCHP) in Yafo, Qedumim Square (License No. G-35/2008; map ref. NIG 453-662387/768-176676; OIG 126676-768/162387-453). The excavation, directed by A.A. Burke (photography) of the Cotsen Institute of Archaeology at the University of California, Los Angeles (UCLA) and M. Peilstöcker (photography) of the IAA, co-directors of the JCHP project. The excavation staff included K. Keimer (area supervision), G. Pierce (area supervision, surveying), A. Hajian (surveying), O. Tsuf (pottery consultation), S. Krapiwko (IAA archive), N. Meirowitz (Jaffa Museum), E. Meirowitz (Visitor's Center Qedumim Square), Y. Klein (Old Jaffa Development Corporation) and M. Ajami (Tel Aviv district, IAA). Fieldwork was carried out by UCLA undergraduates and a number of volunteers.

Archaeological work in the area of the Qedumim Square, located opposite St Peter's church, had begun in 1961 by J. Kaplan on behalf of the Jaffa Museum of Antiquities. The excavation area was labeled Area C and had been one of larger areas excavated on the summit of the tell (Fig. 1). After a second season in 1965, work was resumed by E. Brand on behalf of the IAA (ESI 14:81-83) to prepare the area for the construction of a roofed visitor's center.
The renewed excavations of the JCHP included soundings within the Visitor's Center and outside on the eastern side of the square. Their main goal was to clarify questions concerning the stratigraphy that related to J . Kaplan's excavations in the area and to examine the possibility of reaching earlier stratigraphic remains from the Bronze and Iron Ages. The excavations outside, between the Visitor's Center and Mifraz Shelomo Street to the east, were aimed at gaining a better understanding of the latest remains there, following a request of the Old Jaffa Development Company which intends to reclaim space on this part of the tell.
The area's overall designation as Area C was retained as were Kaplan's square designations, which could be easily identified on his unpublished plans.

## Excavations inside the Visitor's Center

The lowest levels reached in the previous excavations had a feature that was defined by Kaplan as a courtyard of a catacomb, surrounded by walls of ashlar masonry on three sides. Since the area of this courtyard was too small for a deep sounding, excavations concentrated on cutting parts of a stepped structure, which limited the courtyard toward the west. In all, four probes were excavated within the lines of the conspicuous ashlar masonry, which can be traced across the entire excavation area today and was dated by Kaplan to the early Hellenistic period. Although the probes were excavated with primary reference to these wall remains, they can also be localized within Kaplan's excavation squares, namely Probe 1 within Squares CC101 and DD101, Probes 2 and 3 within Square DD101 and Probe 4 spanned Squares CC100 and 101 and DD101 (Fig. 2).
Probe 1 was oriented northwest-southeast along the elevation of the northern ashlar wall (W1005), which disappeared on the west into layers of earth and across the stepped stone feature (L1000/L1007) that abutted the southern face of W1005. At the outset of our excavation, no evidence for the western end of W1005 was visible. However, in the course of fieldwork, the upper course of an additional wall (W1006) was identified to the west (Fig. 3). Ultimately, W1006 was completely exposed, standing nine courses high, while W1005 stood even higher to twelve courses high (Fig. 4). These two walls appear to constitute the western and northern limits of both a first-floor room and a second-floor room above the level of the doorway at the eastern end of W1005, which Kaplan had exposed in 1961 as part of the so-called cellar or catacomb. With the discovery of W1006, the dimensions of the courtyard could be reconstructed, something Kaplan was not able to do since he left the western half of the room unexcavated. The remains of a plaster floor that had probably covered this entire space were also revealed.
Aside from exposing the complete elevations of the northern and western walls of this room, our excavation allowed us to identify the enigmatic stepped stone structure (L1000/L1007) that had cut across the center of this space (see Figs. 2, 4). This structure turned out to be a modern mantle of stones, as evidenced by modern debris underneath the stones. It probably dated to the 1970s and was intended to prevent the further erosion of the lower courses of an Early Romanperiod wall that was built across this room from its southern to northern walls, 0.6 m to the east of and parallel to W1006. The Early Roman fill (L1012; depth 2.18 m ) included in its last 0.5 m a large quantity of dressed ashlars that had collapsed from W1006, which is distinctly broken away from top to bottom. In addition to Hellenistic and Early Roman pottery, the Early Roman fill contained two nearly complete lamps and a bronze bracelet (?).
The excavation of Probe 1 revealed the full dimensions of the central courtyard or room, which was constructed from ashlar headers and stretchers (length of each side 3.4 m ; height c. 2.5 m ). Along the north, east, and south elevations, which had already been exposed by Kaplan, ledges ran along the ceiling of the first story to the north and east, upon which the wooden beams of the second story floor had rested (see Fig. 4). A wall of undressed stones (W1024) that was on a similar but not identical line to W1005, suggesting an earlier phase of construction, was exposed at the base of W1005. Based on the masonry of W1024 and its comparison with Persian masonry exposed by Kaplan in his Area A, as well as the fact that W1024 was earlier in date than W1005, this sub-floor feature is tentatively assigned to the Persian period and thus the earliest feature known in Area C.
Probe 2 was opened to the north of W1005 with the purpose of identifying its northern face (see Fig. 3). Unfortunately, no such identification was possible since it appears to have been robbed out, collapsed or both, like the western face of W1006. Consequently, this probe was terminated shortly after it had begun.
Probe 3 was undertaken to identify the west face of W1006. After the exposure of two courses of the eastern elevation of W1006 it was evident that something had caused the wall to collapse. Only during the later excavation of Probe 1 it had become apparent that the entire southern extent of W1006 had collapsed and/or been removed to the level of the floor. The probe was also instrumental in our attempts to relate the Roman-period wall at the west end of the probe to the earlier Hellenistic (?) W1006. Poorly preserved traces of a plaster floor were detected in the probe, the bedding fill of which (L1010) included a fragment of an Early Roman period Judean limestone cup, although no occupational debris was discerned on the floor.
Probe 4 was opened to the north of W1005. The purpose of this probe was to determine if the room to the north of W1005, which was accessed via the doorway at the eastern end of W1005 (see Fig. 4), had a ceiling that would need to be removed prior to the continuation of the excavation in 2009. It was revealed, however, that no ceiling, or floor of the second story, remained intact in this room, although it was filled with a substantial amount of ashlar masonry debris (L1013). The probe was discontinued after reaching the lower edge of the stone lintel on the inside of the doorway on the north side of W1005. Despite the small amount of datable finds from this locus, it seems that this fill, as on the south side of W1005, dates to the Early Roman period. It is uncertain how this room functioned, but it is possible that this narrow space led from the doorway north and up a set of stairs to a second story.

## Excavations in Qedumim Square

An excavation square was opened outside of the Visitor's Center on the east side of the Qedumim Square. Although the area was ready for manual exploration only toward the end of the season, some architectural features were noted immediately upon preparing the new surface for excavation. These remains indicated that architectural remains were present directly below the modern paving of Qedumim Square. Based on the stratigraphic sequence published by Kaplan for Area C and the relative levels of architecture within the Visitor's Center, it is probable that the exposed architectural remains belong to the Early Islamic period. However, due to the limited time available for this square, very few potsherds were recovered from this sounding and a more precise dating is not yet available.

The results of the 2008 excavation season will undoubtedly assist in a better understanding of the remains excavated by Kaplan. This is essential for the ongoing publication work of the classical remains at Jaffa by O. Tsuf and the early remains at the tell by M. Peilstöcker and A.A. Burke, as part of the JCHP activities.
The current season will also aid in establishing a strategy for future excavations, necessary to reach the earliest occupation layers of the Bronze or Iron Ages in this area. It seems that an unexpected byproduct of the current excavation is the high quality of preserved architecture from the Hellenistic period in the area.


1. Tel Yafo, map of main excavations' areas.

2. Area C, location of probes within Visitor's Center.

3. Probe 1 at beginning of excavation; Probe 2 at bottom behind southern face of W 1005 , looking southwest.

4. Probe 1 at end of excavation; note discoloration of W1005 where debris below L1000/L1007 was located, looking north.
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Yafo, Marzuk and 'Azar Street
Final Report
Lior Rauchberger

5. Location map.

6. Square A, plan and section.

7. Wall 101, looking north.

8. Pottery.

During January 2007, a salvage excavation was conducted on Marzuk and 'Azar Street in Yafo (Jaffa; Permit No. A-5016; map ref. NIG 177388-401/624498-504; OIG 127388-401/124498-504), after ancient remains were exposed in a probe trench that was opened prior to the installation of water and sewer lines. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Tel Aviv-Jaffa municipality, was directed by L. Rauchberger, with the assistance of S. Ya'aqov-Jam (administration), V. Essman and V. Pirsky (surveying and drafting), T. Sagiv (field photography), O. Ackermann (geomorphology), E. Jakoel (probe trench), M. Peilstöcker (archaeological guidance), P. Gendelman (ceramic consultation) and M. Shuiskaya (pottery drawing), as well as Y. Arbel, M. Ajami, D. Barkan, D. Golan, R. Asis, R. Ben Ezra and O. Abadi.

The excavation was carried out along the eastern part of the street, near the intersection with Jerusalem Boulevard (Fig. 1). Two previous excavations had been conducted further down the street to the west, revealing fragments of pottery vessels from the Hellenistic, Roman and Byzantine periods alongside animal bones and tesserae (HA-ESI 111:39*-40*; Fig. 1:1), and remains of tombs, a septic pit and foundations of a large building that dated to the later part of the Ottoman period (HA-ESI 113:131*; Fig. 1:2).

After removing the asphalt and using a backhoe that dug to a depth of 1.1 m , two squares ( $\mathrm{A}, \mathrm{B}$; each $4.5 \times 5.0 \mathrm{~m}$ ) were opened along the southern sidewalk of the street.

In Square A, a section of a broad wall (W101; at least 1.2 m wide, height 0.5 m ; Figs. 2, 3) was uncovered along 2.2 m . The wall was oriented north-south and continued north, beyond the limits of the excavation area. Only the western side of W101, which was preserved three-four courses high that slightly inclined to the west, was exposed. It was built of fieldstones mixed with roughly hewn kurkar stones of various sizes (average size $0.08 \times 0.12 \times 0.20 \mathrm{~m}$ ), among which a large block of beach rock $(0.11 \times 0.31 \times 0.47 \mathrm{~m})$ was laid. This combination of different types of stones may indicate that they were in secondary use when placed in the wall. West of W101 and parallel to it was a collapse of fieldstones and coarsely hewn kurkar stones that probably originated from the wall, in whose vicinity small pieces of white plaster were also found.

In Square B, a refuse pit that contained modern building debris was exposed.
The pottery finds recovered from the layer of soil above the wall and the collapse included a gray or black slipped bowl from the Hellenistic period (third-second centuries BCE; Fig. 4:1) and a zir jar from the Middle Ages (about eighth-twelfth centuries CE; Fig. 4:9). The ceramic finds from the collapse and the fill below it, as well as from the fill that abutted the western side of the wall, included a Galilean bowl (Fig. 4:2), an imported fry pan (Fig. 4:3), two basins (Fig. 4:4, 5), a krater (Fig. $4: 6$ ), a bag-shaped jar (Fig. $4: 7$ ) and the base of a saqiye jar (Fig. 4:10), which dated to the Late Roman period (first-fourth centuries CE), as well as a bag-shaped jar (Fig. 4:8) and a fragment of a roof tile (Fig. 4:11) from the Byzantine period (sixth-seventh centuries CE). The well-preserved pottery fragments indicate that they did not originate in the alluvium, but rather derived from fill material. Since most of the ceramic fragments were dated to the Late Roman period (first-fourth centuries CE), it seems that this should also be the date of the wall.
The region where the wall was discovered is located beyond the built boundaries of the city of Jaffa in antiquity and northwest of a seasonal swamp that existed east of the city until the end of the nineteenth century CE. It is difficult to determine the use of W101 and it is unclear whether the entire width of the wall was preserved or only its core, while its outer faces were plundered. The wall may have been built this way originally, as either a retaining wall or as part of an agricultural installation that did not require careful construction.



1-1
2. Square A, plan and section.

3. Wall 101, looking north.

4. Pottery.

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## Yafo Harbor

# Preliminary Report 



1. The harbor and the
excavation, looking north.

2. A section of the Crusader wall, looking east.

3. Yafo and the Ottoman seawall in center of harbor. looking east (photographed by Felix Bonfils, 1875).

4. The broad staircase. aerial view.

5. The center of Yafo harbo at the end of the excavation. aerial view.

Elie Haddad
25/8/2009
During July-December 2007, a salvage excavation was conducted within the precincts of the Yafo harbor (Permit No. A-5198; map ref. NIG 17656-67/66237-52; OIG 12656-67/16237-52; Fig. 1), prior to the construction of a promenade. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Tel Aviv-Yafo Municipality, the mishlamah to Yafo and Yafo Harbor, was directed by E. Haddad, with the assistance of U. 'Ad (Area A supervision), H. Torge (Area D supervision), E. Jakoel and L. Talmi (Area E supervision), S. Ya'aqov-Jam and E. Bachar (administration), D. Porotzky and V. Pirsky (surveying and drafting), T. Sagiv (field photography), Skyview Company Ltd., (aerial photography), Y. Nagar (physical anthropology), I. Ktalav (mollusks), E. Ayalon (Marseilles roof tiles), laborers from a manpower company and D. Barkan, M. Ajami and L. Rauchberger of the IAA central region (inspection after excavation). Thanks are extended to R. Baransi of the Shtang Company for valuable cooperation, E. Eden the harbor architect, the sea-scout team, the workers in the harbor and the residents, as well as the fishermen who took a great interest in all that was going on.

The outline of Jaffa harbor had been altered during the British Mandate era, in 1934-1936. A poured concrete wharf and a series of the breakwater's concrete cubes to the west, that reached Andromeda's Rock, were built. The British attempted to turn Yafo harbor into a deep-water port by expanding it to the west through land reclamation, building the wharf along its western border and making it deeper.
Five areas (A-E; Fig. 2), between the harbor's northern gate and Hanger 1, were opened. It became apparent at the beginning of the excavation that the area was severely disturbed by numerous modern infrastructures. A previous excavation had partly documented the sewer installed within the precincts of the wharf (HA 65-66:2526 [Hebrew]) and at the end of the 1990s, three excavations were conducted on Ha-'Aliya Ha-Sheniya Street, prior to infrastructure development (HA-ES/ 111:40*-41*; 114:53*; Permit No. A-2848).
The excavation exposed five strata that indicated the main construction phases of the harbor walls from the Crusader period until the British Mandate era. The strata are described from earliest to latest.

Stratum V is dated to the Crusader period. A northeast-southwest oriented wall, built of medium-sized ashlar stones with whitish bonding material (length c. 22 m ; Fig. 3), was exposed in Area A, c. 1 m west of the Greek Orthodox Church compound line. The face of the wall was slanted and carefully constructed (c. 8 courses; preserved height above sea level c. 2.3 m ). J. Kaplan excavated sections of this wall in 1978 and dated them to the Crusader period (ibid., HA 65-66). North of Hanger 1 in Area E, an impressively constructed fortification that was probably part of the Crusader fortress that protected the harbor from the south, was exposed (Figs. 4, 5). The 3-4 bottom courses of a wall, aligned east-west and built of massive kurkar stones, were exposed. The wall was built as a glacis (thickness c. 2 m ), which slightly sloped downward and reached the level of the sea. This was the northern wall of the fortress that extended as far as the waterline. South of it, part of a wide room with a thick plaster floor, set atop a bedding of small fieldstones with whitishgray mortar bonding material, was exposed. The room was subdivided in the Ottoman period. Leaning up against the northern side of the fortress wall and negating it was a massive foundation of small and medium-sized fieldstones that were meticulously bonded with pale gray and light red mortar. A paving that dated to the Ottoman period was built on top of the foundation.

Stratum IV: A wall built of medium-sized ashlars that were bonded with whitish mortar was exposed in Area A, c. 1 m from the wall of Stratum V. The wall was poorly preserved (min. width 2 m , height c .2 m ) and it probably dated to the beginning of the Ottoman period. The continuation of the wall was uncovered in Area D; the upper part of one of its section was overlain with a paved surface that apparently served as a wharf (Fig. 6). The wall was severed by the Ottoman customs house that was built above part of this wharf.

