## Hadashot Arkheologiyot

Excavations and Surveys in Israel


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## Abu Ghosh*

Irina Zilberbod
23/7/2007


1. The courtyard and the quarry, plan and section.

During July 2003 a salvage excavation was conducted at Abu Ghosh (Permit No. A-3931*; map ref. NIG 2105/6345; OIG $1605 / 1345$ ), in an area slated for the setting of a sewer course. The excavation, on behalf of the Antiquities Authority and financed by the Abu Ghosh Local Council, was directed by I. Zilberbod, assisted by V. Pirsky (surveying).

A burial cave was discovered alongside the proposed sewer route; only its courtyard was excavated. A later quarry was exposed to the northwest of the cave (Fig. 1).

The bedrock-hewn courtyard (L3; $2.5 \times 2.5 \mathrm{~m}$ ) was survived by its northern wall and façade. The entrance to the cave, decorated with a stepped frame (L8; width 0.5 m , height 0.68 m ), was hewn in the façade (height 1.1-1.5 m).
A three-stepped slope, beneath a fill of arable soil and small stones, was discerned in the quarry. The upper step was hewn north of the cave (L2; $2.5 \times 2.7 \mathrm{~m}$ ). The middle step (L4; $2 \times 5 \mathrm{~m}$, height 0.5 m ) cut the northwestern part of the cave's courtyard. Two severance channels (L5-length 1.15 m , width 0.2 m , depth 0.21 m ; L6--length 1.9 m , width 0.2 m , depth 0.18 m ) were discovered in the middle of the cave's courtyard.
The bottom step (L7; 0.5-1.5 $\times 6.0 \mathrm{~m}$, height 0.75 m ) was west of the cave and beyond the area of the courtyard.
Fragments of jars, dating to the Byzantine period, were discovered in the soil fills.


1. The courtyard and the quarry, plan and section.

## Abu Ghosh

## Irina Zilberbod

23/7/2007


1. Plan.

During January-February and July-August 2003 an excavation was conducted in the center of Abu Ghosh (Permit No. A-3811; map ref. NIG 21050/63490; OIG 16050/13490), prior to the construction of a commercial building. The excavation, on behalf of the Antiquities Authority, was directed by I. Zilberbod, with the assistance of V. Essman and V. Pirsky (surveying) and T. Sagiv and C. Amit (photography).

The excavation area was located c. 15 m east of the Benedictine Monastery area where excavations took place in 1940-1941 by R. de Vaux and A.M. Stève (1950. Fouilles Qaryet el- 'Enab, Abu Gosh, Palestine. Paris). The area ( $20 \times 20 \mathrm{~m}$ ) revealed buildings with floors and walls from the Ottoman, Mamluk and Byzantine periods (Fig. 1).

## The Byzantine Period

The remains of only two walls, exposed below later walls and soil fills (thickness $0.7-1.1 \mathrm{~m}$ ) that contained fragments of jars and roof tiles, were ascribed to this period. The meager remains could not be connected stratigraphically to Byzantine-period sites that had previously been exposed there.

## The Mamluk Period

Two construction phases were discerned in the buildings ascribed to this period. The remains of two buildings, in the northern part of the excavation and in its southeastern corner, were attributed to the early phase. The area between them seems to have been open as no construction remains were found. Part of a large building was discovered in the northern part of the area. It included a square hall ( $5 \times 5 \mathrm{~m}$ ) that was entirely exposed and had two rectangular rooms of similar dimensions ( $2 \times$ 5 m ) to its west. A plastered installation $(0.6 \times 4.5 \mathrm{~m})$, whose walls incorporated architectural elements in secondary use, was built on top of some of the square hall's walls and belonged to the later phase.
The recovered finds included fragments of pottery vessels and coins.

## The Ottoman Period

Buildings from this period that evidenced two construction phases were discovered throughout the excavation area. The early construction phase consisted of a covered passage between the entire lengths of two exposed buildings. The ceiling of the passage was supported on two pairs of engaged pillars. The southeastern part of the building was surrounded by a narrow alley, which was enclosed within two walls that curved to the northeast (length c. 15 m , width 3.5 m ). The construction area was expanded to the east in the later phase and the plan of the buildings was altered.
The finds included pottery vessels, lamps, pipes, coins, metal artifacts and glass bracelets.


1. Plan.

## Abu Ghosh*

Hamudi Khalaily and Omri Barzilay
20/12/2007


1. Plan.

During April 2003 a salvage excavation was conducted at the Neolithic site of Abu Ghosh (Permit No. A3890*; map ref. NIG 21027/63540; OIG 16027/13540), prior to expanding the nearby school. The excavation, on behalf of the Antiquities Authority and financed by the Abu Ghosh Local Council, was directed by H. Khalaily and O. Barzilai, assisted by A. Dubovska (surveying and drafting).

The site was discovered in the 1920 s, examined in the 1950 s and excavated at the end of the 1970 s by a French expedition, directed by J. Perrot. Neolithic settlement remains, including impressive architecture and tombs that dated to the eighth millennium BCE, based on the flint industry, were found.
Part of the site was excavated, in the wake of development plans, by the Antiquities Authority in 1995, revealing additional remains of the Neolithic settlement that was estimated to cover c. 28 dunams (IAA Reports 19). Built courtyards, used as animal pens, were prominent among the finds and evidenced, for the first time, the domestication process of the goat in the Levant.
Four squares were opened in the current excavation and two more were excavated along the fringes of the area (Fig. 1).

It should be noted that the top soil layer was 1.5 m lower than the measured surface in 1995 . The squares, which were excavated down to bedrock, contained modern fill that was also found in the probe trenches, cut in the area of the 1995 excavation.
It became apparent that development work performed around the school, which included the installation of a fence and paths to nearby houses, lowered the ground level, causing damage to the site. Consequently, no remains of the Neolithic site were discovered.


1. Plan.

## Abu Ghosh*

Hamudi Khalaily and Omri Barzilay
20/12/2007


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1. Plan.

## Ahihud

## Michael Cohen

18/4/2007


1. The collecting vat and paved surface around it, looking south.

During July 2000 a trial excavation was conducted in the eastern part of Moshav Ahihud (Permit No. A 3250; map ref. NIG
$21680-85 / 75680-85$; OIG $16680-85 / 25680-85$ ) in an area slated for construction. The excavation, on behalf of the Antiquities Authority, was directed by M. Cohen (photography), with the assistance of H. Abu 'Uqsa and V. Essman and V. Pirsky (surveying and drafting).
Twelve squares were opened in a sampling of twelve building lots on a hill, 60 m above sea level. The remains of four walls, two buildings and numerous water cisterns were exposed, all oriented in a general north-northeast direction, indicating a densely built up zone in the middle of the spur.

A quarry was revealed on the northern fringes of the spur and the remains of a complex winepress were exposed along the spur's eastern fringes. The winepress, mostly destroyed by mechanical equipment, had survived by a work surface paved with white tesserae that surrounded it and a bedrock-hewn collecting vat $(3.2 \times 3.6 \mathrm{~m}$, depth 2.3 m$)$. Ten steps paved with white mosaic led down to the bottom of the collecting vat in whose southwestern corner was a hewn settling pit.