Stratum III is dated to the Ottoman period. A wall (Fig. 7) was exposed along the entire section between the southern border of the Mandatory customs house and Hanger 1. A probe trench dug east of the wall revealed that it was located c. 2 m west of the wharf, which was ascribed to Stratum IV. The wall consisted of medium-sized kurkar ashlars. Larger and longer ashlar stones were used in the bottom courses, as well as ashlars with drafted margins that were probably in secondary use from the Crusader period. The concave outline of the wall did not extend in a straight line from north to south and it was preserved to at least 2 m high above the waterline. The wall stood to its greatest height at least until the year 1875, as seen in photographs taken by the Frenchman Felix Bonfils (Fig. 8, courtesy of the Yafo Museum and Eitan Eden, architect of the Yafo harbor).
Remains of the trapezoid-shaped sea fortress (c. $20 \times 30 \mathrm{~m}$ ) from the Ottoman period were exposed in Area E (Fig. 9). A section of an impressive stone pavement that served as the habitation level in the Ottoman period was exposed on the inside of the fortress wall. The pavement was built on top of the massive foundation from Stratum V. An underground storeroom, which bore a vault that did not survive, was exposed; its beginning should probably be dated to the Crusader period.
A round corner of the Ottoman customs house that had cut the wharf of Stratum IV was exposed in Area D (Fig. 10). West of the corner in Area B, a section of its southern wall (preserved height c. 1 m ), set at a slight incline on top of a broad foundation, was exposed. The foundation was cast of pale gray mortar poured in a mold and shows remains of wooden beams at its bottom. The wall was built of medium-sized ashlars and hard thick dark gray mortar was inserted in the joints between the stones to decorate the rectangular outline of each stone (Fig. 11).

Stratum II is dated to the end of the Ottoman period-the beginning of the British Mandate era. The harbor was renewed in this stratum with the construction of a new wharf that is a rather thin, poured layer of gray concrete (c. 5 cm ). This wharf followed above the outline of the Ottoman wall from Stratum III. Staircases with six steps were built along the concrete wharf to facilitate access to the water line for loading and unloading cargo from the boats that arrived at the Ottoman sea wall (Fig. 12). An iron shackle, to which the boats would be tethered, was discovered on the wharf. A chain secured to the front of the wall was exposed in another section and it seems to date to the end of the Ottoman periodbeginning of the British Mandate era.
On the northern part of the wharf, a broad staircase-the 'Sea Gate'-was uncovered; it is the largest one exposed in the harbor so far, through which people and cargo entered Yafo (Figs. 13, 14). A long iron beam was fixed in the wall below the bottom step. Engaged pillars supported the staircase in the north and south. The steps and parts of the northern pillar were constructed in 1917.

Stratum I. The concrete wharf of today's waterline is part of the harbor that was enlarged by the British in 1934-1936.
The five strata are clearly represented by five massive walls that were generally oriented north-south. Their construction progressed westward in historical sequence and they were part of the seawalls of Yafo (Fig. 15). The eastern Crusader wall of Stratum V, in the area of the harbor and close to the present line of buildings, was built of medium-sized ashlar stones with whitish mortar as bonding material. An impressive fortification, which was probably a maritime Crusader fortress that was built of massive kurkar stones, was exposed in the south of the harbor. The wall from Stratum IV, c. 1 m west of the Stratum V wall, is probably dated to the beginning of the Ottoman period. The curved Ottoman wall from Stratum III is very imposing.

Based on the results of the excavation, we are almost certain that the waterline in the Crusader period was c. 20 m east of today's wharf and close to the façade of the buildings in the harbor. A massive fortress whose remains served as a
convenient foundation for the construction of the Ottoman fortress was erected in the Crusader period in the south of the harbor. The fortress, which protruded out into the sea, closed off this part of the harbor toward the south (Fig. 16)
The excavation exposed almost the entire outline of the Yafo harbor in the Ottoman period, whose date of construction is still unknown. Technical difficulties, such as reaching the water level and in most places, the 1978 sewer line adjacent to it, precluded excavating very deep and therefore bedrock was not reached


1. The harbor and the excavation, looking north.


2. A section of the Crusader wall, looking east.

3. The northern wall of the Crusader fortress, looking south.

4. A north-south section of the Crusader fortress, looking east.

5. Stratum IV, a pillar in the wall of the wharf.

6. A section of the Ottoman wall, looking southeast.

7. Yafo and the Ottoman seawall in center of harbor, looking east (photographed by Felix Bonfils, 1875).

8. The northern wall of the Ottoman fortress, looking south.

9. The round corner of the customs house, looking north.

10. The southern wall of the customs house, looking north.

11. Staircases set in Ottoman wall after its upper part was removed, looking east.

12. The broad staircase, aerial view.

13. The southern engaged pillar and part of the broad staircase, looking east.

14. The center of Yafo harbor at the end of the excavation, aerial view.

15. 1875 phtograph superposed on current-day photograph of the harbor.

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Yafo, the Qishle Preliminary Report



1. General plan, including current areas

2. Area C, plan.

3. Area C, base of two Muslim grave platforms. looking west.

4. Area A, the packed earth and plaster laver at the western yard, looking southeast.

5. The spaces in the kurkar bedrock.

Yoav Arbel and Limor Talmi
30/11/2009
During May 2009, salvage excavations were conducted at the old police compound (the Qishle) by the Clock Tower Square in Yafo (Permit No. A-5651; map ref. NIG 177056-154/662605-667; OIG 127056-154/162605-667). The excavations, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Orchidea Hotel Group, were directed by Y. Arbel, with the assistance of L. Talmi and D. Golan (area supervision), S. Ya‘aqov-Jam and E. Bachar (administration), A. Hajian (surveying), A. Peretz (field photography), A. de Vincenz (ceramics consultation), D.T. Ariel and R. Kool (numismatics) and K. Rafael (metal finds).
The excavation completed the major project conducted at the site in 2007 (HA-ESI 121; Fig. 1), focusing on two limited segments, which could not be reached before due to technical reasons. One segment (Area C) comprised a single square $(6 \times 7 \mathrm{~m})$ located at the eastern extremity of the compound, which had previously been occupied by the police front desk (Fig. 2). The second segment (Area A) consisted of two squares and an additional half square at the center of the compound's western courtyard (Fig. 3). Architectural remains were found only at Area C, over an unrelated layer of graves. Both layers dated to the nineteenth century CE. Large quantities of fill, deposited during the later decades of the same century, were discerned in Area A, with no related architecture. The excavation reached kurkar bedrock, overlain with Hellenistic potsherds. Hollows in the rock were investigated as well, but no traces of anthropogenic activity were detected.

Area C. Immediately below the concrete foundations of the police compound, earlier walls built of roughly cut kurkar stones and consolidated with cement-plaster, had emerged, as well as a corresponding plaster floor (L525; Fig. 4) between them. Three walls (width c. 0.5 m ) of this structure were partly exposed, including two long walls (W522, W529) and a perpendicular wall between them (W528). The general orientation of construction was southwest-northeast, deviating from that of the main buildings in the Qishle compound. The northeastern W529 was exposed for only 1.25 m and remained mostly buried in the section; the southwestern W522 could be followed to a length of 4.45 m and the connecting wall (W528) was 1.1 m long. The inner faces of these walls were coated with a layer of plaster (thickness 3 $\mathrm{cm})$. Although the walls were poorly preserved and survived a single course high, they seem to have belonged to a reasonably well-built unit. Related pottery, metals, glass and coins dated to the late Ottoman period (nineteenth-early twentieth centuries CE).
A layer of fill (thickness 1 m ) separated the structure from seven burials discovered in various parts of the square. Five of the graves, which consisted of underground beach-rock slabs deposited over the human remains, were in the sections (Fig. 5).The remaining two graves in the center of the area (L533, L538) showed unusual preservation. The burials at the Qishle, as those in the Clock Tower square and adjoining areas to the north and east, were destroyed in the early twentieth century, reportedly by the Ottoman governor Hasan Bey. The destruction apparently obliterated most of the superstructure, which in traditional Muslim funerary architecture, consisted of one or two stone markers set into a rectangular platform. The human remains and their covering slabs were in many cases left more or less undamaged. The bases of the superstructure platforms in the two graves had, however, remained intact and are, so far, the only such example in the compound's excavations (Fig. 6).

Area A. The excavation was obstructed by the remains of concrete foundations, mainly in the half square that marked the northern limit of the area. These remains (W1126) probably belonged to a structure of British Mandate origin. Many such structures were built on this part of the site, as well as numerous Israeli additions of mostly lighter prefabricated materials. Below the modern level was a fill layer (thickness 0.9 m ), which overlaid a solid surface of packed earth and plaster (L1130, L1137; Fig. 7) and contained late Ottoman ceramics, glass and metal artifacts, as well as several coins. Fill of a similar nature that contained analogous finds was excavated below the solid surface. An exactly matching stratigraphy was discovered throughout the central and western parts of the western courtyard in 2007 (HA-ESI 121). Pottery and other finds in the thick fill above and below the solid surface (L1130) dated to the late Ottoman period. Hence, the solid surface was probably a foundation bed for the Qishle's actual surface, paved c. 1 m higher. The purpose of the solid surface may have been to stabilize the thick, but relatively soft fill that was intended to level the ground in preparation for the construction of the Qishle compound in the 1880s.
The kurkar bedrock, exposed 3.1 m below surface (L1142), was overlain with a sandy layer that contained potsherds from the Hellenistic period. A similar layer, overlaying bedrock, was found in 2007 immediately to the north of the present excavation. No architectural remains could be securely associated with this period during the former excavations at the western back courtyard and none emerged in the course of the present fieldwork.
Exposure of bedrock brought to light what seemed at first as an artificially hewn space, with an apparent straight-angled entrance (Fig. 8). However, excavating the space yielded sterile sand and rock fragments with no anthropogenic materials of any kind. The easily fractured nature of the kurkar rock could have obscured any marks of hewing tools. However, the complete absence of finds and the likelihood that natural elements caused erosion and damage to the soft material, suggest that the space was natural.
The results of the current excavation at the Qishle compound are directly associated with those of the 2007 excavation in the corresponding areas. The structure in Area C indicates obscure limited activity during the brief period between the cessation of funerary utilization and the construction of the Qishle complex. The graves discovered in Area C were of the same type as those uncovered c. 10 m to the west in the same part of the compound. The innovation of the latest discovery was in two aspects. The first was in the physical connection that now existed between the graves at the Qishle and the large historical burial ground to the north of the city. The second was the discovery of some of the graves' superstructures.
The discoveries in Area A fill in a localized hollow space in the plan of that part of the compound. The absence of graves in the excavated area, and the discovery of the Ottoman surface's foundation bed helps define the western limits of the burial ground, as well as the gradual decline of the natural topography that was filled in prior to the construction of the Qishle compound. The completion excavation thus added valuable details to the general framework gained during the main phase of investigation in 2007.


1. General plan, including current areas


$\mathrm{n}^{0} \xrightarrow{2} \mathrm{~m}$
2. Area A, plan.

3. Area C, remains of a late Ottoman structure at the Qishle eastern yard, looking northwest.

4. Area C, beach-rocks slabs sealing a nineteenth-century grave, looking northwest.

5. Area C, base of two Muslim grave platforms, looking west.

6. Area A, the packed earth and plaster layer at the western yard, looking southeast.

7. The spaces in the kurkar bedrock.

## Yattir Forest (B)

## Final Report

Mordechai Haiman


1. Installations, plan and section.

2. Winepress (L100), looking east.

3. Cupmarks (Loci 100/1-3). looking east.

4. Farming Terrace 101, plan and section.

5. Quarry, looking west.

During May-June 2005 a salvage excavation was conducted in the Yattir Forest (Permit No. A-4474; map ref. NIG 20085/60853; OIG 15085/10853), along the route of the separation fence. The excavation, undertaken on behalf of the Israel Antiquities Authority and financed by the Ministry of Defense, was directed by M. Haiman, with the participation of A. Freiberg (area supervision) and A. Hajian (surveying).

## Area A

A bedrock surface ( $20 \times 50 \mathrm{~m}$ ), in which various installations are hewn, was exposed at the top of a hill (Fig. 1). The surface was delimited by a wall (width c. 0.7 m , preserved height c. 0.5 m ). The installations included a winepress (L100) that consisted of a treading floor $(0.2 \times 2.5 \times 3.0 \mathrm{~m})$ and a collecting vat $(0.7 \times 1.0 \times 1.0 \mathrm{~m}$; Figs. 1, 2). A rock-hewn water cistern (diam. of opening c. 1 m , depth c. 2.5 m ) was in the middle of the collecting vat. Fragments of worn potsherds that dated to the Byzantine period were found in the excavation of the winepress. West of the winepress, two large cupmarks (Loci 100/1, 100/2; diam. 0.8 m, depth 0.3 m ) and two smaller cupmarks (Loci 100/3, 100/4; diam. c. 0.1 m ; Figs. 1, 3) were discovered.

## Area B

A cultivation plot $(100 \times 150 \mathrm{~m})$ in the middle of the slope included farming terraces, one of which, built of small stones, was partly excavated (L101; length c. 30 m , height 0.5 m ; Figs. 4, 5). The terrace abutted a field wall that was built of larger stones.
A quarry (L102; $1 \times 5 \times 3 \mathrm{~m}$ ) was excavated at the bottom of the slope. Severance channels (width c. 0.1 m ) were exposed, indicating the large masonry stones $(0.4 \times 1.2 \mathrm{~m})$ that were quarried there. Next to the quarry were a hewn cupmark (diam. c. 0.5 m , depth c. 0.1 m ) and a shallow rock-hewn channel that led to it (Figs. 6, 7).

No pottery vessels were found in the excavation of the installations; however, the potsherds scattered in the area dated to the Byzantine period. It seems that the installations reflected the agricultural activity in this period along the fringes of a settlement, probably Yattir, which was located c. 600 m north of the excavation area.


1-1

1. Installations, plan and section.

2. Winepress (L100), looking east.

3. Cupmarks (Loci 100/1-3), looking east.


4. Farming Terrace 101, looking south.

5. Quarry, plan and section.

6. Quarry, looking west.
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7. Wall 2, plan.

8. Wall 4, plan.

9. Wall 1, looking north.

10. Winepress, plan and section.

11. Winepress, looking east.

During July 2005, an excavation was conducted in the Yattir Forest (Permit No. A-4538; map ref. NIG 20795/58490; OIG $15795 / 08490$ ), along the route of the separation fence. The excavation, undertaken on behalf of the Israel Antiquities Authority and financed by the Ministry of Defense, was directed by M. Haiman, with the assistance of A. Freiberg (area supervision) and A. Hajian (surveying).
The site included an agricultural area delineated by a stone wall, farming terraces, a winepress and a quarry.
The Agricultural Area ( $37 \times 47 \mathrm{~m}$ ) was delimited by fieldstone walls (W2 in the north, Fig. 1; W4 in the east, Fig. 2; W1 in the west, Figs. 3, 4) founded on bedrock at a depth of $0.2-0.4 \mathrm{~m}$ below surface. Within the area were farming terraces (length 3-12 m, width 1 m , height 0.4 m ) and one of them (W3; Fig. 2), which abutted the wall that surrounded the area (W4), was excavated. The farming terrace wall was a row of a single stone course and the terrace fill included earth mixed with small stones.
The Winepress consisted of a treading floor $(2.0 \times 2.1 \mathrm{~m}$, height 0.35 m ; Figs. 5 , 6), a square settling pit $(0.45 \times 0.45 \mathrm{~m}$, depth 0.25 m ), to which a hewn channel (depth 5 cm ) led from the treading floor and a collecting vat ( $0.8-1.0 \times 0.95 \mathrm{~m}$ ) that was connected to the settling pit via a perforation (diam. 5 cm ).
The Quarry ( $10 \times 15 \mathrm{~m}$, height 1 m ), located east of the winepress, contained negatives of stones (height c. 0.25 m ) and severance channels (width c. 10 cm ).

Potsherds from the Byzantine period were scattered in the area and found in some of the excavation squares; however, it seems that the excavated remains dated to different periods. Based on the regional context, it can be assumed that the winepress and the quarry reflect the agricultural activity along the fringes of Horbat 'Anim, which is located c. 200 m from the excavation. These installations can therefore be dated from the Hellenistic until the Byzantine periods. The agricultural plot, which was surrounded by a wall, was one of a dense network of plots that covered the region and should be dated to the Byzantine period.


1. Wall 2, plan.

2. Wall 4, plan.
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3. Wall 1, plan and section.


4. Winepress, looking east.


5. Farming Terrace 106. looking southwest.

6. Farming Terrace 110, looking west.

7. Farming Terrace 113. looking west.

8. Cave (L111), looking east.

9. Farming Terrace 100. looking south.

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Mordechai Haiman
4/1/2009
During June-July 2005, a salvage excavation was conducted in the Yattir Forest (Permit No. A-4514; map ref. NIG 1999/5849; OIG $1499 / 0849$ ), along the route of the separation fence. The excavation, undertaken on behalf of the Antiquities Authority and financed by the Ministry of Defense, was directed by M. Haiman, with the participation of A. Freiberg (area supervision) and A. Hajian (surveying).
Three areas were excavated in the wadi and along its eastern and western slopes.

## The Eastern Slope

An agricultural area ( $100 \times 250 \mathrm{~m}$ ) is located on the eastern slope. It is surrounded by a stone fence (length 30 m , width $1 \mathrm{~m})$ and includes dozens of farming terraces, stone clearance heaps and caves. On the upper part of the slope, beyond the limits of the excavation, a field tower $(4.5 \times 4.5 \mathrm{~m})$ was documented. Five shallow farming terraces (height c .0 .5 m ) were excavated; their walls were founded on bedrock and their fill consisted of tamped soil and small stones: Farming Terrace $106(0.6 \times 1.0 \times 8.0 \mathrm{~m}$; Fig. 1); Farming Terrace $108(0.6 \times 0.8 \times 8.0 \mathrm{~m}$; Figs. 2, 3); Farming Terrace 110 (length 3.5 m, width 0.5 m; Figs. 4, 5); Farming Terrace 113 (length 7 m; Figs. 6, 7) and Farming Terrace W114 (length 8 m; Figs. 8, 9).
A probe within the stone clearance heap (L109; $0.6 \times 3.0 \times 8.0 \mathrm{~m}$; Fig. 10) revealed that the heap comprised a mixture of small stones and soil. Similar heaps occurred in the precincts of cultivation plots.
A rock-cutting (L105; diam. c. 2 m , depth c. 1 m ; Figs. 11, 12) was hewn in the center of a nari bedrock surface ( $15 \times 20$ $m$ ). It seems that bedrock surfaces with rock-cuttings in their centers were located in agricultural areas and meant for planting trees.
A natural cave (L107) that had no signs of usage was discovered during earthmoving works.
Burial Cave (L111; Fig. 13). The inside of the cave ( $1.5 \times 3.0 \times 4.0 \mathrm{~m}$ ) was enlarged for later use. A corridor $(2 \times 5 \mathrm{~m})$ in the front of the cave led to an opening whose upper part was arched $(1.0 \times 1.4 \mathrm{~m})$. A probe excavated inside the cave revealed organic material (thickness 0.2 m ) that contained fragments of pottery vessels from the Byzantine period on the bedrock floor.
The opening of another natural cave was made narrower by a stone wall (L112; $3.5 \times 4.5 \times 2.2 \mathrm{~m}$ ). A probe that was excavated inside the cave exposed a thin layer of organic material on the bedrock floor.

## The Wadi

Sixteen farming terraces were found in the agricultural area of the wadi, which was 450 m long; two terraces were excavated.
Farming Terrace 100 (length 10 m , width 1 m . height 2.2 m ; Figs. 14, 15) was built of fieldstones ( $0.5-0.9 \mathrm{~m}$ ); its upper part was retained on the slope with a tamped fill of small stones and its center was found breached.
Farming Terrace 101 (length 11 m; Figs. 16, 17) was built of a single row of stones and was supported on the side facing the slope by a tamped fill of small stones.

## The Western Slope

The western slope was covered with stone walls and a probe was excavated in one of them. The wall (W104; height c. 0.4 m ; Fig. 18) was built of a single row of stones.

The exposed agricultural area was essentially composed of a dammed wadi and delimited slopes. Shallow farming terraces that did not contain soil sufficiently deep for growing trees or grain were found in the delimited plots. In light of the frequency of large winepresses in the region it seems that the terraces were probably used for growing grapevines. Considering the pottery finds from the Byzantine period and the fact that the field tower located alongside the agricultural area, the likes of which were dated to the fifth-sixth centuries CE, it seems that the agricultural complex should also be dated to this period.


1. Farming Terrace 106, looking southwest.


2. Farming Terrace 108, looking east.


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4. Farming Terrace 110, plan and section.


6. Farming Terrace 113, plan and section.



9. Farming Terrace 114, looking east.

10. Stone clearance heap (L109), plan and section.

11. Rock-cutting (L105), plan.

12. Rock-cutting (L105), looking east.



15. Farming Terrace 100, looking south.

16. Farming Terrace 101, plan and sections.

17. Farming Terrace 101, looking south.

18. Farming Terrace 104, looking north.
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## Yattir Forest <br> Final Report

Alexander Krokhmalnik


1. Area A, plan and section.

2. Area B, plan and section.

During December 2005, an excavation was conducted along the Yattir Forest road (Permit No. A-4655; map ref. NIG 19959-82/58417-38; OIG 14959-82/08417-38). The excavation, on behalf of the Israel Antiquities Authority, was directed by A. Krokhmalnik, with the assistance of V. Essman and V. Pirsky (surveying) and T. Sagiv (field photography).

Two excavation areas (A, B) were opened.
Area A (Fig. 1). A rock-hewn winepress was discovered. It consisted of a shallow rectangular treading floor ( $2.15 \times 2.60$ m , depth 0.36 m ) and a rectangular collecting vat ( $0.85 \times 1.40 \mathrm{~m}$, depth 1.05 m ). The treading floor was linked to the collecting vat by way of a gutter that was hewn in the center of the floor's northern side. A sump (diam. 0.3 m ) was cut in the bottom of the collecting vat
Walls were discovered south and west of the treading floor. Wall 51 (length 2.6 m , width 0.2 m ), built of kurkar stones, was preserved a single course high ( 0.3 m ); W52 (length 2.15 m , width 0.2 m ) was also built of kurkar stones and preserved a single course high ( 0.2 m ). Several potsherds that dated to the Byzantine period were found around the winepress.

Area B. A rock-hewn cistern with a rounded opening (diam. 0.5 m ) that was built of curved stone sections (diam. 2 m ) was discovered. A cupmark to the southeast of the cistern's opening was probably used to stand pottery vessels in. To the east and west of the cistern's opening were hewn channels for collecting water, which contained a few body sherds of jars from the Byzantine period.


1. Area A, plan and section.

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Yattir Forest, Reservoir Survey Final Report

Nir-Shimshon Paran


1. Survey map.

2. Farming terraces, looking southeast.

3. Animal pen, looking west.

During February 2007, an archaeological survey was conducted close to the Yattir reservoir (Permit No. A-5064; map ref. NIG 2084/5840; OIG 1584/0840), prior to the construction of an amphitheater. The survey, undertaken on behalf of the Israel Antiquities Authority and underwritten by the South Har Hevron Regional Council, was performed by N.S. Paran, with the assistance of S. Gal (GPS).
The surveyed area (Fig. 1) is located within the precincts of the Yattir Forest in the southern Hebron highlands, southeast of the Jewish National Fund reservoir. The region consists of gentle hills and broad ravines. Most of the area is forested and the trees are planted on an ancient complex of farming terraces that were documented in the survey (Fig. 2). Field walls, which delineated agricultural plots and an animal pen (Fig. 3) built on the slope of the hill, were identified. These finds are characteristic of the extensive agricultural landscape in the southern Hebron highlands.


2. Farming terraces, looking southeast.

3. Animal pen, looking west.


1. General view to the north.

2. Rock-hewn installations, plan.

3. Pressing Installation 209, looking southwest.

4. Cave, looking north.

5. Terrace wall, looking north.
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During May 2005, a salvage excavation was conducted in the Yattir Forest (Permit No. A-4472; map ref. NIG 20116/58514; OIG $15116 / 08514)$, prior to the construction of the separation fence. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by M. Haiman, with the assistance of A. Freiberg (area supervision) and A. Hajian (surveying).
On a hilltop, agricultural installations hewn in bedrock surface ( $10 \times 20 \mathrm{~m}$; Figs. 1, 2) c. 400 m north of Horbat Yattir, were cleaned; a cave and a farming terrace were examined on the hill's southern slope.

Winepress (L202). The winepress consisted of two treading floors. The main treading floor ( $2.6 \times 3.0 \mathrm{~m}$, depth c .0 .1 m ) was west of and connected to the collecting vat ( $1.2 \times 1.4 \mathrm{~m}$, depth 1.2 m ) by means of a channel (length 0.4 m , width 8 cm , depth 5 cm ). A smaller treading floor ( $0.9 \times 1.2 \mathrm{~m}$, depth 5 cm ) was south of and connected to the vat by means of a shallow channel (length 0.3 m , depth 5 cm ).

Pressing Installations. Five pressing installations, which consisted of a treading floor that was usually connected by a short channel to a cupmark or a basin, were hewn in bedrock surface.
(1) Installation 203 (Fig. 3). Irregular-shaped treading floor (c. $1.5 \times 1.5 \mathrm{~m}$, depth 3 cm ), cupmark (diam. 0.3 m , depth 0.3 m) and channel (length 0.1 m , depth 5 cm ).
(2) Installation 204 (Fig. 4). Elliptical treading floor ( $0.9 \times 1.1 \mathrm{~m}$, depth 3 cm ), cupmark (diam. 0.5 m , depth 0.1 m ) and channel (length 7 cm , depth 3 cm ).
(3) Installation 205 (Fig. 5). Square treading floor (c. $1.0 \times 1.2 \mathrm{~m}$, depth 2 cm ) and two adjacent cupmarks (diam. 0.15 m , depth 5 cm ).
(4) Installation 206 (Fig. 6). Round surface (diam. c. 0.2 m , depth 5 cm ), deep cupmark (diam. 0.15 m , depth 0.2 m ) and channel (length c. 0.1 m , width 4 cm , depth 2 cm ).
(5) Installation 209 (Fig. 7). Elliptical treading floor (c. $1.2 \times 2.0 \mathrm{~m}$, depth 3 cm ), hewn basin (diam. c. 0.7 m , depth 0.4 m ) and shallow channel (length 0.15 m , width 7 cm , depth 4 cm ).

Cupmarks. Two shallow cupmarks were cleaned (L207—diam. 5 cm , depth of 5 cm ; L208—diam. 0.2 m , depth 5 cm ).
Cave. A cave (L201; c. $6 \times 17 \mathrm{~m}$, max. height in excess of 2 m ; Figs. 8, 9) was located on the southern slope of the hill, c. 70 from the bedrock surface on the hilltop. The opening was made narrower by means of a wide wall (width c. 1 m ), built of different sized stones, in which a narrow entry was set (width c. 0.5 m ). The cave had no partitions or installations that are characteristic of a dwelling and therefore, it was probably used as a sheepfold. Two squares (Loci 210, 211), opened along the inside of the wall, were excavated down to bedrock ( 0.15 m below surface) and another square (L200; 0.2 m below surface), which was opened in front of the cave, yielded pottery fragments that dated to the Byzantine period.

Farming Terrace. A system of c. 20 farming terraces (length $30-40 \mathrm{~m}$, width from bank to bank $15-27 \mathrm{~m}$, height 1 m ) that were supported by stone retaining walls (width 1.0-1.5 m) crossed the wadi channel south of the hill. On either side of a terrace wall (length 18 m , width 1.5 m , height 1 m ) , c. 20 m south of the cave, a probe trench (L341; 3 $\times 3 \mathrm{~m}$; Figs. 10,11 ) was opened in an old breach in the terrace where a dirt road passed through. It became clear that the wall was built of fieldstones (up to 0.7 m long) that were set on a foundation of small stones; the latter were placed atop a layer of loess (thickness c. 0.4 m ), deposited on bedrock. Potsherds that dated to the Byzantine period were recovered from the trench.

The group of installations, which were hewn in bedrock surface on the hilltop and apparently belonged to the RomanByzantine settlement of Horbat Yattir, is common to the agricultural fringes of the mountain-region settlements in these periods. The system of farming terraces in the wadi reflects a later settlement phase, at the end of the Byzantine and the beginning of the Early Islamic periods. The system should probably also be attributed to the settlement at Horbat Yattir, which continued to exist in these periods. Yet, it seems that the cave was in use much later because the utilization of caves for storage and as sheepfolds was widespread among the Arabs of the Hebron Highlands from the Ottoman period until the modern era.


1. General view to the north.

2. Rock-hewn installations, plan.

3. Pressing Installation 203, looking north.

4. Pressing Installation 204, looking west.

5. Pressing Installation 205, looking west.

6. Pressing Installation 206, looking northwest.

7. Pressing Installation 209, looking southwest.



8. Terrace wall, looking north.
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9. Stone Clearance Heap

100, plan and section.

3. Stone Clearance Heap 107, looking north.

5. Stone Clearance Heap 108, looking north.

Mordechai Haiman

During May 2005, an excavation was conducted at a site located in the Yattir Forest (Permit No. A-4473; map ref. NIG 20116/58514 OIG 15116/08514), prior to the construction of the separation fence. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by M. Haiman (photography), with the assistance of A. Freiberg (area supervision) and A. Hajian (surveying)
Seven stone clearance heaps, two walls and a built installation were examined on a flat hilltop (c. $40 \times 40 \mathrm{~m}$ ), c. 600 m north of Horbat Yattir. Two cisterns and a winepress, located close to the hill, were not inspected.

Stone Clearance Heaps. The heaps (max. diam. 6 m , max. height 0.8 m ) comprised different sized stones. Probes (c. 1 $\times 1 \mathrm{~m}$ ) were dug in five of them: Heap 100 (elliptical; $2.5 \times 3.5 \mathrm{~m}$, height 0.5 m ; Fig. 1); Heap 103 (round; diam. 2.5 m ; Fig. 2); Heap 106 (round; diam. c. 3 m , height 0.4 m ), in which body fragments of a jar from the Byzantine period were found; Heap 107 (round; diam. c. 3 m , height c. 0.4 m ; Fig. 3); Heap 108 (elliptical; $3 \times 5 \mathrm{~m}$, height 0.6 m ; Figs. 4, 5), in which potsherds that dated to the Byzantine period were found.

Walls. A cultivation plot extended across the southern slope of the hill and two walls that delineated its northern corner had survived (Fig. 6): a wall oriented northeast-southwest (W113; length c. 100 m ) and a wall aligned south-southwest-north-northeast (W127; length c. 120 m ). A square $(3 \times 3 \mathrm{~m})$ was opened along the northeastern side of W113, near its juncture with W127. The excavation revealed that the two walls were built of a single row of large stones (max. length 1 $\mathrm{m})$, set on bedrock.

Built Installation. A square installation (L109; c. $1 \times 1 \mathrm{~m}$; Fig. 7), built of a single stone course (up to 0.5 m long), was erected next to the northwestern face of W113. Remains of a hearth were found inside the installation, as well as fragments of pottery vessels from the Byzantine period, including a fragment of a baking tray that suggest the installation may have been used as an oven.

These installations and the agricultural installations near them, which are characteristic of the areas along the fringes of settlements from the Byzantine period in the hill country, belonged, most likely, to Horbat Yattir.


3. Stone Clearance Heap 107, looking north.

4. Stone Clearance Heap 108, plan and section.

5. Stone Clearance Heap 108, looking north.


1-1
6. The corner formed by Walls 113 and 127 and Installation 109, plan and section.

7. Installation 109, looking east.

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Mordechai Haiman

3. Wall 100, looking south.

5. Wall 108, plan and section.

6. Wall 108, looking southeast.

During May-June 2005, a salvage excavation was conducted in the Yattir Forest (Permit No. A-4484; map ref. NIG 20060/58520; OIG 15060/08520), prior to the construction of the separation fence. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by M. Haiman (photography), with the assistance of A. Freiberg (area supervision) and A. Hajian (surveying).

An ancient cultivation plot ( $80 \times 90 \mathrm{~m}$ ) was examined; it extends over a steep, rocky slope, which faces east and descends to a wadi that is dammed by farming terraces its entire length. The plot was delimited by stone enclosure walls and terrace walls were located inside it. Probe trenches were excavated alongside the enclosure walls and several of the terrace walls.

Enclosure Walls. Three walls, built of a row of large stones (up to 1 m long), were identified. Wall 100 was in the northwest of the plot (length 48 m ; Figs. 1-3), Wall 103-in the southwest (length 91 m ; Fig. 4) and Wall 108 in the southeast of the plot (length 35 m ; Figs. 5, 6). The probe trenches flanking W100 on each side exposed its stones, which were set on a layer of soil (thickness $0.2-0.5 \mathrm{~m}$ ) that covered bedrock surface.