Most of the ceramic and numismatic finds are dated from the Late Roman and Byzantine periods until the Early Islamic period. The earliest finds, dating to the Early Roman period, were recovered from the northern part of the quarry's bottom. The latest finds came from the fill and dated to the Early Islamic period.


1. The collecting vat and paved surface around it, looking south.

## 'Akko, the Old City 2000-2001

Eliezer Stern
3/1/2007
During 2000-2001 limited archaeological excavations were conducted in the Old City of 'Akko (License No. G-7/2000; Permit No. A-3375), in coordination with tourism development and the installation of infrastructures. The excavations, on behalf of the Antiquities Authority and financed by the Old 'Akko Development Company and the Ministry of Tourism, were directed by E. Stern, with the assistance of A. Thatcher (area supervision and Hellenistic pottery), A. Shapiro (registration), V. Essman (surveying), H. Smithline (photography), L. Porat (pottery restoration), H. Tahan (pottery drawing), E.J. Stern (Crusader pottery), D. Syon (numismatics) and Y. Gorin-Rosen (glass). The conservation staff consisted of J. Sheffer (director), R. Kislev (documentation and architecture), A Zazolinski and E. Cohen (engineering).

The Saraya (HA-ESI 109:10*-13*). Three trial squares ( $2 \times 2 \mathrm{~m}$ ) were opened along the western wall of the Turkish Saraya courtyard, prior to converting the building into a community center. Upon removal of a modern cement floor, a layer of fill ( 2 m thick) that contained stone collapse, remains of marble elements and potsherds from the Ottoman and Crusader periods was discovered Below this layer was a well-tamped plaster floor, which showed the negatives of marble tiles ( 0.25 $\times 0.25 \mathrm{~m}$ ), only a few fragments of which were found in situ. Fragments of stained glass windows were recovered from the plaster floor. The threshold of an entrance built of black granite was in the middle of the wall. It seems the excavation exposed the entrance structure (narthex) of the Church of St. John in the Hospitaller Quarter. The probe was very limited and the development of the Saraya will require a large-scale excavation.

## The Hospitaller Center

The Dining Room. A square was excavated in the western part of the structure. A well-preserved kurkar quarry that dated to the Hellenistic period was discovered. In the eastern part of the structure was a plastered water reservoir that had been first excavated in the 1960s and cleaned once again.

The Northern Moat. Two trial squares were excavated along the line of the planned infrastructure Light gray soil fill with a high concentration of beach sand was found at a depth of 2.5 m . It contained the remains of metal fences, metal canteens and others, probably from the Mandatory Prison. A square was opened next to the northwestern corner of the Treasury Tower (Hazana Tower), revealing the well-built remains of a circular tower that was built of large ashlars with drafted margins set on a bedding of natural kurkar (preserved height 2.8 m ). A large quantity of Crusader-period pottery was found in part of the foundation trench ( 0.2 m wide) that was uncovered against the tower wall. It was ascertained that the Treasury Tower, which is dated to the Turkish period, was built on the remains of a circular tower from the Crusader period.

The Southern Street. The removal of soil from the Crusader Street, south of the Hospitaller Center, continued. Following the Mamluk conquest of 'Akko in 1291, the street was blocked with stone collapse and soil, which contained thirteenth century CE Crusader pottery, as well as Ottoman pottery.

## ‘Akko, Remez Street



1. Plan of excavated areas (M. D. = Moshe Dothan's excavation areas).

2. Square C1, eastern half, looking south.

3. Square C1, group of early Hellenistic amphorae, looking east.

4. Square C1, glass bottles in Roman graves, looking north.

5. Squares D6, D7, Hellenistic (?) reservoir, looking southwest.

Gerald Finkielsztejn
8/3/2007
From November 2002 to January 2003, soundings were conducted in 'Akko, along Remez Street, on both sides of the junction with Ben-'Ami Street (Permit No. A-3749; map ref. NIG 2080-83/75865-900; OIG $1580-83 / 25865-900$ ), prior to its expansion. The excavation, on behalf of the Antiquities Authority, was directed by G. Finkielsztejn, with the assistance of S. Yankelewich and S. Zagorski of Haifa University (area supervision), Y. Dangur (administration), V. Essman, V. Pirsky and Y. Salmon (surveying), A. Tatcher, D. Avshalom-Gorni and E.J. Stern (pottery reading and processing), D. Syon (numismatics), Y. Gorin-Rosen and N. Katsnelson (glass), L. Kupershmidt (metallurgical laboratory), Y. Somekh of Haifa University (geomorphology), E. Bar-On and I. Roll, of Tel Aviv University (Roman roads).

The investigated area along the street sides extended roughly north-south for c. 430 m . It was divided into four areas (A-D; Fig. 1), comprising twenty-four trenches and squares of various sizes, not all explored. Areas $A$ to $C$ were excavated as probes and a rescue excavation was carried out in Area D, due to a deep trench needed for a drainage pipe.
Very few architectural remains were uncovered in the excavation, located between Tel 'Akko (Tell el Fukhkhar) to the east and the lower city-harbor to the west, which was devoted, in all likelihood, to transportation, as well as to burial.

## AREA A

Four squares (A1, A6, A2, A3) were opened and a narrow trench (A4) was dug to the west of Remez Street and c. 150 m north of the junction. A thin brown surface layer overlaid a white layer that covered a thick debris layer rich in pottery (depth c. 1 m ), which was probably brought from nearby Tel 'Akko in the 1960s, when a soccer field was built.

Square A1. The deep fill consisted of dark brown thick clay with very few sherds.
Two parallel lines of ashlars (W103, W159; length c. 2 m ; Fig. 2) were found in the northwestern corner of the square. The walls, oriented east-west and c. 1.5 m distant from each other, covered three-four courses of collapsed stones. The heavy rains completely filled this square several times and the accumulating mud precluded its full exploration. The deep trench dug between these walls did not uncover any floor or surface and hardly contained any potsherds. The lack of pottery and the location of the square suggest that these walls may have been related to a causeway (the arch of a bridge?) whose date could not be determined.

Square A6. A partly preserved water-supply pipe (elevation 2.75 m above sea level; hereafter, asl), mainly oriented north-south, was uncovered. Its northern end curved to the east, as evidenced by a track of dark earth where the pipe is missing. It consisted of overlapping tubular units of rather thin dark clay (diam. 0.8 cm , length 0.4 m ), protected by small stones embedded in cement. It was probably set along the east side of a road, not visible here (see Sqs A2 and A3, below). The date could not be clearly determined, but appears to be in the Late Ottoman period and may have been still in use in the twentieth century CE. The fill below the pipe was the same thick dark brown clay as in Sq A1. A deep bulldozer probe reached the kurkar bedrock (at 0.86 m asl) that was covered with a layer of black sterile clay (thickness c. 0.3 m ).