Terrace Walls. Two walls that delimited farming terraces inside the cultivation plot were examined. Wall 101 (Figs. 7 , 8) was built of three-four stone courses and delimited a farming terrace (width c. 1 m ) where the soil was c. 0.5 m deep; Wall 102 (height c. 1 m ) was built of three-five stone courses (max. length of each stone 0.2 m ) that delimited a farming terrace where the soil was c. 0.4 m deep (Fig. 9). The two walls were built of small stones ( 0.3 m long), piled up haphazardly. A terrace wall (W104; height c. 1 m , width 1 m ), which belonged to one of the farming terraces that was built in the wadi channel, was inspected. The wall whose outer face was built of large stones (up to 0.8 m long) continued widthwise across the wadi in a general east-west direction. It retained fill that comprised different sized stones and enclosed a farming terrace where the soil had accumulated to a depth of 2.2 m (Figs. 10-12).

Potsherds that dated to the Byzantine period were discovered on surface and in the probe trenches alongside the enclosure and terrace walls. There was no evidence that the cultivation plot or the terrace in the wadi were used in modern times. The examined cultivation plot is characteristic of the Yattir region and the southern Hebron Highlands: massive enclosure walls that encompass an area of 5-15 dunams, divided into shallow farming terraces where soil is up to 0.5 m deep. A geomorphological examination has revealed that the terraces were not eroded and the shallow construction was intentional. The depth of the soil is unsuitable for growing orchards or grain; therefore, it is unclear for which agricultural crop it was used.


2. Wall 100, general view to the south.

3. Wall 100, looking south.


5. Wall 108, plan and section.


8. Wall 101, looking east.



11. Wall 104, looking east.

12. Wall 104, looking southeast.

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Emil Aladjem
During December 2005, an archaeological excavation was conducted in the region of the Yattir Forest (Permit No. A-4482; map ref. NIG 1988-91/5846-8; OIG 1488-91/0846-8), prior to the construction of the separation fence. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by E. Aladjem, with the assistance of H . Lavi (administration).

A farming terrace and field wall, c. 1 km apart, were excavated.
Farming Terrace (map ref. NIG 1988/5846; length 12 m , width 0.5 m , height of two courses 0.6 m ). A probe trench was excavated inside the terrace; it indicated that the terrace was built on bedrock outcrop, descending westward. The western side of the terrace was exposed, whereas its eastern side was covered with alluvium. No archaeological finds were discovered.

Field Wall (map ref. NIG 1991/5848; length c. 200 m , width 1 m , height 0.5 m ). The wall was built of medium and large stones ( $0.5-0.6 \mathrm{~m}$ ); large stone slabs (length 1 m , width 0.8 m , thickness 0.2 m ) were placed upright along its northern face. The field wall, set on a flat ground, was abutted by other walls that divided the area into plots. The course of the wall was cleaned for a distance of 15 m and no archaeological finds were discovered.

The wall and the farming terrace were built very simply of indigenous fieldstones and they probably constituted part of a regional agricultural complex.

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## Yattir Forest Final Report

Mordechai Haiman

## 21/9/2009



1. Wall 2, plan and section.

2. Wall 3, plan and section.

3. Wall 8, plan and section.

4. Watchman's Hut 1, plan.

5. Stone Heap 7, plan and section.

During July 2005, a salvage excavation was conducted in Yattir Forest (Permit No. A-4537; map ref. NIG 20860/58480; OIG $15860 / 08480$ ), prior to the construction of the separation fence. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Ministry of Defense, was directed by M. Haiman, with the assistance of A. Freiberg (area supervision) and A. Hajian (surveying).

A walled, trapezoidal cultivation plot ( $50 \times 80 \times 85 \times 90 \mathrm{~m}$ ) that extends across a flat hilltop on which other fenced-off plots are spread was examined. The remains of a square watchman's hut, a hewn installation and two stone heaps were excavated within the plot.

Enclosure Walls. Four walls (W2, W3, W4, W8; Figs. 1-4), built of one row of stones (width 0.3-0.4 m, height up to 0.8 m ) delimited the plot. Probes excavated along the walls ascertained that the stones were set on top of natural bedrock (c. 0.2 m below surface).

Watchman's Hut (L1; $2.9 \times 3.2 \mathrm{~m}$; Fig. 5). The foundation wall of the building had survived (width c. 0.8 m ). It consisted of short stones (up to 0.2 m long) and was preserved two courses high (c. 0.6 m ). No remains of a floor were discerned and potsherds dating to the Byzantine period were collected around the structure.

Installation. It has an irregular rectangular outline (L6; c. $0.7 \times 2.0 \mathrm{~m}$, depth 0.6 m ; Fig. 6) and is hewn in the center of a bedrock surface (c. $8 \times 11 \mathrm{~m}$ ).

Stone Heaps. Two low heaps (Loci 5, 7; Figs. 7, 8) that consisted of small stones and earth (Heap 5-diam. 3 m, height c. 0.4 m ; Heap 7-diam. 4.1 m , height 0.3 m ). Although not numerous, similar stone heaps are known in the fenced-off farmland of the Yattir region.
These remains are characteristic of the agricultural landscape of the Yattir region and the southern Hebron Highlands, particularly in the open areas between the settlements. The potsherds noted on surface date only to the Byzantine period, hence the remains should be dated to the same period.


1. Wall 2, plan and section.


2. Wall 4, plan and section.

3. Wall 8, plan and section.

4. Watchman's Hut 1, plan.



1-1
7. Stone Heap 5, plan and section.

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## Yavne Yam

Final Report
Edna Ayash and Amir Ganor


1. The pithos, in situ.

2. The pithos.

During December 2002, a salvage excavation was conducted at Yavne Yam (Permit No. A-3870; map ref. NIG 1713/6478; OIG 1213/1478), following the discovery of a jar by H. Yihye (antiquities trustee), who alerted the inspetors of the IAA Unit for the Prevention of Antiquities Robbery. The excavation, on behalf of the Israel Antiquities Authority, was directed by E. Ayash and A. Ganor, with the assistance of A. Klein and A. Hofesh, Y. Bukengolts (pottery restoration), C. Amit (photography) and N. Ze'ev (drawing of finds).

A dolium-type pithos that was embedded in an ancient settlement layer on the beach, at the foot of the western section of Yavne Yam, was removed (Fig. 1). A layer of plastered soil, which was probably the floor of a building, was discerned around mid-height of the pithos. It was preserved in its entirety (diam. 1 m , height 1.2 m ; Fig. 2) and it has a flat thickened rim, bearing a stamped impression of the letter M (Fig. 3), two handles and a decoration of a wavy combed design between the rim and the top of the handle. The orange-brown fabric contains small white inclusions and is well fired. The pithos is dated to the Byzantine period.
These pithoi were used to store liquids and dry products; similar ones were discovered in recent years on the Palmahim beach, now on display in the Palmahim Museum.


1. The pithos, in situ.


2. The pithos' rim.

3. Aerial view of the Yavne-Yam-Palmahim region.

4. Area B1, installation, plan and section.

5. Area B1, installation. aeria view looking northeast.

6. Area B2, winepresses, aerial view looking northeast.

7. Area C , a pit containing shells, looking northeast.
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## Yavne-Yam (North)

## Preliminary Report

## Moshe Ajami and Uzi 'Ad

During April-May 2007, an excavation was conducted south of Qibbuz Palmahim and c. 700 m north of the fortress at Yavne-Yam (Permit No. A-5086; central map ref. NIG 17190/64860; OIG 12190/14860), prior to the construction of a holiday village and in the wake of discovering antiquities during a preliminary survey by D. Golan. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Evlon and Ma'oz Daniel Companies, was directed by M. Ajami and U. 'Ad, with the assistance of E. Jakoel and L. Talmi (area supervision), S. Ya'aqov-Jam (administration), A. Hajian (surveying), L. Yihye and A. Dagot (GPS), T. Sagiv (field photography), the Sky View Company (aerial photography), S. Al-Amla (metal detection), N. Zak and E. Belashov (drafting), C. Amit (studio photography), R. Vinitsky (metallurgical laboratory), P. Gendelman (ceramics), R. Gat (pottery restoration), M. Shuiskaya (find drawing), Y. Gorin-Rosen (glass) and D.T. Ariel (numismatics). Additional assistance was rendered by the project managers on behalf of the contractor and the antiquities inspectors of the IAA Tel Aviv district.

Several excavations had previously been conducted at the site of Yavne-Yam and in its vicinity (Fig. 1). J. Kaplan excavated inside the Yavne-Yam compound and the ramparts that surrounded it at the end of the 1960s (HA 30:16-17; 38:24-25 [Hebrew]) and M. Fisher of Tel Aviv University had excavated the site since 1992 (M. Fisher [ed.] 2005, Yavne, Yavne-Yam and Their Surroundings, Tel Aviv, pp. 173-208). During 1996 and 1997, E. Ayalon and Y. Drey exposed an irrigation system northeast of the compound, which included a saqiye well, a pool and plastered water channels from the Byzantine period (Yavne, Yavne-Yam and Their Surroundings, pp. 229-252). Several dozen rock-hewn and built tombs have been surveyed and excavated, dating from the Chalcolithic until the Byzantine periods; some tombs were located on the same kurkar ridge as Qibbuz Palmahim.
The excavation was carried out in the area between the Middle Bronze II fortification ramparts and the kurkar hill on which Qibbuz Palmahim is located (Fig. 1). Twenty-five excavation squares were opened in four areas (A, B1, B2, C) and twenty-five tombs (T1-T25), some of which included more than one burial, were identified to the west, southwest and east of Area B1, (Fig. 2). Industrial areas, an agricultural area and part of the northern cemetery of Yavne-Yam, which were used in the Late Bronze Age and from the Persian until the Byzantine periods, were exposed in the excavation.

Area A, the southernmost area, was opened at the top of a low kurkar hill. A well-built winepress (Fig. 3), in which two phases of use were discerned, was exposed. The winepress included a square treading surface ( $3.8 \times 4.3 \mathrm{~m}$ ) whose floor and walls were coated with thick white hydraulic plaster. Two vats were installed adjacent to the western side of the treading floor. The northern was a shallow intermediate vat ( $1.7 \times 2.4 \mathrm{~m}$, depth 0.6 m ) that connected to the floor via a gutter and the southern was a deep collecting vat $(1.75 \times 2.10 \mathrm{~m}$, depth 1.6 m$)$. The two vats were linked by a channel cut in the middle of the wall that separated them. A sump (depth 0.15 m ) was hewn in the southeastern corner of the collecting vat's floor. The floors and sides of the two vats were coated with a thick layer of hydraulic plaster, identical to that on the treading floor. Based on the finds discovered in and around the winepress, its construction should be dated to the Persian or Hellenistic periods; it ceased to be used in the Roman period (first-second centuries CE).
At the foot of the hill, c. 5 m north of the winepress, a square building ( $3.5 \times 3.9 \mathrm{~m}$; Fig. 3) whose entrance was set in the northern wall, was exposed. Its walls were built of roughly hewn, medium-sized stones, with small fieldstones in-between, and it had a tamped-earth floor. Based on the pottery vessels found above the floor of the building and in the foundation trenches of the walls, it seems that the structure was built and used during the Early Roman period (first-second centuries CE), contemporaneous with the later phase of the winepress to its southwest. The building was probably connected to the later activity in the winepress, possibly as a storeroom for materials and tools that were used in the winepress.
An east-west oriented channel (length c. 50 m , width 2.5 m ) was dug next to the southern wall of the building. Flanking the trench on both sides was a series of small dirt mounds (average diam. 1.5 m ) that were probably created when the trench was dug. Small and medium undressed kurkar stones were scattered on the northern mound near the building The purpose of the channel is unknown, yet it is clear that it was dug after the building had been constructed and probably after the latter was no longer in use. It seems that in a later phase, after the channel was filled in, the northern mound served as a boundary enclosing an agricultural plot.

Area B1. A built installation was exposed c. 100 m north of the winepress in Area A. Although the installation was poorly preserved, two operating phases could still be discerned (Figs. 4, 5). In the first phase, the installation included a square plastered surface ( 3.8 [?] $\times 4.1 \mathrm{~m}$ ), aligned north-south and divided into two (L241, L286) by a wall (W35) whose only southern part survived. In the second phase, W35 was dismantled and its foundation trench was blocked by medium and large fieldstones (L214). A square vat (L230; $1.4 \times 1.4 \mathrm{~m}$, depth 0.6 m ) was installed near the center of the installation. It was lined with ashlar stones and light-colored mortar and its floor consisted of wadi pebbles and shells. The western part of the installation was re-paved: atop the earlier plastered surface, a floor of small stones bound with light-colored mortar, which abutted the vat in the middle of the installation, was placed. A lead amulet-pendant, bearing a Greek inscription on both of its sides, was discovered on the occupation level that abutted the southern side of the floor. Based on the few potsherds discovered in the foundation trenches and in the floor beddings of both operation phases, the installation's use should be dated to the second-fourth centuries CE; its function, however, was not ascertained.
Three meters west of the installation was a heap of fieldstones and broken ashlar stones that contained numerous fragments of pottery vessels, dating to the end of the Roman-beginning of the Byzantine periods (fourth-fifth centuries CE). Most of the vessels were saqiye jars, the likes of which in large numbers were exposed in the excavation of the saqiye well, c. 120 m northwest of the excavation area (Fig. 1; Yavne, Yavne-Yam and Their Surroundings, p. 241, Fig. 14:5). It seems that the heaps of stones were formed when the installation walls were dismantled.
North of the installation was a low kurkar ridge that extended in an east-west direction and had a kind of a step (W23; length c. 0.55 m , height $0.5-0.8 \mathrm{~m}$; Fig. 6); it had been hewn by removing a strip in the northern side of the ridge. A robber's trench was exposed in the fill above the step and medium and large fieldstone collapse was discovered north of the step. It therefore seems that this step was used as a foundation for a wall, whose stones were mostly robbed. It is possible that the wall served to retain the fill upon which the installation was constructed or to separate between agricultural plots, such as the wall exposed in Area A.

Area B2. Two adjacent winepresses, oriented north-south, were exposed c. 40 m north of the installation in Area B1 (Fig. 7). The southern winepress, which was the larger of the two, had a square treading floor ( $2.8 \times 3.2 \mathrm{~m}$ ); a shallow intermediate vat ( $0.8 \times 1.0 \mathrm{~m}$, depth 0.3 m ) installed west of the treading floor's southwestern corner and a collecting vat $(1.5 \times 2.9 \mathrm{~m}$, depth 1.2 m$)$ with a sump in its northeastern corner that was installed north of the intermediate vat and west of the treading floor. The treading floor and the intermediate vat were connected by a perforated hole in the wall between them and the two vats were connected by a channel that was cut in the wall separating between them. The sides and floors of the treading floor and the vats were coated with a thick layer of white hydraulic plaster.
At least two operation phases were discerned in the northern winepress. The plan of the winepress in the early phase was almost a mirror image of the southern winepress, except for its smaller size. It consisted of a square treading floor (2 $\times 2 \mathrm{~m})$, a shallow intermediate vat $(0.8 \times 0.9 \mathrm{~m}$, depth 0.2 m$)$ and an adjacent collecting vat ( $1 \times 1 \mathrm{~m}$, depth 1 m ). In the late phase, the intermediate vat and the collecting vat were filled with brown soil that contained a few stones and plaster. At the same time, medium-sized fieldstones and light-colored lime-based mortar were placed over the treading floor and the walls, serving as a foundation for a layer of wadi pebbles and small fieldstones that was covered with a layer of light plaster. Based on the ceramic finds in the foundation trenches of the winepresses, between the stones in the walls and in
the fill that was deposited in the vats of the southern winepress after it was no longer in use, it seems that the winepresses were built in the Persian or Hellenistic periods and ceased to be used in the Roman period.
A firebox (?) was exposed some 20 m east of the winepresses. It was installed in the bottom of a circular kiln (diam. 2 m ; preserved height 0.3 m ) that was dug into the hamra soil. Based on the pottery vessels recovered from the fill in the kiln and its vicinity, it seems that the installation was used during the Persian period.

Area C. Several concentrations of fieldstones and small pebbles (length c. 0.1 m ) that formed irregular-shaped surfaces (max. diam. 0.8 m ; Fig. 8) were exposed close to the surface, northeast of Areas B1 and B2. The remains of a light gray material were discovered between the stones; however, no datable artifacts were found in or around them and the time and purpose of these surfaces are unclear. A square pit ( $0.5 \times 0.5 \mathrm{~m}$, depth 0.2 m ) , dug in the hamra soil and filled with shells and a sandy fill (L321; Fig. 9), was discovered east of the stone concentrations. The sandy fill contained a small amount of potsherds that dated to the Roman period. The shells in the pit included murex shells and were probably meant to be burnt and used as a component in the production of mortar and plaster for the winepresses.

Tombs. Five Late Bronze Age tombs were exposed west and southwest of Area B1, at the exterior foot of the eastern rampart (Tombs 21-25; see Fig. 2). These pit graves and cist tombs were covered with roughly dressed kurkar slabs, placed the length and width of the tomb (Fig. 10). The date of the tombs was based on their shape, location-outside the enclosure delimited by the rampart-and the potsherds recovered from the fill in their vicinity; numerous tombs from this period had previously been exposed in the region (Yavne, Yavne-Yam and Their Surroundings, pp. 15-32)

Twenty cist tombs (T1-T20; average dimensions $0.6 \times 1.9 \mathrm{~m}$; see Fig. 2) were identified east of Area B1, but it is clea that other graves exist in this area. The tombs, dug into the hamra soil, were lined with carefully dressed rectangular kurkar slabs; in most of the tombs the long sides were formed by two vertical slabs standing next to each other and the narrow sides consisted of a single slab. The covering, which was only exposed in some of the tombs, was composed of dressed kurkar slabs that were positioned in a gable shape. It was impossible to determine with certainty the date of tombs since they were not excavated. However, E. Ayalon exposed identical tombs c. 100 m south of here, at the bottom of the southern (inner) slope of the northern Middle Bronze II rampart, which he dated to the Early Roman period (see Fig. 1; Yavne, Yavne-Yam and Their Surroundings, pp. 217-221).

An agricultural area with installations was exposed in the excavation; it was used by the settlement at Yavne-Yam from the Persian (fifth century BCE) until the Byzantine periods. It seems that the agricultural activity in this region began to flourish during the Early Roman period (first-second centuries CE). By the end of the Byzantine period or the beginning of the Early Islamic period (sixth-seventh centuries CE), this area was almost completely abandoned. Furthermore, tombs that dated to the Late Bronze Age and the Early Roman period were discovered. These join the finds from previous excavations and surveys, indicating that this region served for burial over long periods of time.
Four periods of activity were identified in the installation remains:
(1) The Persian and Hellenistic periods (Stratum V).-three winepresses (Areas A, B2), two of which were adjacent to each other (Area B2) and a kiln for firing pottery or metal vessels (Area B2) were built.
(2) The Early Roman period (Stratum IV).-two of the winepresses were re-used after the installations were abandoned for a period of two to three hundred years. The winepress in Area A was expanded and a structure (a storeroom?) was built alongside it; the large winepress in Area B2 was probably renovated and an open surface was installed in place of the small winepress.
(3) The Late Roman period (Stratum III).-the area was adapted for farming after the winepresses were filled in and no longer used. A wall was erected in Area A to mark the boundary of a plot and the building from the Early Roman period was converted for use as a watchman's hut. A wall was built in Area B1, probably to support an installation that had a plastered surface and in which a small vat was installed in the second phase; the wall may also have been used for a farming terrace that extended southward.
(4) The Byzantine period (Stratum II).-the region continued to be used for farming and at the same time, the building stones from the structure in Area A and the installation in Area B1 were robbed


1. Aerial view of the Yavne-Yam-Palmahim region


2. Area A , the winepress and the building alongside it, aerial view looking north.


1-1
4. Area B1, installation, plan and section.

5. Area B 1 , installation, aerial view looking northeast.

6. Area B1, Wall 23, plan.

7. Area B2, winepresses, aerial view looking northeast.


9. Area C, a pit containing shells, looking northeast.

10. Late Bronze Age tomb, looking east.

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## Yavne'el <br> Final Report

Butrus Hana


1. Plan.

2. Pottery.

During July 2003, a salvage excavation was conducted at Yavne'el (Permit No. A-3927; map ref. NIG 24679-85/73540-46; OIG 19679-85/23540-46). The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by D. Bechor, was directed by B. Hanna (surveying and drafting), with the assistance of L. Porat (pottery restoration) and H. Tahan (pottery drawing).

Three strata that dated from the Late Byzantine until the Mamluk periods were uncovered in the excavated area ( 12.5 sq m ).

Stratum III. Architectural remains that included a stone pavement (L106) and remains of a mostly robbed wall (W11; Fig. 1) were exposed. The wall, built of fieldstones and oriented east-west, was preserved two courses high. A threshold stone with a hewn socket survived in the southern part of the wall; it was probably part of a doorway that was not preserved.
Floor 106, abutting W11 and consisting of fieldstones, was overlain with body fragments of jars from the Byzantine period.
Stratum II. Another floor (Loci 104, 107) that covered W11 and Floor 106 was exposed. The floor (thickness 0.2 m) was composed of basalt gravel, tesserae and fragments of pottery vessels mixed with soil. The ceramic finds from this layer dated to the Early Islamic period and included jar fragments (Fig. 2:3) and an intact lamp (Fig. 2:7) in the floor bedding (L108); a cooking bowl (Fig. 2:4) and a lamp (Fig. 2:6) on the floor; and a jug fragment (Fig. 2:5) in the accumulation above the floor (L103).
Stratum I. A collapse (Loci 100, 102) was exposed c. 0.5 m above the floor of Stratum II. It consisted of medium-sized basalt fieldstones, a stone doorjamb, gravel, dark brown soil and fragments of bowls from the Mamluk period (Fig. 2:1, 2).





2. Pottery.

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## Yif'at (east)

## Final Report



1. Aerial view of excavation area.

2. Winepress I, plan and section.

3. Winepress I, looking northwest.

4. Quarry/ Winepress II. treading floor and quarry with ashlar block (upper right), looking south.

5. Winepress V, looking north.

During August 2008, a salvage excavation was conducted in the eastern part of Qibbuz Yif'at (Permit No. A-5503; map ref. NIG 301-731199/901-221597; OIG 171597-901/231199-301), prior to the construction of a new neighborhood. The excavation, on behalf of the Israel Antiquities Authority, was directed by K. Covello-Paran, with the assistance of Y. Lavan (administration), R. Mishayev and M. Kunin (surveying), H. Smithline (photography) and E. Belashov (drafting). Additional assistance was provided by F. Abu Zidan (IAA district inspector).
The site is located on the Yif'at Hill and its northern slopes, east of the Qibbuz, which is part of the ridge that is one of the northern borders of the Yizra'el Valley (Fig. 1). The bedrock of this hill is limestone with a nari crust and it is mostly forested today. The site overlooks Nahal Yif'at and is 300 m above two springs located to its southeast.
No previous excavations had been carried out at the site; however, during the course of 55 years, over 70 winepress installations were recorded at Yif'at by an antiquities enthusiast, M. Barak from the neighboring Qibbuz Gevat. Unfortunately, almost all of the recorded winepresses were destroyed during development works at Qibbuz Yif'at.
The present excavation was limited to only documenting agricultural installations in part of the area that is due to be built. Eleven winepresses were documented, nine of which were fully excavated and three quarries were partially excavated (Fig. 2).

## Winepress I

A rock-hewn winepress (Figs. 3, 4) that consisted of an elongated shallow trapezoid treading floor with rounded corners (length 5.25 m , width $1.50-2.25 \mathrm{~m}$, depth 0.25 m ) and a small rectangular collecting vat ( $0.58 \times 1.20 \mathrm{~m}$, depth 0.4 m ). Two circular cupmarks (northern-diam. 0.3 m , depth 0.2 m ; southern-diam. 0.26 m , depth 0.32 m ) were hewn on either side of the treading floor, at a distance of 1.4 m from the bottom, closest to the collecting vat (Fig. 5). An additional depression (diam. 0.15 m , depth 0.07 m ) was hewn in the center of the back third of the treading floor. Two channels (diam 0.16 m ), partially hewn in the treading floor, drained the liquid out of the floor into the collecting vat.
After the winepress went out of use, the treading floor was quarried for ashlar blocks. Part of a severance channel was observed. The winepress and quarry were devoid of finds.

## Quarry/Winepress II

A quarry for ashlar blocks (Fig. 6). The quarrying was incomplete, as indicated by a roughly hewn stone block ( $0.37 \times$ 0.90 m ), surrounded by severance channels and clefts that was left in situ. The negative of another extracted stone was surrounded by a deep groove that served as a severance channel
A sloping smoothed surface, c. 0.5 m north of the quarry, was probably the remnant of a winepress treading floor (Fig. 7). The quarry was devoid of finds.

## Quarry III

A large quarry (length 9.5 m , width c. 5 m , depth c. 1.5 m ; Fig. 8) in the northern part of the area was used for hewing ashlar stones. In addition to a rectangular ashlar block, a curvilinear quarried stone was left in place. The middle of the area was completely quarried and steps were hewn on the northern, southern and western margins (Fig. 9). The negatives of the extracted stones and a deep severance channel were partially visible. Trees from a protected forest could not be removed from the center of the quarry and precluded the completion of the excavation.

Quarry IV
A large stepped quarry (length c. 20 m , depth up to 1 m ; Fig. 10), of which only a small part was excavated and documented (length 4.5 m , width 3.5 m , depth 0.8 ). This quarry was located c. 5 m south of Quarry III and both were probably contemporaneous. The imprints of a large ashlar block ( $0.9 \times 2.0 \mathrm{~m}$ ) had visible severance channels (width 5 cm ). A small pit (diam. 0.53 m , depth 0.4 m ) was found at the bottom of the ashlar-block imprint. This quarry, not very wide or deep, indicates that a maximum effort was made here to cut into rocky outcrops for obtaining ashlar blocks.

## Winepress $V$

A rock-hewn winepress that consisted of a short trapezoid treading floor with rounded corners (length 2.2 m , width $1.70-$ 2.24 m , max. depth 0.5 m ; Fig. 11) and a small rectangular collecting vat ( $0.58 \times 0.97 \mathrm{~m}$, depth 0.35 m ). The treading floor was relatively deeper than in most winepresses and notably, the collecting vat was not positioned at the central axis of the floor, but was justified to the northern corner (Fig. 12). A circular depression (diam. 0.15 m , depth 0.1 m ) was hewn in the center of the treading floor and a small sump (diam. 0.24 m , depth 7 cm ) was cut in the center of the collecting vat floor. Two channels (diam. 0.15 m ), partially hewn in the treading floor, drained the liquid out of the floor into the collecting vat.
An open channel (width 0.6 m ) was identified 0.75 m east of the winepress. It was not determined whether it was natural or a rock-hewn installation. The winepress and adjacent area were devoid of finds.

## Winepress VI

A rock-hewn winepress that consisted of a small squarish and shallow treading floor with rounded corners (length 2 m , width 1.15 m , depth 0.2 m ; Figs. 11, 13) and a small rectangular collecting vat ( $0.63 \times 0.97 \mathrm{~m}$, depth 0.35 m ). A circular depression (diam. 0.15 m , depth 5 cm ) was hewn in the center of the treading floor and a small sump (diam. 0.19 m ) was cut in the center of the collecting vat floor. Two channels (diam. 0.21 m ), which drained the liquid from the treading floor into the collecting vat, were relatively wide, more circular and more vertically angled than those in the other excavated winepresses. The southern part of the winepress was damaged by modern agricultural activities. The winepress and adjacent area were devoid of finds.

## Winepresses VII and VIII

These winepresses were not excavated during the current fieldwork; however, their location and preliminary measurements were documented. Winepress VII had a small treading floor ( $2.2 \times 2.2 \mathrm{~m}$ ) and a small collecting vat ( 0.65 $\times 1.00 \mathrm{~m}$ ). Winepress VIII had a large elongated treading floor (length 7 m , width 2.6 m ) and a collecting vat ( $0.80 \times 1.35$ m)

## Winepress IX

A rock-hewn winepress that consisted of a short trapezoid treading floor with rounded corners (length c. 2.5 m , width $1.90-2.24 \mathrm{~m}$, depth 0.2 m ; Figs. 14, 15) and a small rectangular collecting vat ( $0.53 \times 1.11 \mathrm{~m}$, depth 0.3 m ). A circular depression (diam. 0.2 m , depth 0.1 m ) was hewn in the center of the treading floor and another small circular depression (diam. 0.24 m , depth 0.2 m ) was cut north of the treading floor. Two channels that drained liquid from the treading floor into the collecting vat could not be clearly identified due to damage caused to bedrock. Two elongated depressions whose function is unknown were hewn to the northeast of the winepress. A similar depression was noted south of Winepress X (below).
Winepress IX was 2 m northeast of Winepress X . The bedrock area between them exhibited additional quarrying,
including circular cupmarks, elongated depressions and smoothed bedrock. It is proposed that this area served the workers during the wine harvest and for various functions connected to the pressing of the wine grapes. It is also possible that some of these hewn depressions were the initial stages of hewing another winepress that was then abandoned.

## Winepress $\mathbf{X}$

A rock-hewn winepress that consisted of a shallow rectangular treading floor with rounded corners (length 2.4 m , width $1.8-2.0 \mathrm{~m}$, depth 0.25 m ; Fig. 16) and a small rectangular collecting vat ( $0.58 \times 1.14 \mathrm{~m}$, depth 0.38 m ). Two circular cupmarks (eastern-diam. 0.3 m , depth 0.25 m ; western-diam. 0.24 m , depth 0.24 m ) were hewn on either side of the treading floor at a distance of $1.0-1.2 \mathrm{~m}$ from the bottom of the treading floor, closest to the collecting vat. An additional depression (diam. 0.15 m , depth 7 cm ) was hewn outside of the southwestern corner of the treading floor. Two channels (diam. 0.2 m ), partially hewn in the treading floor, drained the must from the floor into the collecting vat. Another small circular sump (diam. 0.2 m , depth 8 cm ) was cut in the corner of the collecting vat floor. The wall separating between the treading floor and the collecting vat was not well preserved. After the press went out of use this rocky outcrop was disturbed by forces of nature, e.g., the northwestern corner of the treading floor was damaged.

## Winepress XI

This winepress had an irregular shape. The almost rectangular treading floor (length 3.75 m , width 2.25 m ; Figs. 17, 18) was similar to the treading floor of Winepresses IX and X; however, the rectangular collecting vat $(0.60 \times 1.15 \mathrm{~m}$, depth 0.6 m ) was not aligned with the floor, but situated at the southeastern corner and was slightly damaged by modern agricultural activities. A small circular sump (diam. 0.2 m , depth 0.1 m ) was cut in the corner of the collecting vat floor. A well-hewn deep circular depression (diam. 0.25 m , depth 0.37 m ) in the center of the treading floor was aligned with another deep circular depression (diam. 0.27 m , depth 0.3 m ) cut to the east of the treading floor. Two channels (diam. 0.15 m ), which flanked the corner of the treading floor, due to the position of the collecting vat, drained the must from the treading floor into the collecting vat (Fig. 19).
This winepress is an interesting example of how the rock cutters adapted the basic characteristics of the Ta'anakh winepress (below) to the available rocky outcrop.

## Winepresses XII and XIII

Two well-preserved adjacent rock-hewn winepresses (Figs. 20, 21), which included each a shallow, trapezoid treading floor, a small rectangular collecting vat and various rock-hewn cupmarks. A tethering installation (diam. 0.25 m ; Fig. 22 ) was hewn due north of Winepresses XII and XIII; its close proximity to the winepresses suggests a contemporaneous use.

## Winepress XII

A rock-hewn winepress that consisted of a shallow rectangular treading floor with rounded corners (length $3.0-3.7 \mathrm{~m}$ width $1.93-2.30 \mathrm{~m}$, depth 0.25 m ). The back southern part of the floor had a steep slope and an irregular shape, which is probably the rock-cutters' adaptation to bedrock. The small rectangular collecting vat ( $0.73 \times 1.06 \mathrm{~m}$, depth 0.35 m ) had a circular sump in its floor (diam. 0.3 m ) that was not well preserved. Two circular cupmarks (eastern-diam. 0.3 m , depth 0.36 m ; western—diam. 0.25 m , depth 0.3 m ) were hewn on either side of the treading floor at a distance of 0.75 m from its bottom, closest to the collecting vat. Additional depressions (diam. 0.22 m , depth 0.14 m ) were hewn outside of the northeastern corner of the treading floor. Each of these depressions had a small recess at their bottom. Two channels (diam. 0.15 m ) drained the must from the treading floor into the collecting vat. Four small rock-hewn cupmarks, which were discerned in the top southern part of the treading floor, appeared to be aligned together and traversed the back of both Winepresses XII and XIII.