Square A2. Another well preserved pipe (L125; elevation 3.6 m asl; Fig. 3) crossed the middle of the square from north to south. It was composed of ceramic tubular units whose workmanship was different from those in Sq A6 (diam. 0.1 m , length $0.41-046 \mathrm{~m}$ ). The levels of the two pipes indicate that they were apparently not related, although both seem to date to the late Ottoman period. The pipe was set to the east of, and not associated with, a Roman road that consisted of a layer of small stones and debris superposed by a layer of bigger stones, visible only in the eastern half of the square (Fig. 4). Such pipes had previously been uncovered east of the street (ESI 15:27-28) and were dated to the Hellenistic and Roman periods.
The road to the west of the pipe was set on a succession of sand layers, which were manually excavated to an elevation of 1.5 m asl. Each sand layer was sampled for geological analysis, to find out their origin, whether eolian, sedimentary or artificial. Very few eroded potsherds were found in each of the sand layers, dated to the Hellenistic period.
It became clear that the boundary between the dark clay to the north and the sand layers to the south lies somewhere between Sqs A6 and A2.

Square A3. Substantial fragments of several ceramic sarcophagi were found in the upper debris layer. Similar sarcophagi were found across the street in 1992 (ESI 15) and in Sq C1 (see below).
More of the water pipe in Sq A2 appeared in this square, with a probable extension to the east, visible in the northern balk. Most of the square was occupied by the Roman road (L156; elevation 3.3 m asl; Fig. 5). The road, oriented northeast-southwest, consisted of a thin layer of debris set directly on the sand, covered with a bed of rounded stones and a surface of lime cement, which mostly disappeared. The uncovered western edge of the road was composed of a line of ashlars. I. Roll, and E. Bar-On, specialists of Roman roads, suggested that this road--dated by the pottery finds to the first century CE--was probably built by Emperor Nero in 56 CE, to link between Antioch in Syria and 'Akko-Ptolemais. The width of the road was reconstructed to be 6.7 m (see Trench A4 below) and its eastern edge should be under the paved Remez Street. The Roman road was set on the same sand layers found in Sq A2.

Trench A4. This last minute bulldozer trench was solely aimed at uncovering the eastern edge of the Roman road. A line of small stones and an ashlar were discerned at the southeastern end of the narrow trench. Its location suggests that the road made a sharp turn to the southwest, which raised the question of where the road was heading, to the coast and a harbor, or toward the city of 'AkkoPtolemais, through a gate. The latter is the logical assumption and a general map should show where the road may have reached the theoretical prolongation of the fortification from the Hellenistic period, uncovered by M. Dothan in 1973 in his Area E, west of our Area D, which may have still served the city in the Roman period (see Fig. 1).

AREA B
This area, on both sides of Remez Street, was c. 100 m south of the Ben-‘Ami-Remez junction. Five squares were opened, three on the west side ( $B 1, B 2, B 3$ ) and two joined squares on the east side (B4, B5).

## Square B1

A deep bulldozer probe uncovered solely a thick layer of sand, probably corresponding to a dune; it was rapidly closed.

## Square B2

The only feature excavated was a surface of small stones that extended across the whole square. It was probably a road surface, as in Sqs A2 and A3. Although not fully analyzed, the potsherds seem to date it roughly to the medieval period (or later?). A probe undertaken to a level of 3 m asl was closed, as soon as sand was reached and no built structure was discerned.

## Square B3

A high voltage electrical cable was uncovered by the bulldozer during the removal of the upper layers. Work was suspended and the trench was closed.

## Squares B4 and B5

Near the surface was a fill that appeared to be a late disturbance, as the stratigraphy was clearly reversed. Well preserved jar bases of the Late Persian-Early Hellenistic periods (fourth-third centuries BCE) covered a thick layer of small stones and fragments of pottery from the Late Roman-Byzantine periods (fourth-fifth centuries CE).
All the squares of Areas B and C on the eastern side of Remez Street revealed a hard white surface (elevation c. 4.9 m asl), which was tentatively identified as a road. It systematically covered the eastern half of each square and was aligned north-south, with some curves. However, it was not always clearly defined and seems to have been covered with whitish sandy silt that may have derived from the flooding by still waters in a later period.
The white surface in Sq B4 was simply a compressed light earth with some lime; in Sq B5 it was a fairly hard compressed lime. The layers below the white surface produced Byzantine pottery, which was quite numerous in Sq B4 and this seems to be the date of laying it. Byzantine pottery was also found within a stone collapse above a sandy floor in Sq B4.
Two non contemporary (?) perpendicular walls were uncovered in Square B5. The western face of the lower wall was visible in the eastern balk and its top was 0.1 m lower than the top of the upper wall along the northern balk, which was connected to a sandy floor. These walls, whose function is unknown, were associated with Hellenistic pottery.

## AREA C

This area was c. 60 m south of Area B on the east side of the street and extended c. 40 m to the south. Seven squares were opened (C1-C7). While Sq C1 was a rectangular independent trench, Sqs C2 to C7 branched off from a long bulldozer trench. The white surface uncovered in Sqs B4 and B5 was much better defined in Area C, where it consisted of a hard plastered surface. The discovery of tombs caused the suspension of work in Sqs C2 to C7, except for the exploration of the white surface. Some important building(s), such as a church, a monastery or a villa, is presumed to have existed in the area, as evidenced by the many marble elements found.

## Square C1

This was the richest and most complex of all squares. It was divided into two halves by a northsouth oriented balk (Fig. 6). The hardened earthen white surface was discovered in the eastern half of the square. Overlaying the surface was a layer of whitish sandy silt, visible throughout the square.
The corner of a room (W331, W332) was uncovered in the southeastern corner of the square. The walls were built of fieldstones and plastered on the interior; the floor was plastered as well. To the south and mainly to the west of this structure, c. 10 Greek amphorae and Levantine jars were standing upright (Fig. 7). They included amphorae from the island of Chios, basket-handled jars, either Levantine or Cypriot and the top of an Attic amphora. The amphorae and jars appear to date to the fourth-early third centuries BCE (NEAEHL 1, 1993:24, Area E1).
Significant numbers of Northern Aegean (Thasos, Mende) and Chian amphorae were found in the debris of the excavation, as well as two stamped amphora handles, one Cypriot (beginning of the third century BCE) and the other, Rhodian (c. 127-125 BCE), accompanied by numerous fragments of local Phoenician jars, mainly with twisted handles.
To the south of the square's eastern half, a heavily disturbed stone-built tomb was found partly under the central balk. It contained fragments of a ceramic sarcophagus and roof tiles, comparable with those in Sq A3. Some bones were visible outside the remains of the tomb.
The stratum below the white surface in the western half of the square contained randomly arranged graves that were identified mainly by a few bones, the darker color of their fill and sometimes by an irregular lining of stones. The bones were often dissolved, except for two cases, where parts of the lower limbs were in articulation. The only offerings were about a dozen mostly intact glass bottles, isolated or grouped, dating the graves to the first-second centuries CE (Fig. 8). Similar tombs were found in the 1960s on the coast, north of the city of 'Akko (ESI 9:16). Both locations seem to indicate two limits of the Roman city.

## Squares C2-C4

The hard lime plaster white surface, with some potsherds mixed in it, was clearly visible in these squares (Fig. 9). It was set on a foundation of earth and stones that extended beyond the limits of the plastered area. It was mainly visible in Sq C3, yet disappeared progressively in Sq C4. This fact casts some doubt on the identification of that surface as a road. A probe to the east showed that it extended toward that direction. Its eastern edge was not found, indicating that its original width was over

5 m .
At least three channels (width 0.6 m ) built of fieldstones and entirely plastered were found in Sq C2, immediately west of the white surface. Their orientation was northwest-southeast and the plastered white surface covered them to the east. They appeared to be built graves that contained a few human bones, perhaps a collective burial of unidentified nature. They seem to date to the Byzantine period and one may tentatively suggest that they could have belonged to a monastery Some stone tesserae of industrial mosaic, typical of the same period, were discovered, as well as some tesserae made of glass; however, no connection with the structure was evident. The white surface may thus be interpreted as the floor of a large building, maybe the bedding for a now completely missing mosaic.

Square C3
A row of three ashlars, covered by another disturbed one, was uncovered in a very small probe. Expanding the probe could assist in outlining the structure to which the ashlars belonged. Yet, combined with the previous finds, it may point to a building of some stature.

## Squares C5 and C6

These squares were hardly explored; some fieldstones that may have covered graves were discerned, but could not be examined.

## Square C7

A partly destroyed tomb, oriented east-west, was uncovered in the southeastern corner of the square. It was built of fieldstones and some ashlars and was completely plastered on the interior. The tomb was filled with fieldstones and only a skull was discerned to the west. The proximity of the tomb to surface, only a few meters from today's cemetery, may point to it being a modern interment.

AREA D
This was a trench across the street from Area $C$, extending 35 m to the south. It was divided into seven squares (D1-D7), three of which (D1, D6, D7) yielded substantial remains.

## Square D1

Immediately below surface, a well built water-wheel (antilia) was uncovered. It consisted of a rectangular well, surrounded by a walking surface, enclosed within a circular wall (diam. 6 m ). About half of it was covered by Remez Street to the east and Gedud 22 Street to the south. The debris inside the well contained only modern material, down to c. 2 m below surface. The construction fill between the well and the external circular wall produced a Marseille roof tile at the bottom of the foundation, indicating a twentieth century CE date for the well. An intact Hellenistic arrowhead was found in the debris comprising pottery of various periods.

## Squares D2 and D3

Sand was discovered in these squares, down to 3 m below surface.

## Squares D4 and D5

A hard earthen surface was found in these squares. A few walls in Sq D5 appear to have belonged to a modern building, set on sandy layers.

## Squares D6 and D7

The corner of a big plastered pool, extending to the east, which was probably a reservoir, was discovered in the western half of these squares (Fig. 10). Its walls (width 1.85 m , max. preserved height 3.9 m ) were built of fieldstones and some ashlars. The bottom of the pool was not reached at c .2 m below the preserved edge ( 1.28 m asl). A stone with a painted fresco, perhaps of the Late Hellenistic-Early Roman period (first century BCE-first century CE) was found in the debris. The date of the pool remains to be established, but its location, not far from the Hellenistic fortification discovered by M. Dothan in his Area E (BASOR 224, 1976:40-45), as well as its construction technique and the level of its walls, roughly correspond to the bottom of the fortification and suggest a tentative dating to the Hellenistic period. A probe immediately south of the pool revealed only a thick layer of sand.

The excavations in Remez Street exposed several important features, relating to the topography and history of 'Akko-Ptolemais.
The area appears to have been the location of a main north-south road during several periods. The geology of the region implies that the area was often flooded by the sea or by marshes, or both and comprised dunes, south of the kurkar ridge and the clay bed. It seems the area was unfit for habitation. Roads are evidenced in this area and apparently the first important road was built in the Early Roman period. Some doubt remains as to the exact purpose of the long stretch of plastered surface found in Areas B and C. In the Ottoman period, the springs in the area were exploited, lasting well into the twentieth century CE.

A concentration of tombs from the Roman period and probably the Byzantine period as well, was uncovered in the area, which is nowadays occupied by the Muslim and Christian cemeteries. In the past, cemeteries were built along roads at the entrance to cities and our discoveries seem to fit well such an arrangement.

Evidence concerning the limits of the Hellenistic Lower City partially occurred in our excavation. Commercial activities were apparently taking place in the area between the tell (acropolis) and the lower city, with a building connected to some storeroom of amphorae, as well as a very large pool. These activities may have been connected to the nearby sea, as suggested above.

The numerous ceramic finds, mainly from the Hellenistic and especially the beginning of the period,
clearly shows the orientation of imports from Greece. During the fourth century and beginning of the third century BCE, pottery was imported from the Northern Aegean down to the island of Chios. Gradually, the Southeast Aegean got more involved in production and export of wine to the Levant and from the second half of the third century down to the first century BCE, Rhodes, Kos and Knidos were the prime suppliers for the Levantine markets. The city of 'Akko-Ptolemais, which was re-established early as a royal Greco-Macedonian city, is an ideal site to study this phenomenon. If the area of Remez Street was a focal point of trade, with the creation, or expansion of the lower city, pottery, rather than architecture, testifies to the continuity of this activity, whose variations were probably due to climatic or geologic changes, such as the fluctuation in sea levels, creation of marshes or formation of dunes. Other well-represented eras are the Early Roman period (mainly graves), the Byzantine period (the white surface and a stratum in Sq B4), the Crusader/Mamluk periods (some potsherds), as well as the late Ottoman period down to British Mandate times.
The results of our excavations will be better understood after a thorough study of the numerous coins, pottery, marble and glass fragments, as well as the geological data.


2. Square A1, Wall 103 and W159, looking west.

3. Square A2, Ceramic pipe, looking northwest.

4. Squares A2, A3, Ceramic pipe and Roman road, looking south.

5. Square A3, Roman road, looking west.

6. Square C1, eastern half, looking south.

7. Square C1, group of early Hellenistic amphorae, looking east.

8. Square C1, glass bottles in Roman graves, looking north.

9. Squares C2-C4, white surface to east, plastered graves to north, looking south.

10. Squares D6, D7, Hellenistic (?) reservoir, looking southwest.

## ‘Akko, the Citadel*

## Eliezer Stern

18/12/2007
During February-March 2002, trial excavations and antiquities inspections were conducted at the citadel in 'Akko (Permit No. A-3572*), in the wake of infrastructure works. The excavations, on behalf of the Antiquities Authority and financed by the Old 'Akko Development Company and the Ministry of Tourism, were directed by E. Stern, with the assistance of A. Thatcher (area supervision and Hellenistic pottery), V. Essman (surveying), A. Shapiro (registration), H. Smithline (photography), L. Porat (pottery restoration), H. Tahan (pottery drawing), L. Kupershmidt (metallurgical laboratory), E.J. Stern (Crusader pottery), D. Syon (numismatics), Y. Gorin-Rosen (glass), J. Scheffer and R. Kislev (conservation, documentation and architecture), Y. Carmel (conservation) and A. Zazolinsky and C. Cohen (engineering).

Dining Hall. During the course of infrastructure works, the hall's modern concrete floor, which had been poured in the 1970s, was removed. A trench was excavated (width 1 m , depth 1 m ) along the southern and western walls for the purpose of installing a pipe. The soil fill in the trench contained fragments of marble architectural elements, mixed potsherds from the Hellenistic until the Crusader periods and a ruinous section of an Ottoman drainage channel. It should be noted that the fill had previously been excavated during the Ottoman period and again in the 1970s.