## Winepress XIII

A rock-hewn winepress that consisted of an elongated shallow trapezoid treading floor with rounded corners (length 4.5 m , width $1.60-2.88 \mathrm{~m}$, depth $0.10-0.15 \mathrm{~cm})$ and a small rectangular collecting vat $(0.65 \times 1.40 \mathrm{~m}$, depth 0.35 m$)$, in the center of whose floor was a circular sump (diam. 0.3 m , depth 0.1 m ). Two channels (diam. 0.16 m ) drained the must from the treading floor into the collecting vat.
The back part of the treading floor was very shallow and had no well-defined upper (southern) corners. Its southeastern corner was turned toward the back of Winepress XII, which accordingly, was hewn first and Winepress XIII was installed either directly after or at a later date, possibly to an increase in demand.
Dating the winepresses to Middle Bronze II is based on the similarity of shape and repeated group of features in all the Yif'at winepresses with that of a winepress found below the Middle Bronze Age rampart at Tel Ta'anakh in the southern Yizra'el Valley (BASOR 195, p. 12). The ashlar quarries postdated the MB period, as indicated by the quarrying that had cut Winepress I.

Albeit a number of variations, the winepresses are all of the 'Ta'anakh' type, whose characteristic features are a shallow sloping treading floor, two rock-hewn channels at its base that drain the must into a small collecting vat with a circular sump cut in its floor. Often, two rock-hewn depressions flanked either side of the treading floor, presumably for poles that held a covering for giving shade and for grasping to keep steady during the tramping of grapes. The relatively wide channels probably held a thorny bush acting as a sieve for the grape skins. The fermentation process apparently did not take place in the small-dimensioned collecting vat, but rather in clay jars, to which resin that aided in the fermentation process was added.
The dimensions of the various components of the winepresses exhibit a high degree of similarity between them, albeit certain deviations, such as the depth of Winepress XI collecting vat. An additional circular cupmark in the treading floor was found in a number of the Yif'at winepresses, which can also be characterized by their adaptation to local topography that somewhat altered the traditional shape of the installation, but still incorporated many features of this type, e.g., Winepress XI.

No Bronze Age settlement to which the Yif‘at winepresses can be attributed has been found to date within the limits of Qibbuz Yif'at. However, it is plausible that this ancient industrial area was connected to one of the Middle Bronze Age settlements in close vicinity, such as the MB II settlement near Qibbuz Sarid (HA 77:10 [Hebrew]) c. 700 m to the southwest, or to Tel Shaddud that is 1.6 km southeast of Yif'at. No Middle Bronze finds have yet been found to date at nearby Kh. Jabata in Qibbuz Gevat, the closest to Yif'at.
Other than Yif‘at and Tel Ta'anakh, winepresses of the Ta'anakh type are known from other sites in the Yizra'el Valley. Over 15 winepresses were excavated in association with the Middle Bronze occupation at 'Ein el-Hilu, c. 1 km northeast of Yif'at in northern Migdal Ha-'Emeq ('Atiqot 34:63-84). It is suggested that the Yif'at winepresses and those at 'Ein elHilu were part of extensive wine production during the Middle Bronze Age, most likely controlled, organized and redistributed by the nearby city-state at Tel Shimron (Map of Nahalal [28], 1982: Site 83).


1. Aerial view of excavation area.

2. Distribution of documented installations, map.


1-1
3. Winepress I, plan and section.

4. Winepress I, looking northwest.


1-1
6. Quarry/ Winepress II, plan and section.

8. Quarry III, plan and sections

9. Quarry III, looking east.

10. Quarry IV, plan.

12. Winepress $V$, looking north.




15. Winepress IX, looking north.

16. Winepress $X$, looking southeast.

17. Winepress XI, plan and section

18. Winepress XI, looking south.


20. Winepresses XII and XIII, plan and sections.

22. Tethering installation north of Winepress XII.
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## Yiftah

Final Report


1. Survey map.

## Abdalla Mokary

30/9/2009
During December 2004, a survey preceding development was conducted in Qibbuz Yiftah (Permit No. A-4303; map ref. NIG 25130-75/78125-50; OIG 20130-75/28125-50), prior to expansion. The survey, on behalf of the Israel Antiquities Authority, was directed by A. Mokary and A. Shapiro (GPS).
An area, west of and adjacent to Qibbuz Yiftah, on a low hill characterized by outcrops of limestone bedrock, was surveyed. Thorny bushes that covered the hill made it difficult to carry out the survey.

Twenty features with antiquities (Fig. 1) were documented: eight stone heaps built of small and medium stones (6, 8, 11, $12,15,16,20,21$ ), ten agricultural enclosures founded on bedrock ( $2,3,4,5,9,13,14,17,18,19$ ) and two limestone quarries ( 1,10 ). Feature 7 was a modern military outpost.
Fragments of pottery vessels that dated to the Roman and Byzantine periods were collected.
The surveyed hill was used as a farmland and belonged to the ancient site of Birkat Tarjam, located within the precincts of Qibbuz Yiftah.


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## Yiftah'el

## Preliminary Report



1. The excavation area. looking east.

2. Area I, a hoard of blades from Building 500.

3. Area I. plastered skulls.

4. Area I, reconstruction of the interred body positions.

5. Area G, standing stone near Building 200, looking south.

## Hamudi Khalaily, lanir Milevski and Nimrod Getzov

From October to December 2007 and April to August 2008, two seasons of excavation were conducted at the Neolithic site of Yiftah'el (Permit No. A-5252; map ref. NIG 221656-2006/739873-40307; OIG 171656-2006/239873-40307), prior to the expansion of Highway 77 that links the Yishay and Ha-Movil Junctions. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Israel National Roads Company (Department of Public Works), was directed by H. Khalaily, I. Milevski and N. Getzov, with the assistance of A. Abu Hamid, Z. Daniel, O. Zeidan, A. Yaroshevitz, I. Mitler, A. Najjar, H. Smithline, V. Shlomi and E.J. Stern (area supervision), Y. Ya'aqobi, E. Bachar, Y. Lavan and R. Abu Khalaf (administration), A. Shapiro (laboratory administration), V. Essman, M. Kipnis, T. Kornfeld and R. Mishayev (surveying), E. Amos (drafting of sections), R. Liran (architecture), N. Ezra (data input) and O. Barzilay and O. Marder (flint analysis). We extend our thanks to S. Weiner, E. Boaretto and L . Regev of the Weizmann Institute of Science for the analytical laboratory. We are especially grateful to the staff of the IAA Northern Region, D. Barshad, Z. Horowitz and R. Wolmark, for their contribution to the success of the project.

The site of Yiftah'el in the Lower Galilee extends across the eastern terrace of Nahal Yiftah'el, c. 0.5 km south of Ha-Movil Junction. A perennial spring and a small tell (Kh. Khaldiya) whose remains date to the biblical and classical periods are located near the site, which is located at the western edge of the Bet Netofa Valley, between two geological units, the hills of Shefar'am-Alonim to the west and the Nazareth mountains to the east. The site was first explored in 1982 when the road from Qibbuz Alonim to Ha-Movil Junction was constructed. To date, four expeditions had excavated at the site. Area D, in the northwest of the site ( 80 sq m ; 1982-1983), was excavated by M. Lamdan and M. Davis of the University of Haifa (IEJ 33, 1983, p. 250). Six habitation levels that dated to the Pre-Pottery Neolithic B and included sections of plaster floors, animal bones, seeds and a large assemblage of flint artifacts were exposed. Areas A and B, in the southeast and center of the site (2.4 dunams; 1983), were excavated by E. Braun of the Department of Antiquities (IAA Reports 2). Four layers that dated to the Neolithic period and the Early Bronze Age were exposed. The most significant discovery was a settlement with rounded and elliptical buildings that dated to the beginning of the Early Bronze Age. Area C ( 180 sq m; 1983), adjacent to Area B, was excavated by Y. Garfinkel on behalf of the Department of Antiquities (The Pre-Pottery Neolithic B Village at Yiftah'el, 1987). Five habitation levels from the Pre-Pottery Neolithic B, which included rectangular buildings with plaster floors, knapping pits, tombs, and animal bones, were exposed. Area E (50 sq m; 1997), between Areas B and D, was excavated by O. Marder, H. Khalaily and I. Milevski of the Israel Antiquities Authority (HA-ESI 112:23*-24*). A rectangular structure that dated to the Pre-Pottery Neolithic B was uncovered.
The new excavations concentrated in four areas (Fig. 1): Area I in the northwest of the site, near Area D, was opened to assist in understanding the nature of construction and settlement in this area; Areas F and H were opened in the center of the site for the purpose of clarifying the relationship between the Early Bronze Age strata and those of the Pre-Pottery Neolithic B period next to Area C and exploring the foundations of the Neolithic strata and their scope; and in Area G, in the southeast, a stratigraphic section was excavated across the breadth of the site between Areas A and B.

## Areal

The area extends across more than half a dunam and two main layers that represented two periods were exposed: Stratum I3 of the Pre-Pottery Neolithic B period (hereafter PPNB) and Stratum 12 of the Late Pottery Neolithic period (hereafter PNB), the Wadi Rabah culture.
Stratum I3 was exposed throughout the entire excavation area and seven levels that represented settlement phases were discerned. The plaster floors of the buildings in these levels were remarkable. The walls of the buildings did not survive, but they can be inferred from the turned-up edges of the plaster floors that were preserved. Three adjacent buildings with plaster floors, aligned north-south were exposed in the main level (I3d; Fig. 2). The impressive northeastern building (501) is one of the largest structures from the Neolithic period that was exposed to date. The building had a rectangular plan ( 100 sq m ) and was built of stone and mud-brick walls, as well as three layers of finequality plaster floors. Most of the floors were smoothed and the middle floor was even partly painted red. The structure was a broad house with two narrow entrances that were located in the western wall. Several deep and round depressions in the floor were probably postholes for wooden columns that supported the roof. The building was systematically excavated according to prehistoric methods and the exposure of its elements enabled to reconstruct a variety of activities that had taken place there. Numerous installations were incorporated in the plaster floor and some were even dug into it, including installations intended for preparing lime and for firing mud bricks that may have been used for building installations, as well as pits for burial under the floors, as was customary during the same period and others were disturbances ascribed to later phases.
Three knapping locations for the preparation of flint tools were revealed in Building 501. The first was a knapping pit that contained cores and typical flint tools-arrowheads and sickle blades. The second was a cache of flint blades, buried beneath the plaster floor in the corner of the building (Fig. 3). The third was a pit that penetrated the plaster floor and contained knapping debitage characteristic of naviform knapping technology. A hoard of axes was discovered on the floor of this building; some axes were miniature and made of green stone that was identified as serpentine-a rare raw material whose closest source occurs in northeastern Syria (Fig. 4). Their discovery could indicate cultural contacts with long-distant contemporary cultures. Noteworthy among the discovered animal bones was the intact horn of a red deer that was lying on the floor of the building, next to a circular installation. Most of the burials were found under plaster floors and some were found with their skulls intact, while others had no skulls, which is a traditional funerary practice in the PPNB. Three plastered skulls-a common phenomenon to PPNB sites-were discovered buried in Pit 402, located in an open area northeast of the building; the pit was dug into the levels of the stratum (Fig. 5). The middle skull was found in a good state of preservation. The face bears a complete plaster mask, to which the facial features of the deceased were applied. A limestone covered with a thin layer of plaster was put in place of the nose. The eyes were elongated and each was reconstructed with three inlaid shells, the middle shell placed vertically. The mouth was closed and the lips were delicately reconstructed. The plaster in the left skull was preserved in the orbits of the eyes. The skull on the right was poorly preserved; however, there are signs indicating it was also treated with plaster in the vicinity of the eyes. The funerary practice involved interring the dead inside the buildings, beneath the plaster floors. After a while, the inhabitants would reopen the burial pit, detached the skull from the skeleton and cover the skeleton with plaster. Then, the skull was plastered in the image of the deceased and kept inside the house. This practice is known in the literature as ancestor worship and the plastered skull is the actual image that is preserved in the consciousness of the descendants.
The middle building (502) was smaller and next to the western wall of Building 501. It was rectangular (c. 25 sq m ), although irregular and had a plaster floor. A thick layer of mud bricks, ash and burnt clay, in which the negatives of reeds were discerned, was found on top of the floor. It was evidence of walls built of mud bricks and a ceiling constructed from reeds. The ceiling was also attested to by the round pits in the plaster floor that served as bases for columns that supported it. The most remarkable installation in the building was a circular silo that was partly built of plaster and incorporated in the floor and partly built of clay. The silo contained charred lentil seeds (vicia faba) and a few cleavers' seeds (gallium triconutum), which is a noxious weed common to sown fields. It is believed that this combination points to the growing of lentils at the site. Collecting tens of thousands of seeds demonstrates planned storage inside a large silo. An unusual distribution of lentil seeds was discerned in the northern part of the building. Large concentrations of charred broad bean seeds (vicia faba), together with a few seeds of grain that are probably wild wheat (Fig. 6), were discovered inside a layer of mud-brick material in the open area opposite the southern wall of the building.

Perpendicular to Building 502 was another building ( 550 ; width 6 m , length in access of 7 m ), entered from the north and similar in shape to Building 501. The western part of the building was disturbed by a channel and its original plan could not be reconstructed. This building also had a plaster floor whose ends ascended up from the floor level and ascended to the lower part of the walls. Several postholes that were incorporated in the floor indicated the building's roof; charred wood was preserved in one of them.
Architectural changes in the building complex were made in later phases (I3c, I3b). A stone wall was built in the northeastern Building 501 (becoming Building 500 in these phases), which delimited it on the east and an interior wal that partitioned the building's interior into two spaces was added. The small space in the south had a thin plaster floor and the large space in the north had a few preserved sections of a plaster floor. Several installations and pits were incorporated in the plaster floors. Some of the pits were lined with stones and in others were concentrations of ash rich in phosphates, indicating that bones were burnt in them. Some of the installations that were integrated in the floors of Buildings 500 and 501 were intended for storing flint items, which were in various stages of knapping. Naviform cores in various stages of knapping were stored in one installation and another installation contained pounders, cores and typical flint tools, such as arrowheads and sickle blades, indicating flint knappers who specialized in the naviform technology. Ascribed to these phases were several primary and secondary burials, the most remarkable of which was the interment of three individuals discovered above Building 502. The three articulated skeletons were found in a flexed position and their skulls had not been removed. The skeletons were those of a man, a woman and a boy; the right arm of the woman was below the head of the man and her left arm was hugging the boy; the left arm of the man was placed on the boy (Figs. 7, 8).
The shape and orientation of Building 550 was changed in Phase I3b and it was designated Building 551. In this phase it was aligned east-west and paralleled Building 500. Building 551 was wider than the building in the previous phase (c. 50 sq m ); its walls were built of mud bricks and two openings were set in them, in the east and west. The disturbed plaster floors of this phase had installations and pits, including a notable square installation, incorporated in them.
Pits were scattered throughout the entire area of the building and three pits in a row at the northern end of the structure standout in particular. The middle pit contained the remains of an articulated skeleton of a wild bovine (Bos primigenius; Fig. 9). Postholes were incorporated in the plaster floors of all the phases; a charred wooden beam (diam. 15 cm ) was preserved in Building 551.
The lithic assemblage from this area is characteristic of the middle phase of the PPNB. An extremely large amount of naviform industrial debitage was found, especially blades, along with sickle blades, arrowheads and axes. Jericho points were prominent among the arrowheads in each of the phases of the stratum and 'Amuq points stood out in two of the discovered caches.
Stratum I2 of the Pottery Neolithic period (Wadi Rabah) was discerned below the current surface level. It included the meager remains of walls and stone-built installations, which contained fill that yielded flint tools and potsherds that were characteristic of the Wadi Rabah culture (Fig. 10). This stratum, which seems to have been preserved in the northern part of the area, was founded on top of Stratum I3. It appears that Stratum I2 was below the remains of the Early Bronze I layer, but was not preserved, due to modern cultivation activities and especially the infrastructure work of the 1980s.

## Area F

Most of the remains in this area were from the PPNB in Stratum F4 and from Early Bronze I in Stratum F3 (Fig. 11). Parts of plaster floors, installations and stone and mud-brick walls, whose spatial plan connected with the excavations from the 1980s, were exposed, as well as levels across an extensive area that contained large quantities of burnt stones, flint artifacts and partially burnt bones, which belonged to various animals, namely gazelles, goats, pigs and cows. Some of the levels contained mud-brick material that appeared like light brown tamped sediment. Most of the flint artifacts from Layer F4 dated to the PPNB and were knapped using naviform technology. The amount of flint items and their variety, ranging from cores and core debitage to tools, such as sickle blades and arrowheads, indicates that the inhabitants of Yiftah'el were somewhat intensively engaged in the production of flint artifacts during the PPNB. Axes, knives and other tools were found in the area, as well as a Neolithic artistic find in the image of a wadi pebble decorated with a fishnet motif
Stratum F4 was over 1.5 m thick and four habitation phases were discerned in it. The lowest phase (F4d), which was located beneath levels of plaster floors, consisted of several circular installations that were built into a layer of clay sediment with a few finds. The installations were lined with plaster and contained ash that indicates they were used for burning. The flint tools in this area were similar to those from Area I; the predominant point in the tool assemblage was the Jericho point.
The main phase (F4c) revealed sections of plaster floors that were scattered in no apparent order across an extensive area. A rectangular building (102; 10 sq m ) whose wall foundations were built of one row of stones (preserved height 0.25 m ) was partly exposed. The floor in the building was tamped earth, in parts of which plaster was integrated. The building was founded on top of a large plaster floor ( 70 sq m ) that had installations incorporated in it, some of which contained ash and signs of burning. About 1 m of accumulation (F4b), which included gravel layers that were replete with flint artifacts, installations and hearths, separated between Phase F4c and the upper phase (F4a), which was disturbed by pits and installations that dated to the Early Bronze Age; some even penetrated deep into the earliest phases. Sections of plaster floors in this phase were preserved in the western part of the area and were founded on top of dense stones bedding.
Scant remains of the PNB were discovered between the PPNB and Early Bronze I strata. A single wall, which was probably also used in the Early Bronze Age, and a thin habitation level attributed to it, were preserved from this period. Based on the potsherds, the remains should be ascribed to the Lodian culture (Jericho IX).
Stratum F3 consisted of two levels that dated to Early Bronze I. Sections of walls and several agricultural installations, which were probably fieldstone-built silos that were used to store grain, were preserved from Phase F3b. Several refuse pits were also found, among them a large pit that contained numerous potsherds, including medium and large jars and delicate gray-burnished bowls. Remains and sections of walls of elliptical buildings were revealed in the upper phase (F3a). Many of them had previously been excavated; their plans were completed this season and the level below them was excavated.
The large number of recovered pottery vessels was dated to EB IA; in addition, Canaanean sickle blades, carnelian beads and shells from the Mediterranean Sea and Egypt were found, indicating ties with this country.

## Area H

A deep depression was created in the area by bulldozers in the 1980s, when the roadbed was being prepared. Severa probe trenches had been conducted here in the past by the University of Haifa, although their locations were not markec and hence, unknown.
A small probe trench in the center of the area had revealed a thick archaeological level, rich in Neolithic flint artifacts. A light colored surface that appears to have been a section of a plaster floor was exposed at the bottom of the trench. Eigh squares, excavated to a depth of 0.7 m were opened. It became apparent at the beginning of the excavation that all the archaeological remains in the area dated to the PPNB period. The remains that postdated this period were probably removed during the infrastructure work of the 1980s. Three habitation phases, ascribed to a single stratum, were identified and excavated
Phase H2c was only preserved in the southern row of squares. Sterile soil appeared in the rest of the squares. The phase consisted of light gray sediment level, mixed with angular stones that were mostly burned. The level contained numerous small hearths, pits that contained angular stones and small circular, plaster-built installations (diam. 0.5 m ), which contained coarse plaster remains. Based on the character of the level and its installations, it can be reasonably assumec that this was an industrial area where plaster was prepared.
Phase H2b (thickness 0.4 m ) was characterized by a level of friable gray sediment, rich in mud-brick material, anima bones and a high concentration of flint artifacts. The level sloped to the northeast and it was thicker in the east than in the west. Despite the abundant artifacts, it seems that the level was artificial-a result of intentional debris that covered the depression, which was formed by later activity. The debris was founded in the northern part on top of sterile brown terre
rossa soil. Sections of walls were preserved in the southern part. These formed square rooms with plaster floors that were founded on top of tamped stone levels, installations and a single grave that was discovered below a floor. The deceased in the grave was placed in a flexed position and the skull had remained in place.
Phase H2a was severely damaged during previous work and none of its remains were left in situ, although the level could be discerned in a section of the probe trench.

## Area G

The accumulations at the site were studied in a wide trench (length 50 m , width 15 m ) that was excavated in the area. Thirty-one squares (Fig. 12) were opened and five strata were exposed; the excavation was completed in most of the squares and virgin soil was reached.
Stratum G5 (PPNB). The identification of the fill ascribed to this layer was usually done on the basis of absent ceramic finds. It should be noted that not a single artifact, which can be ascribed to the PPNC (the Ghazalian culture), was recovered and therefore, earlier proposals that suggested a settlement from this period at the site should be rejected. Three habitation phases were identified.
Phase G5c was only exposed in three squares, in limited probes beneath the floor of Building 200 (below). It became clear that a depression (diam. c. 4 m ) was in the area, at whose bottom was a pavement of small stones. An accumulation of light colored soil (thickness c. 0.4 m ) was on the floor. The prominent remains in Phase G5b belonged to large buildings whose wall foundations were built of large stones and founded on virgin soil. The floors were a thin layer of crushed chalk, of which only small sections were generally preserved and exposed. The remains were insufficient to learn about the planning and buildings of the settlement. A rectangular structure (Building 200; $8 \times 9 \mathrm{~m}$; Fig. 13) in an excellent state of preservation was discovered in the center of the area and the scope of the area was expanded. The walls of the building, probably built of mud bricks, were not preserved. Along part of the perimeter was a stone foundation of the wall and in another part it seems that the mud bricks were set directly on the ground. The sub-base of the building's floor consisted of small stones (thickness c. 20 cm ) that were overlain with small flat stones; the spaces between the latter were filled with lime-based cement that was also used to plaster the floor's surface.
At the time when the building was still in use, several pits were dug in the floor. Foundations for installing posts that supported the ceiling were discovered at the bottom of four pits (Fig. 14).
A courtyard to the north of the building was mostly not exposed. The main entrance to the building was in the middle of the lateral northern wall, along the longitudinal axis of the building, between four columns. After the building was no longer used, it was covered with a thin layer of dark brown clay soil and a large stone was placed in the center. Over the stone and covering the soil, a large heap of small stones of uniform size was placed and it seems that the stones were carefully selected for this purpose.
To date, such a building is unknown in the architecture of the PPNB. Its large dimensions and the considerable investment in its construction render it unique and indicate that it had a public function. The careful preservation of the building after it was deserted demonstrates that the residents of the site ascribed it symbolic importance and possibly cultic ceremonies have taken place inside it.
A coarsely hewn, rectangular standing stone $(0.3 \times 0.6 \times 1.4 \mathrm{~m}$; Fig. 15) that was found outside of Building 200 and next to its southwestern corner could be a stela.
The top of the layer in Phase G5a was exposed in most of the area. Numerous clusters and two large pits that contained the debitage of knapping flint tool were found. Only a few architectural remains could be attributed to this phase, among them a thick plaster floor of a small building, as well as three large kilns that were built within circular pits (diam. c. 2.5 m ) An examination of the ash recovered from inside the kilns, which was conducted by a team of researchers from the Weizmann Institute, showed that the firing temperature in the kilns reached c. 1,000 ${ }^{\circ}$ Celsius (Fig. 16 ).
The flint industry in Phases G5b-c was similar to that in the other areas and is characteristic of the middle PPNB. Apart from a considerable amount of debitage, naviform industry, sickle blades, arrowheads and axes were prominent in the assemblage. Byblos points stood out among the characteristic arrowheads in the three phases, evidence that the PPNB accumulations in Area G were probably later than those in Area F, where the Jericho point prevailed. The finds in Phase G5a were different. Particularly in the knapping pits, bipolar cores that are not naviform and the debitage of a bifacial tool industry, which probably belonged to the late phase of the PPNB, were found. Conspicuous among these finds were special ad-hoc tools, including knives that were carefully shaped using bi-facial pressure retouching. These are known elsewhere but this assemblage seems especially large and impressive (Fig. 17).
Stratum G4 (PN) consisted of numerous building remains, among them sections of walls that were preserved throughout the excavation area. The buildings had straight or curved walls, but at this stage it was impossible to identify complete structures (Fig. 18). A complete holemouth jar with two large lug handles and numerous knobs along the rim was found in situ in the corner of one of the buildings.
It was possible to identify in several places three phases, in which buildings replaced the earlier ones. However, this picture does not represent three successive sub-phases, but rather a local sequence of changes.
Building III/B/1, which was exposed in Braun's excavations and ascribed to Stratum III of the PPNB, was attributed to Stratum G4 of the PN, based on the renewed excavations. The finds from Stratum G4, together with the finds of Stratum III from Braun's excavation, show a small settlement ( 2.5 dunams) that was mostly excavated. The buildings were crowded and had small rooms. There is much innovation in the exposure of the settlement and its defining, as well as a significant contribution to the study of the period cultures in the north of the country.
A tomb was also ascribed to Stratum G4; it contained the interment of an adult female who was lying in a flexed position with her face to the northeast. Flat stones were placed on the upper part of her body and in the middle of them, above her head, a flat standing stone was set on its narrow side, parallel to the direction of the body.
The pottery vessels from this stratum point to a clear connection with the Lodian culture (contemporary with Stratum IX at Jericho) and include jars with in-curved rims and a few painted and burnished vessels, decorated with triangular patterns and groups of parallel lines (Fig. 19).
The flint assemblage included numerous residual artifacts from the time of Stratum G5, as well as artifacts that were characteristic of Stratum G4, such as flake cores with several striking surfaces, thin axes with a broad cutting edge, many of which were shaped on flakes, several sickle blades that were modified by bifacial pressure retouching and a few minute arrowheads. The pottery vessels and flint assemblage show a clear affinity to the Lodian culture. Typical components of the Yarmukian culture, such as potsherds decorated with incising, or a combination of incising and painting, as well as deeply denticulated sickle blades, are completely absent from the finds.
Stratum G3 (Early Bronze I) comprised architectural remains that were only uncovered in the western part of the site. Levels with medium-sized stones and meager remains of walls were exposed. Three burial jars that contained the skeletal remains of day-old infants were discovered east of the built-up areas. It is noteworthy that these burials were found outside the area of the Early Bronze Age buildings.
Prominent vessels within the ceramic assemblage were holemouths jars and kraters with a decorated ridge around the rim, as well as jars and other vessels of the gray-burnished ware. Noteworthy among the flint artifacts of the period were a few Canaanean sickle blades.
Most of the settlement area from this period was exposed in the excavations of the 1980s and in the current excavation. Combining the finds from both excavations indicate a settlement (c. 4.5 dunams) that comprised two groups of buildings (Areas A and B of Braun's excavation) and an open space between them, which consisted mostly of stone pavements, without residential buildings (Area G).
Stratum G2 (Intermediate Bronze Age). A few potsherds were found close to surface and generally clear accumulations could not be ascribed to it. Only a small pit from this period that contained fragments of a cooking pot and a jar was found in one square.
Stratum G1 (surface). Potsherds dating to the Early Roman, Late Roman and Byzantine periods were found. Most of the pottery vessels were from the Late Roman period and prominent among them the Kefar Hananya-typevessels. It seems that these potsherds were brought by farmers who fertilized their fields with refuse from settlements.

Two dunams of PPNB remains were exposed and excavated in the current excavation. Three settlement periods were identified: the earliest dated to the PPNB. Overlying these remains were those of the PN (Jericho IX and Wadi Rabah cultures) and the uppermost settlement dated to EB I.
The contributions of the new excavations focus on a number of topics:
(1) The extensive exposure of buildings with plaster floors in Areas F and H and particularly Area I furthers the understanding of architecture and settlement organization during the PPNB.
Seven successive settlement phases of rectangular buildings with plaster floors that were documented in Area I enhance our perception, regarding continuity and change of the construction technique in the PPNB.
(2) The enormous amounts of flint knapping, using naviform technology, point to specialized flint knappers and industrial knapping, not just for local use but for local exchange.
(3) The various kinds of charred seeds found in Area I are essential in studying of the beginning of agriculture and the economic base of the settlement.
(4) The many burials and especially, the group of plastered skulls, provide additional information regarding the special mortuary practice and beliefs of the period.
(5) The discovery of the public building in Stratum 5 of Area $G$ and identifying it as a later phase of the buildings with plaster floors that had been exposed in previous excavations, as well as in other areas, bears witness to a long sequence of continuity of settlement development within the PPNB.
(6) The three kilns discovered in Area $G$ and the installations located in the other areas are unique finds from this period, which demonstrate the development of pyro-technology.
(7) The identification and understanding of the Pottery Neolithic settlement (probably Stratum III in Braun's excavation and Stratum 4 in Area G), the architecture and the components of the material culture are important data on cultures following the Yarmukian culture the northern country.
(8) The exposure of more remains from an Early Bronze Age settlement in Areas F and G (Stratum II in Braun's excavation and Stratum 3 in the current excavation) makes it possible to clearly define the scope of the settlement and its division into two separate clusters of construction and adds important knowledge to the study of the settlement's internal organization in this period.


1. The excavation area, looking east.

2. Area I, the three buildings, aerial photograph, looking east.


3. Area I, axes made of serpentine.


4. Area I, charred broad bean and wild wheat seeds.

5. Area I , a family burial.

6. Area I, reconstruction of the interred body positions.

7. Area I, skeleton of undomesticated bovine, in situ.

8. Area I, potsherds characteristic of the Wadi Rabah culture.

9. Area F, prominent buildings of the Early Bronze Age, looking east.

10. Area G, general view, looking southeast.

11. Area G, Building 200 from the PPNB, aerial view, looking east.

12. Area G, Building 200, isometric reconstruction.

13. Area G, standing stone near Building 200, looking south.

14. Area G , view of one of the kilns in the section of the square.

15. Area $G$, bifacial knives from a knapping pit.

16. Area G, Stratum 4, building remains from PN period, looking south.

17. Area G, pottery vessels characteristic of the Jericho IX culture.

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Hervé Barbé and Gilad Cinamon


1. Location map.

2. Plan and sections.

3. Southern vault, looking northeast.

4. Area I. Ottoman period pottery.

5. Area II, Mamluk unglazed pottery vessels.

During April 2005, a trial excavation was conducted on Ha-Ari Street in Zefat (Permit No. A-4441; map ref. NIG 2462-3/7637-8; OIG $1962-3 / 2637-8$ ), prior to construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and financed by the Breslau Hasidism, was directed by H. Barbéand G. Cinamon, with the assistance of Y. Ya'aqobi (administration), V. Essman and V. Pirsky (surveying and drafting), N. Zak (drafting), L. Kupershmidt (metallurgical laboratory), C. Hersch (pottery drawing) and R. Kool (numismatics).
The excavation area was located on the western hill of Giv'at Zefat, west of Ha-Ari Street in Qiryat Breslau, at the western end of the Old City, c. 300 m from the walls of the citadel. The Ha-Ari Synagogue is located south of the excavation area (Fig. 1). Two excavation areas were opened east and west of the exposed vaults (Fig. 2).