The Hall of Pillars. Two pits $(3 \times 3 \mathrm{~m})$ were excavated around the Crusader pillars, which supported the ceiling of the hall, to reinforce them. The pits were dug in the Crusader foundation trenches of the pillars. The Crusaders built a broad square foundation of fieldstones and bonding material (height 1.5 m ) on bedrock. The pillar visible above the floor level was built of well-dressed ashlar stones and set on this foundation. Mixed potsherds, dating from the Hellenistic to the Crusader periods, were recovered from the soil fill.

The Southern Street. A level of fill, which contained numerous potsherds from the Crusader period and comprised Crusader debris from the thirteenth century CE (over 3 m high), was excavated in the eastern part of the street, in a passage created between the Hospitaller center and the Turkish hamam to the south.

The Turkish Hamam (Bathhouse). A sounding ( $2 \times 2 \mathrm{~m}$ ) was excavated in the bathhouse, when the main open entrance plaza was being upgraded. Several human bones that dated to the Ottoman period were found at a depth of 0.5 m . From that point to a depth of 6 m was a layer of soil fill, stone collapse, fragments of architectural elements and potsherds that dated from the Hellenistic to the Ottoman periods.
A Crusader wall, built of ashlar stones and oriented north-south (depth 3.8-5.5 m), was discovered, as well as Crusader pottery from the thirteenth century CE.
The excavation was suspended due to safety precautions.

## ‘Akko, the Northern Moat*

Ayelet Thatcher
18/12/2007


1. Plan.

During April 2003, a trial excavation was conducted in the northern moat of 'Akko (Permit No. A-3886*; map ref. NIG 20874-5/76068-70; OIG 15874-5/26068-70), after channels for laying an electrical and drainage grid were dug by mechanical equipment on both sides of the moat and several probe trenches were cut after the discovery of ancient remains. The excavation, on behalf of the Antiquities Authority, was directed by A. Thatcher, assisted by H. Abu-‘Uqsa and A. Shapiro (surveying).
Two small areas were opened along the line of the drainage and electric channels, revealing two main periods, the Hellenistic (second-first centuries BCE) and the Crusader (thirteenth century CE). A poor wall section (W9; length 1 m , width 0.7 m ), built of dry construction that used mediumsized fieldstones, was discovered in the area near the northern wall of the moat, as well as remains of a quarry from the Hellenistic period and a large 'refuse' dump from the same period, which contained dozens of pottery vessels that were damaged over their course of use and therefore discarded. The ceramic finds comprised cooking, storage and serving vessels, including imported amphorae.
Remains of a wall (W8) were uncovered in the area near the southern wall of the moat. These included a foundation course of debesh and a small section of the first course, survived by six masonry stones. Various potsherds, ranging in date from the Hellenistic until the Mamluk periods, as well as a few medium-sized cannonballs from the Ottoman period (eighteenth-nineteenth centuries CE), were collected near the wall.


1. Plan.

## Ar`ara*

## Abdallah Masarwa

24/12/2007


1. Plan and sections.

2. Clay lamp from the Late Roman period.

3. Basalt bowl.

4. Metal spatulae.

5. Glass vessels.

During August 1999, an excavation was conducted in a burial complex from the Roman period in 'Ar'ara (Permit No. A-3103*; map ref. NIG 208214/714775, OIG 158214/214775), in the wake of damage caused by a pit for an electric pole. The excavation, on behalf of the Antiquities Authority, was directed by A. Masarwa, with the assistance of V. Pirsky (surveying), E. Belashov (drafting), Y. Gorin-Rosen (glass), A. Pikovski (drawing of glass vessels), E. Altmark (metallurgical laboratory), Y. Nagar (anthropology), D.T. Ariel (numismatics) and M. Shuiskaya-Arnov (pottery drawing).
The burial complex (Fig. 1) was hewn in chalk bedrock on the northwestern slope of the village hill. Two steps descended into a central chamber (L100, $2.5 \times 3.0 \mathrm{~m}$; Fig. 2) from the cave's entrance, which was on the northern side. Four burial loculi were hewn in the chamber: two in the southern wall (L104, $0.7 \times 1.9 \mathrm{~m}$; L105, $0.6 \times 1.9 \mathrm{~m}$ ), the third in the western wall (L103, $0.7 \times 1.8 \mathrm{~m}$ ) and the fourth, in the northwestern wall (L102), was not entirely excavated due to the possible collapse of its ceiling. Remains of wax candles in the cave indicated it was plundered in recent times.

Scant ceramic finds, glass vessels, human bones, a basalt bowl, three coins and metal artifacts were discovered in the cave. The pottery included an intact clay lamp (Fig. 3), four fragments of clay lamps and fragments of jars and jugs that dated to the Late Roman period, as well as fragments of a jar from the Mamluk period. It is noteworthy that no bases of pottery vessels were found. The anthropological analysis ascribed the human bones to at least nine individuals of both genders, spanning a broad range of ages. The basalt bowl has a triple-legged pedestal (Fig. 4). The coins included a bronze imperial coin dating to the last quarter of the third century CE (IAA No. 95926) and two illegible coins. The metal artifacts were composed of a ring (Fig. 5), a nail, a teaspoon, an earring (Fig. 6), the base of a vessel and spatulae (Fig. 7).

The finds in the cave show it was used during the Roman period. The meager ceramic finds from the Mamluk period indicate that the cave was either reused or plundered at that time.

## The Glass Finds

Yael Gorin-Rosen
Eight glass vessels, a bracelet and sixty beads were recovered from the burial cave. The glass finds were scattered all over the cave and they present a long period of use from the first until the fourth centuries CE.

Fig. 8:1 is a bowl of light green glass. The rim is hollow and folded-out and the base is a tooled out, tubular ring base. The shape of the bowl, as well as its fabric, is attributed to the end of the first and beginning of the second centuries CE. Bowls of this type continued to the fourth century CE.
Fig. $8: 2$ is a bottle of very pale green, almost colorless. The rim is infolded with a short neck that is constricted at the joint to a pear-shaped body. Unlike similar bottles of this type that are mainly dated to the first-second centuries CE, the applied trail base of our bottle is rare, yet it is nonetheless dated to the same period.
Fig. 8:3, 4 are bottles of colorless glass, probably of the candlestick type that is dated from the end of the first to the third centuries CE.
Fig. 8:5 is a small bottle of bluish green glass, characterized by asymmetrical body and uneven infolded rim. It was carelessly made and is probably a product of local industry, used also as burial offerings.
Fig. 8:6 are fragments of probably a lentoid flask, mold blown with a floral pattern. This type of flask belongs to a group of glass vessels known as 'Sidonian', dated to the first century CE. The fragments, as well as comparative vases in various collections, enable us to reconstruct the complete shape and decoration. A similar flask in the Eretz-Israel Museum (Israeli Y. 1964. Sidonian Mold-Blown Glass Vessels in the Museum Haaretz. Journal of Glass Studies 6:41, Fig. 16) has a pattern of a four-petaled flower, each having a raised middle rib. The center of the flower has a raised dot within a circle. The area between the petals is filled with leaves and tendrils that decorate the sides of the vase. The vase's narrow side is adorned with vertical circles. It was made of uneven purplish green glass that has green, blue and colorless veins.
Fig. 8:7 is a rim fragment of a jar, made of colorless glass. Based on its fabric and color, the jar is attributed to the early period.
Fig. 8:8 is a cosmetic tube of greenish blue glass, decorated with glass trails drawn from the body up toward the rim, like handles. It is dated to the Late Roman period, third and fourth centuries CE. Fig. 8:9 is a bracelet of a very simple type with ' $D$ ' section, made of dark glass and also dating to the Late Roman period.