## Areal

Two vaults, which differ in their construction manner, were exposed (Fig. 3). The southern vault was 1.5 m higher than the northern one and a plastered wall that was painted blue could be seen on its eastern side. The outline of the northern structure was unclear due to alluvium and fill. The western openings of the vaults were exposed and the area to their west was excavated (c. 25 sq m). A wall (W101) was exposed between the vaults. It was built of dressed, medium-sized stones and supported the pilaster between the arches. The pilaster, which protruded from its base, resembled a style of pilasters characteristic of Mamluk construction that was discovered in the fortress of Zefat and at other sites of the period. Despite the limited area of the excavation, several construction phases were discerned. The partition wall (W101) separated between two well-built spaces and was abutted on the south by a perpendicular wall (W102; Fig. 4) that was oriented north-south. Wall 102 was built on a floor of crushed chalk and tamped leveled soil (Loci 1006, 1007). On the floors was a mix of Rashaya el-Fukhar potsherds and Ottoman and Mamluk vessels; noteworthy were fragments of glazed frit-ware vessels, as well as remains of nails, pieces of iron and glass vessels. The artifacts below the floors dated to the Ottoman period and included a large pipe of red clay (Fig. 5:1), a bowl (Fig. 5:2) and a cooking pot (Fig. 5:3), which were products of the Rashaya el-Fukhar pottery workshops. A sounding cut in the floor (L1008) indicated that the floor was set on top of fieldstones and bonding material. Below the floor and its bedding was a large void, 2 m deep. The bottom part of W101 was founded on rock-cuttings in bedrock. Other walls and vaults, which supported and divided the building, could be seen in the subterranean void, which was not excavated and hence, it was not possible to date it and ascertain its nature and purpose.

## Area II

The top of a wall and a collapse were exposed in exploratory trenches. The wall (W100), built of semi-dressed hard limestone, was oriented north-south and preserved, from its base on bedrock, five courses high ( 1.3 m ). The southern end of the wall did not survive.
Parallel to and west of W100, a large stone collapse (L1001; length 7 m ) was exposed. It seems that the collapse and the wall were part of an ancient building, only a small portion of which was uncovered in the excavation. Numerous potsherds dating to the modern era and the Ottoman and Mamluk periods were recovered from the collapse.

A small excavation area ( 6.25 sq m ; L1002) that was opened on the southern edge of the collapse and beneath it revealed a wall that was preserved two courses high. Many pottery fragments were collected near the wall, dating to the Mamluk period. These included unglazed small and large bowls (Fig. 6:1, 2) and storage jars (Fig. 6:3-7); monochrome glazed bowls (Fig. 7:1, 2), reserved-slip bowls (Fig. 7:3), bowls with gouged graffiti (Fig. 7:4-6), Italian glazed bowls (Fig. 7:7), a chamber pot (Fig. 7:8), a faience vessel (Fig. 7:9) and a jug (Fig. 7:10); cooking vessels, such as cooking bowls (Fig. 8:1), globular cooking pots (Fig. 8:2-4) and deep cooking pots (Fig. 8:5, 6), as well as glazed vessels imitating Chinese wares. Many other artifacts were found below the collapse of the building and around it, including two bronze chains, beads, pins and 57 coins.

## Coins

Robert Kool
Fifty-seven coins that are mostly made of bronze and copper were found, 25 of which were identifiable. While four coins dated to earlier periods (second century BCE-sixth century CE), most of the coins (17) are Mamluk folles, dating primarily from the end of the fourteenth century CE. Noteworthy among them is a group of folles that date to the reign of Sultan Barquq ( $1381-1398$ CE). Also found was a contemporary imitation of a $3 / 4$ silver dirham of Barsbāy (1422-1437 CE). These silver coins were in circulation for a relatively short period of time (not later than the middle of the sixteenth century CE). The latest numismatic finds are four Ottoman coins that date to the sixteenth-seventeenth centuries CE.

## Table 1. Coins

| No. | Ruler | Dating | IAA No. |
| :---: | :---: | :---: | :---: |
| 1 | Hasmonean | 134-37 BCE | 108885 |
| 2 | Late Roman | Fourth century CE | 108886 |
| 3 | Anastasius I | 491-489 CE | 108888 |
| 4 | Byzantine | Fifth-sixth centuries CE | 108900 |
| 5 | al-Salih Isma'il | 1342 CE (743 AH) | 108889 |
| 6 | al-Ashraf Sha'ban II | 1362-1376 CE | 108904 |
| 7 | Barquq (first reign) | 1382-1388 CE (784-791 AH) | 108891 |
| 8-12 | Barquq (second reign) | 1389-1398 CE (792-801 AH) | $\begin{aligned} & 108894,108897,108903, \\ & 108906,108907 \end{aligned}$ |
| 13 | Barsbāy | 1422 CE (825 AH) | 108890 |
| 14-16 | Mamluk | Fourteenth century CE | 108895, 108901, 108902 |
| 17-21 | Mamluk | Fourteenth-fifteenth centuries <br> CE | $\begin{aligned} & 108892,108893,108896, \\ & 108905,108909 \end{aligned}$ |
| 22-25 | Ottoman | Sixteenth-seventeenth centuries CE | $\begin{aligned} & 108887,108898,108899, \\ & 108908 \end{aligned}$ |

The trial excavation showed that a settlement established in the fourteenth century CE existed in the area between HaAri Street and the Breslau compound. While most of the pottery vessels from the building dated to the Mamluk period, the four Ottoman coins indicate that the structure continued to be used during that period, as well as into the twentieth century. Due to the limited scope of the excavation, it was neither possible to understand the relationship between the


1. Location map.


2. Southern vault, looking northeast.

3. Wall 102 abutting Wall 101 and the floors, looking northwest.




017 :
4. Area II, Mamluk glazed pottery vessels.




5. Area II, Mamluk cooking vessels.

## Zefat, the Old City

## Final Report

## Yosef Stepansky



1. Plan and sections.

2. The excavation area, looking east.

During May 2004, a trial excavation was conducted in the Jewish Quarter of the old city of Zefat (Permit No. A- 4159; map ref NIG 246355/763735; OIG 196355/263735), prior to construction. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by A. Ben Porat, was directed by Y. Stepansky, with the assistance of Y. Ya'aqobi (administration) and A. Hajian (surveying).
The excavation area ( 14 sq m ) was surrounded by residential buildings and bordered on a road (Tarpat Street). A section of a large building that dated to the Ottoman period and was identified as the Khan al-Pasha (the Khan of the Jews; 'Atiqot 46:113-133 [Hebrew]) had previously been exposed c. 30 m east of the excavation area. Part of a cistern from the Late Ottoman period (eighteenth-nineteenth centuries CE), which was in use until the twentieth century CE, was exposed in the current excavation.

The northern part of a cistern (L1; min. dimensions $2 \times 3 \mathrm{~m}$, depth c. 2.5 m ; Figs. 1, 2) was excavated down to a layer of mud ( 770.76 m above sea level, min. depth 0.8 m ), which prevented the continuation of work. The eastern side of the cistern rested against two earlier walls (W100, W101), which were probably the remains of a building that was damaged prior to the construction of the cistern. The remains of the cistern's vaulted ceiling and outer walls that supported it (W103, W105) were exposed.
The artifacts recovered from the cistern dated to within the last one hundred years and included modern finds. While dismantling a section of W105, a few potsherds that dated to the Late Ottoman period, including a Rashaya el-Fukhar potsherd, were found. Thus, the cistern could not have been built prior to the eighteenth century CE and most likely, was constructed after the great earthquake of 1837. The opening of another cistern was discerned to the west of the excavated cistern; however, no traces of a ritual bath were discovered. Similar cisterns are characteristic of courtyards in the houses of the old city of Zefat and some courtyards occasionally contain more than one cistern.


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Zefat, Tet-Zayin Street (Zawiyat Banât Hamîd)
Final Report
Emanuel Damati


1. Plan and sections.

2. The two street pavements looking south.

During October-November 2002, a salvage excavation was conducted on Tet-Zayin Street in Zefat (Permit No. A-3762*; map ref. NIG 24657/76316; OIG 19657/26316), in the wake of installing pipes. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the Administration for the Development of Infrastructure and Tourism in Zefat, was directed by E. Damati (photography), assisted by A. Shapiro (surveying).
Four courses of a wall (W101; Fig. 1) were discovered in a section of the street, next to the Mamluk mausoleum from the fourteenth century CE (Zawiyat Banât Hamîd) that had been built upon bedrock to the east of W101, which bordered the bedrock from the west and separated it from the street to its west. The remains of W101, clearly visible in a picture of the mausoleum from 1880 (C.W. Wilson, 1880. Picturesque Palestine, Sinai and Egypt II. London. P. 90), were not parallel to the western wall of the mausoleum ( W 100 ) and consisted only of the western face. Two street levels paved with stones $(12 \times 18 \mathrm{~cm}$; Fig. 2) and built one atop the other, abutted the wall. A section of a shallow drainage channel that passed down the center of the upper pavement was exposed. Ottoman potsherds (sixteenth-seventeenth centuries CE) were recovered from the bedding of the lower street level. After the sinking of the street, possibly due to an earthquake, it was repaired and repaved atop a layer of fill (c. 60 cm ), which contained potsherds from the seventeenth-eighteenth centuries CE (Fig. 3).

The Turkish traveler Eveliya Çelebi, who visited Zefat in the year 1671/2 CE, mentioned an inscription that was set in the adjacent Red Mosque, which documented repairs that possibly included the first pavement of the street and were performed by the city's governor Salih Bey. The second pavement may be ascribed to the repairs of Daher al-'Omar, following the earthquake of 1759 CE.


1-1


1. Plan and sections.

2. The two street pavements, looking south.

3. Potsherds and pipes from the bedding of the two street levels.

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1. Plan and sections.

2. Aerial view of the two pools.

3. Wall 13 of the square pool that had cut the circular pool looking south.

4. Pottery.

5. The collapsed side of the square pool, looking south.

Leea Porat
During June and August 2006, a salvage excavation was conducted at Moshav Zippori (Permit No. A-4831; map ref. NIG 22596-8/73949-52; OIG 17596-8/23949-52), following the discovery of ancient remains. The excavation, on behalf of the Israel Antiquities Authority, was directed by L. Porat, with the assistance of Y. Lavan (administration), V. Essman and V. Pirsky surveying and drafting), D. Gahali (aerial photography; Sky Balloons Company), A. Shapiro (GPS, petrography), H. Tahan (pottery drawing) and T Tzuk of the Nature and Parks Authority.
The excavation area $(9.5 \times 18.0 \mathrm{~m})$, which had been leveled in the past, extended along the northern slope of a hill in the western part of Moshav Zippori. Two pools (Figs. 1, 2), a circular one that dated to the Roman period and a square pool that dated to the Byzantine and Early Islamic periods, were exposed. Remains of a mosaic floor from the Byzantine period and remains from the Early Islamic period were excavated in 2003, c. 200 m southwest of pools (Permit No. A-3820).

The Circular Pool (diam. 6.5 m , max. preserved height 1.3 m ). Only the southern part of the pool (L14) had survived. The pool, hewn in chalk bedrock, was lined with large ashlar stones $(0.55 \times 0.80 \mathrm{~m})$ that were also placed along the top edge of the pool (W17). This side of the pool was coated with light gray plaster, upon which were visible water marks. The floor of the pool sloped to the west and was also coated with light gray plaster. A petrographic examination ascertained that the plaster on the side and floor of the pool was the same. The raw material used in making the plaster was indigenous to the vicinity of the site. Two to three layers of plaster were discerned in the pool, indicating that the plaster had been repaired. The eastern side of the pool was severed by the western wall of the square pool (W13; Fig. 3). On the eastern side of the floor was a layer of small and medium-sized stones that probably originated from the square pool. The soil fill discovered on the floor was mixed with potsherds that dated from the first century BCE until the first half of the fifth century CE, including fragments of Kefar Hananya-type bowls (Fig. 4:1-3), Sikhin-type jars (Fig. 4:6) and juglets (Fig. 4:7).

The Square Pool ( $9.2 \times 11.0 \mathrm{~m}$, max. preserved height 1 m ) was only excavated along the walls on the inside. The pool, hewn in chalk bedrock, was lined with different size ashlar stones that included two threshold stones in secondary use. The sides of the pool were coated with three layers of plaster. The bottom one was a gray foundation layer mixed with numerous potsherds; the middle one was a white plaster layer to which a thin layer of reddish brown ochre was applied and the top layer consisted of light gray plaster. A single layer of repairs had been applied to the plaster, upon which water marks were discerned. It seems that the raw material used in the plaster originated in the vicinity of the site. The southern side of the pool (W12) was inclined inward and some of the stones in the eastern side had collapsed onto the floor, probably the result of an earthquake (Fig. 5). A small amount of plaster was discovered among the stones that collapsed. The eastern side of the pool (W15) also slanted inward. The western side (W13), which severed the circular pool, had a small rounded outlet that emptied the water in the direction of the circular pool. Two floors were exposed in the pool. The upper floor (L16) consisted of thick gray plaster applied to a bedding of small and medium fieldstones (L18); it abutted all the walls. It appears that the floor was set toward the end of the period when the pool was used because no water marks were visible on it. The upper level of Floor 16 was c .0 .3 m higher than the floor of the circular pool. The bottom floor (L19) was dark gray plaster that was applied to a bedding of small and medium fieldstones (L20), which were placed on bedrock (L21). A yellow-red layer that contained a large amount of carbon, organic material and fossilized shells was discovered on Floor 19. The ceramic finds that were found in the pool's plaster dated to the Byzantine and Early Islamic periods and included fragments of red-burnished bowls (Fig. 4:8), glazed bowls (Fig. 4:9) and jars (Fig. 4:10-12). Many potsherds of the Roman period (first century BCE-first half of second century CE) were discovered in the fill of the pool and on surface, including bowls (Fig. 4:4) and Kefar Hananya-type cooking pots (Fig. 4:5).

It seems that the circular pool, which operated during the Roman period, ceased to be used during the Byzantine period, when the square pool was constructed. The pools were located outside the built-up area of Zippori, and it therefore seems that they were utilized for irrigating farmland in the vicinity of the city. The outlet in the square pool that led toward the circular pool, which was destroyed at this time, was most likely connected to an irrigation channel that did not survive in this section. The inlets to the pools were not discovered and apparently, they were fixed in high places in the sides of the pools and were not preserved. The water that filled the pools probably came from a nearby spring that flows in the winter. During the Roman and Byzantine periods the water sources were approximately $15 \%$ more abundant than they are to date.

2. Aerial view of the two pools.

3. Wall 13 of the square pool that had cut the circular pool, looking south.


5. The collapsed side of the square pool, looking south.
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## Zur Natan

Final Report
Hagit Torge


1. Quarries, plan.

During November 2007, a trial excavation was conducted at Zur Natan (Permit No. A-5289; map ref. NIG 201114-42/683093-118; OIG 151114-42/183093-118), prior to the construction of a residential building. The excavation, undertaken on behalf of the Israel Antiquities Authority and underwritten by the property owner, was directed by H. Torge, with the assistance of E. Bachar and S. Ya'aqov-Jam (administration) and T. Meltsen and R. Mishayev (surveying and drafting).
The excavation area was located c. 50 m south of a former excavation at Khirbat Majdal, where a settlement from the Byzantine period (sixth-seventh centuries CE) was exposed; it included numerous installations, dwellings and a large public building with an apse that was identified as a Samaritan synagogue ( E . Ayalon 2002. Horvat Migdal (Zur Natan): An Ancient Samaritan Village. In E. Stern and H. Eshel (eds.). The Book of Samaritans. Jerusalem. Pp. 272-288).

Two excavation squares (c. 6 sq m ; Fig. 1) were opened c. 2 m apart, in places where signs of rock cuttings in the chalk bedrock were discerned when probe trenches were dug by mechanical equipment.

A quarry was discovered in the southern square. It consisted of a shallow square recess $(1.8 \times 2.0 \mathrm{~m}$, max. depth 0.13 $\mathrm{m})$, whose southern and western sides were only preserved. The bedrock surface was c .0 .2 m lower to the north, while in the east a notch in the bedrock, which had been carved to detach stones from the quarry, was visible. The rock cuttings can not be used to determine the size or number of the stones hewn in the quarry.

Two quarries were identified in the northern square. The negatives of several square stones (average dimensions $0.2 \times$ $0.3 \times 0.3 \mathrm{~m})$ that had been quarried were visible in a shallow rock cutting $(2.0 \times 2.5 \mathrm{~m}$, depth 0.18 m$)$ in the northern part of the square. The remains of steps with severance channels of four elongated stones (max. dimensions $0.3 \times 0.3 \times 1.8$ m ) were noted in the southern part of the square; however, the depth of the quarry indicates that other stones were possibly hewn there.

These quarries appear to have been part of the construction in the adjacent settlement. The outcrops of soft chalk bedrock in this region made it easy for the masons in the settlement to obtain a large number of stones in small quarries.



[^0]:    2. Plan and sections.
[^1]:    2. Tomb 105 (Subtype A1), plan.
[^2]:    1. Plan and section.
[^3]:    1. Location map.
[^4]:    1. Eastern excavation area, plan and section.
[^5]:    3. Front courtyard, plan and sections.