The sixty beads from the excavation consist of various types, including long and short, with hexagonal, pentagonal or square section, made of green or blue glass; long and short cylindrical beads of the same colors (Fig. 8:10, 11a-g, 12); circular beads, including gold-glass beads, made of two thin glass layers with a thin gold leaf between them (Fig. 8:11f); drawn gold-glass beads still connected to each other (Fig. 8:14); large biconical turquoise bead (Fig. 8:11h), small biconical beads (Fig. 8:13); colorless glass drop-shaped bead and a unique glazed bead (Fig. 8:15), made of faience or frit with a horizontal perforation. In addition, a single rounded carnelian bead with a biconical perforation was retrieved.

The glass finds from this burial cave mainly represent local production, i.e., Fig. 8:3-5, 8, alongside the decorated mold-blown vessel (Fig. 8:6), which was probably manufactured in a central glass workshop, possibly in the region of Sidon.


1. Plan and sections.

2. The central chamber, looking south.



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6. Metal earring.

7. Metal spatulae.


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## 8. Glass vessels.

## Ashqelon-Barnea'*

## Daniel Varga

7/1/2007


1. Plan and sections.

2. Staircase and
vestibule, looking east.

3. Door to the tomb.

From December 1997 to March 1998 an excavation was conducted on Yekutiel Adam Street in Ashqelon, c. 300 m from the coastline (Permit No. A-2784*; map ref. NIG 1590/6218; OIG 1090/1218), in the wake of development work. The excavation, on behalf of the Antiquities Authority and financed by the Economic Corporation of Ashqelon, was directed by D. Varga, with the assistance of V. Essman (surveying), T. Kornfeld (drafting) and Y. Lavi (photography).

Two arcosolia tombs, dating to the Byzantine period, were exposed. The western tomb, located along the line of the development work, was excavated.

The tomb $(4.0 \times 5.3 \mathrm{~m}$, height 2.75 m$)$ comprised a vault with a single cell. It was built of dressed kurkar blocks (average size $0.2 \times 0.3 \times 0.5 \mathrm{~m}$; Fig. 1) and the walls were coated on both faces with a single layer of light gray plaster. The ceiling was composed of cement mixed with varioussized kurkar stones and was also lined with light gray plaster.
Two plastered steps of dressed kurkar stones led to the tomb from the entrance in the south, which was accessed via a flagstone-paved vestibule (Fig. 2), enclosed with two retaining walls that prevented sand from spilling inside (W3, W4).
A stone slab that served as a door was set in the tomb's entrance (Fig. 3). The door, which has a circular iron handle, was not affixed to hinges, indicating that the tomb had been breeched and plundered in the past.
The meager finds consisted of some poorly preserved bones due to water seeping in, as well as several Gaza-type jar fragments and a few body fragments of glass vessels. These probably did not originate in the tomb, but were apparently swept inside via the breach left after the looting of the tomb.

Based on the potsherds and the similarity to other tombs excavated in the region, the tomb is dated to the Byzantine period.


1-1


1. Plan and sections.

2. Staircase and vestibule, looking east.

3. Door to the tomb.

## Ashqelon, Barne'a B, C


2. Areas $D$ and $G$ in the southern portion of the site, looking west.

6. Area D, a possible favissa with ceramic vessels from Stratum II.

7. Area $E$, southern portion, looking west.

10. Area G, general view, looking south.

12. Area G, infant jar burial.

Amir Golani
11/6/2007
During February-May 2005, further salvage excavations were conducted at the Early Bronze Age site of Ashqelon Barne'a, adjacent to the coastline and north of modern-day Ashqelon (Permit No. 4378; map ref. NIG $15975 / 62290$; OIG $10975 / 12290$ ). This project, which continued the previous trial excavations at the site (HA-ESI 117) prior to developing a new residential neighborhood, intended to concentrate on the exposure of archaeological remains only in the southern portion of the site. The excavations, on behalf of the Antiquities Authority and funded by the Economic Company for the Development of Ashqelon, were directed by A. Golani, with the assistance of N.S. Paran (Area G supervision), E. Alajim and A. Freiberg (Area D supervision), S. Talis (registration, ceramic processing and computerized data entry), R. Abu-Halaf and H. Lavi (administration), V. Essman and V. Pirsky (surveying), T. Sagiv and J. Kdoshim (field photography), O. Ackerman (geomorphology), Y. Nagar (physical anthropology), Y. Bukengolts (pottery restoration), N. Zak and I. Berin (drafting), E. Boaretto (14C dating) and P. Nahshoni (district archaeologist).

The site, located c. 1 km north of the Ashqelon Afridar EB site (see 'Atiqot 45), was discovered after large-scale earthmoving activities revealed occupational remains below the overlying sand dunes. These dunes bore remains of a Byzantine occupation (fifth-sixth centuries CE), partially excavated in the past. The earthmoving operations caused extensive damage to the site, especially to its southern part, large portions of which were completely obliterated (Fig. 1). The current excavations sought to expose as much of the surviving remains in the southern part of the area as possible. Areas $D$ and $E$, probed in the previous excavations (HA-ESI 117), were enlarged considerably and a new excavation area (G) was also opened.
The previous stratigraphic scheme that defined four primary strata of the EB I period (Strata IV-I) was revised. Stratum I, previously assigned to the last EB occupational phase, is now associated with the Byzantine occupation. This adjustment now poses Stratum $V$ as the initial occupation in the EB I period, while the last EB occupational phase is Stratum II.
The present season also included mechanical digging of several trial trenches, intended to determine the extent and depth of the archaeological remains on the northern portion of the site (see Fig. 1).

Four primary strata of the EB I period were identified, as in the previous season. Preliminary results of Carbon 14 dating indicate a chronological range between 3500-2900 BCE for the EB occupation at the site.

## AREA D

This area in the southeastern portion of the site lies immediately to the north of Area G (Fig. 2). Its stratigraphic profile was initially determined in the previous season, while the present excavation sought to enlarge this exposure (Fig. 3). Three main strata of the EB period (Strata IV-II) were identified, as well as limited remains of an earlier occupation below (Stratum V ) and sporadic elements of Byzantine activity in topsoil (Stratum I).
Stratum V consisted of several surfaces located below Stratum IV. No architectural remains were revealed and, as in the previous season, it appears to represent a sporadic occupation of limited duration or a pre-constructional phase of Stratum IV.
Stratum IV was the first major building phase that included several pits and curving mud-brick walls, some of which were identified as outlining a large rectangular building with rounded corners. In the southern part, a large and curving mud-brick wall ( 1.4 m wide, exposed length over 30 m ; Fig. 4) was found. No other walls abutted this wall, which appears to have functioned as an enclosure wall, surrounding a very large space that may have continued into Area G, to the south, although a large and deep modern disturbance (see Figs. 2, 10) destroyed any possible continuation of this wall southward.
Stratum III was a continuation of Stratum IV, yet appears to have been the most intensive occupation in this area, often identified as having two architectural phases. The large enclosure wall from Stratum IV partially continued in use. Within the area circumscribed by this wall, a circular mud-brick building (diam. 7.5 m ) with a stone-paved floor was built. Outside the area of the enclosure wall, several large mud-brick structures were identified, some appear to have been domestic buildings, whereas others were larger and of a complex plan and may represent public structures (Fig. 5). In the later architectural phase of Stratum III, the building remains became denser and flimsier in construction.
Stratum II represented a total break in occupation and was possibly founded after a temporary abandonment of the site. None of the Stratum II structures recognized the former Stratum III remains and its poorly preserved architecture was composed of walls built of small stones, in contrast to the mud-brick construction of the previous strata. One of the Stratum II structures was circular and may represent a silo above ground. A small and shallow pit that contained fourteen small ceramic vessels, possibly a favissa, was exposed in this stratum (Fig. 6).
Stratum I was associated with the Byzantine period. Remains of a deep well, built of small ashlars, were revealed. Safety precautions precluded excavating this well to its bottom.

AREA E
This area, situated at the southernmost end of the EB site, defined its southern boundary. Meager architectural remains in the northern part of this area were revealed in the previous season. The excavated area was enlarged, exposing a thin and poor occupational layer with a few surfaces, pits and architectural remains of unclear plan that appear to represent the very fringes of the settlement to the north.
To the south and outside the settlement, twenty rectangular cists were identified, built of local kurkar stone and mud bricks, dug into the sterile soil (Fig. 7). These small structures (0.6-1.0 $\times$ $0.8-1.5 \mathrm{~m}$; Figs. 8, 9), generally oriented north-south, are presumed to have been tombs, although they were not fully excavated. Since they were apparently overlaid by the Stratum I

Byzantine occupation and set in the sterile sands, they should probably be associated with the EB settlement.

## AREA G

This area, situated between Area E to the south and Area D to the north, was separated from the latter by a broad modern intrusion that obliterated any physical connection between the two (see Figs. 2, 10). The archaeological remains were several meters higher than those in the adjacent Areas $D$ and $E$, indicating that Area $G$ was slightly elevated in relation to the rest of the site Remains of Stratum II were not identified, yet remains of several buildings, ascribed to Strata III and IV, were excavated (Fig. 10).
Stratum IV was the earliest identified occupation, which consisted of two oval buildings, nearly complete in plan and the partial remains of two more structures further east. The entrance to the westernmost structure was on the east and adjacent to it were two large silos dug into the soil and faced with mud bricks (Fig. 11). Below the wall of this building was an infant burial within a holemouth jar (Fig. 12). A wide courtyard with several pits and a tabun separated this building from another oval building to the east (Fig. 13). This second building, severely damaged by pitting activities of Stratum I, also had its entrance in the east.
Remains of another rectangular building with rounded corners were identified in the central portion of the area, to the east of the two buildings described above (Fig. 14). Narrow benches were constructed along its walls, while a circular mud-brick podium (diam. 1.5 m ) was in its western part. The northern side of this building was destroyed by a modern intrusion. Remains of a threshold, assumed to have been located at the center of the long eastern wall, suggest an estimated size of the building (c. $7 \times 14 \mathrm{~m}$ ). To its east and near the entrance was a circular stone installation, surrounded by numerous remains of crushed pottery. The elevated position of this unusually large-sized building, its distinctive plan that included narrow benches on the interior, as well as a mud-brick podium within its confines and another circular installation near its entrance, all suggest that this was a building of some importance.
The partial remains of yet another curving structure and a mud-brick silo were found further east, both apparently bounded by a mud-brick enclosure wall that was traced for nearly 30 m .
Stratum III was a direct continuation of Stratum IV. The two oval buildings identified in the western part of the excavated area continued in use, yet were now separated by a mud-brick boundary wall (see Fig. 13). The two underground mud-brick silos of stratum IV, associated with the westernmost structure, were canceled and a new mud-brick silo was built atop ground, above them. An identical phenomenon was observed in the excavation of Area A (see HA-ESI 117). The large building with the rounded corners in the center of the area was expanded, adding another room to the east (see Fig. 14). In a slightly later building phase of Stratum III, one of the oval buildings and the mud-brick silo apparently ceased to function, yet the large building with rounded corners and the westernmost oval building continued in use.
Stratum I saw the area severely affected by pitting activity.
The present excavation at the EB site of Ashqelon Barne'a sought to expose as much of the southern third of a site, which faces an imminent fate of total destruction, as possible. The excavation in Area D revealed some of the most intensive occupational remains at the site to date, while the nature of the defined strata in this area highlighted the development process of the site throughout the EB period. After the initial phase of Stratum V and the subsequent building activities in Stratum IV, including the construction of a very large enclosure wall, an intensive settlement with two building phases was established in Stratum III, including the remains of several large structures, some of them enclosures, alongside domestic buildings. The clear occupation break during the transition from Stratum III to Stratum II was marked by the abandonment of the site and the renewed construction of a different nature that did not recognize the previous remains. The excavations in Area E allowed pinpointing the southern extent of the settlement, revealing at the same time a possible burial ground to its south. The excavations in Area G uncovered a domestic neighborhood composed of two nearly complete oval buildings along with their associated storage facilities that were later separated by a boundary wall. Beside these buildings was a large, somewhat unique structure that may have served a public function.

| Trial trenches | ת- |
| :---: | :---: |
| Destroyed region of the EB site | -'בר |
| Extent of Stratum II Settlement | 11 ת |
| Extent of Stratum III Settiement | III Tusvoavonom |
| Extent of Straturn IV Setiement | JV rasvoawemomn |

1. Location map of all areas excavated to date and the extent of the site.

2. Areas $D$ and $G$ in the southern portion of the site, looking west.

3. Area D, general view, looking south.

4. Area D, looking southeast.

5. Area D, remains of large mud-brick structures in eastern part, looking south.

6. Area $D$, a possible favissa with ceramic vessels from Stratum II.

7. Area $E$, southern portion, looking west.

8. Area E, a stone built cist.

9. Area E, a stone built cist.

10. Area G, general view, looking south.

11. Area G, oval building with two adjacent mud-brick silos, looking east.

12. Area $G$, infant jar burial.

13. Area G, oval building, looking south.

14. Area G, large structure, looking south.

## Ashqelon, the Barzilay Hospital*


2. Artifacts from the tomb and its environs.

5. Decorated amphora.

8. Pottery from pit/silo.

Elena Kogan-Zehavi
28/6/2007
During April and October 2002 two salvage excavations were conducted at the Barzilay Hospital in Ashqelon (Excavation 1--Permit No. A-3514*; map ref. NIG 157970-8015/61988-93; OIG 107970-8015/11988-93; Excavation 2--Permit No. A-3623*; map ref. NIG 15810-33/61910-30; OIG 10810-33/11910-30), in the wake of paving a road and a parking lot. The excavations, on behalf of the Antiquities Authority and funded by the Ministry of Health, were directed by E. Kogan-Zehavi, with the assistance of Y. Huster (Excavation 2), H. Lavi (administration), V. Essman and T. Kornfeld (surveying), V. Pirsky (surveying and drafting), Y. Nagar (physical anthropology), M. Avissar (pottery reading), A. Pikovski (pottery drawing) and D.T. Ariel (numismatics).

A built tomb, dating to the Byzantine period, was partially examined in Excavation 1, as well as two Hellenistic amphorae used for interments that were found in a kurkar-dug pit.
A silo from the Crusader period was uncovered in Excavation 2.

## Excavation 1

The plan of the tomb is incomplete and unclear due to poor preservation and partial excavation (Fig. 1). The tomb, oriented north-south, was constructed in a layer of leveled kurkar. Its walls consisted of gray cement, small fieldstones, lime, ash and shells. The burial structure was probably rectangular, part of a main chamber (at least 3 m long, c. 2.5 m wide) that had two square niches $(0.81 \times 0.86 \mathrm{~m})$ in its southern and eastern sides. The floor of the tomb was not entirely preserved due to the collapse of the ceiling and the walls. The southern niche was coated with white plaster and fragments of frescoes decorated with red and black stripes were discovered in the burial cell. It therefore appears that the tomb was plastered and decorated with bichrome wall paintings. The fill in the tomb contained fragments of pottery vessels that dated to the Byzantine period and included fragments of Gaza-type jars (Fig. 2:3) and bowls, among them two Late Roman C bowls, dating to the second half of the fifth and the beginning of the sixth century CE (Fig. 2:1, 2). In addition, fragments of marble, glass and colored plaster were discovered in Loci 100, 102, 104. The excavation was suspended following the discovery of human bones in the tomb. The bones included at least two individuals, an infant $1.5-2.5$ years of age and an adult 25-40 years of age. The distinct plan of the tomb can be reconstructed. It consisted of a main chamber with square niches in its walls. In 1913, a decorated tomb from the Byzantine period was discovered at Bet Guvrin. Although it was not excavated, it was documented and photographed (W.J. Moulton, 1921-22, A Painted Christian tomb at Beit Jibrin, AASOR, II-III:95-102).
The discovery of the tomb is not surprising and it should probably be considered part of the cemeteries from the Roman and Byzantine periods, located east of Tel Ashqelon.

Two amphorae (Fig. 2:4,5) that dated to the Hellenistic period were exposed north of the tomb. The amphorae were deposited in the kurkar layer and covered. One amphora missing its rim was placed upside down, whereas the second amphora, set on its side with its rim facing south, was placed on top of the first one. Part of the second amphora's side and base were removed so that it could be mounted on top of the first amphora (Figs. 3, 4).
The second amphora had a special decoration of thick gray stripes drawn along its body and redpainted runs on its shoulders (Fig. 5). The amphora's provenance was probably Brindisi, Italy and it is dated to the last quarter of the second century BCE (G. Finkielsztejn, 2000, Amphores importées au Levant Sud a l'époque hellénistique, in Fifth Scientific Meeting on Hellenistic Ceramics: Workshops on Chronological Problems and Sealed Contexts, p. 213, PI. 111 b-e). The missing rim of the first amphora impedes its identification; however, based on its body shape and handles, it seems to have come from Ephesus ('Atiqot 37:23-30).
Burial in amphorae is not a unique phenomenon and interments of this type were discovered in the nearby Afridar quarter (HA-ESI 110:97*).
Crushed bones that could not be identified and five iron nails (Fig. 2:6) were found alongside the amphorae. The nails probably belonged to some other item that was placed near the amphorae and did not survive.

## Excavation 2

A circular-built pit was exposed c. 20 m north of the Byzantine tomb. Its curved walls (diam. c. 2 m depth c. 3 m ; Figs. 6, 7) were coated with light brown plaster. The pit was filled with pale gray. brown earth that overlaid a fill of small stones (size $10-50 \mathrm{~cm}$ ). The finds from the fill includec fragments of marble, stone slabs, roof tiles, animal bones and a glass piece, as well as a coin anc potsherds.

The pottery assemblage, dating to the Fatimid period, included an almost complete glazed bowl that is special due to its rich decoration and the fish motif in its center (Fig. 8:1), a bowl rim (Fig. 8:2) kraters (Fig. 8:3-5), a red-slipped bowl fragment decorated with a plastic ornamentation (Fig. 8:6) a jug (Fig. 8:7), jars (Fig. 8:8) and a pithos rim and handle (Fig. 8:9, 10). The coin (IAA 92344) is dated to the reign of Nur al-Din Muhammad (1164-1174 CE).
The pit seems to have been used as a silo, lying next to the remains of a building
(not excavated), part of whose walls were discerned c. 10 m northeast of the pit. The pottery recovered from the silo, after it was no longer in use, dated it to the Fatimid period. This dating which indicates the time when the installation probably stopped functioning, corresponds to the enc of the city, which was conquered and destroyed by Salah ed-Din in the year 1192 CE.

Other excavations had been conducted in the past within the precincts of the el-Jura site ir Ashqelon. Northwest of the hospital, in the Lev Ashqelon neighborhood, a burial field, which contained pit graves with wooden and lead coffins and cist graves from the Roman period, as well as a burial structure with an arched roof from the Byzantine period, was discovered (ESI 20:120*$121^{*}$ ). A plastered burial structure with an arched roof, which had been plundered in antiquity anc contained meager artifacts that dated to the Byzantine period, was excavated close by (ES. 18:113). Further discoveries included a built circular and plastered installation and a channel fror the Byzantine period (HA-ESI 110:72*-73*), as well as a refuse pit from the Byzantine period (HA.

ESI 110:98*). The author excavated a well at the site and found the remains of a temporary settlement that dated to the Early Bronze Age (Permit No. A-3507).

South of the hospital, at the en-Nabi Husein site, four burial structures from the Byzantine period, one of which had an arched roof, were discovered, as well as a circular plastered pit that was used in a liquid-related industry (HA-ESI 110:73*-75*). Other burial structures were exposed c. 500 m east of Tel Ashkelon, outside the el-Jura site (HA-ESI 113:125*-126*).


1. Byzantine tomb, plan.

2. Artifacts from the tomb and its environs.

3. The amphorae, combined together.

4. The amphorae, view from above.

5. Decorated amphora.

6. Plastered pit (silo), plan.


## Ashqelon*

## Ya'aqov Huster

14/8/2007


1. Tiles with light gray bonding material.

During September 2002 a trial excavation was conducted on S.Y. Agnon Street, c. 400 m east of Tel Ashqelon (Permit No. A-3717*; map ref. NIG 1577/6191; OIG 1077/1191), following the exposure of antiquities while inspecting infrastructure work. The excavation, on behalf of the Antiquities Authority and financed by Y. Atias, was directed by Y. Huster, assisted by H. Lavi (administration).

An area of c. 20 sq m was excavated. A natural sand layer (thickness c. 0.7 m ) was removed by mechanical equipment, revealing a layer of reddish brown clayey hamra, which was partially of a light gray color due to the disintegration of bonding material of the same shade that probably derived from the collapse of an installation, apparently located outside the excavation area. Overlying and within the clayey layer at the northwestern end of the area were numerous fragments of flat ceramic tiles, to which remnants of bonding material were still tacked. Two of the tiles, attached by light gray bonding material, were found intact ( $20 \times 20 \mathrm{~cm}$, thickness 2 cm ). The slightly trapezoidal tiles suggest they belonged to an arch of flat mud bricks (Fig. 1). A few potsherds from the Late Roman period were also found in the collapse. Nearby and to the north of the mud-brick collapse was an irregular-shaped pit, cut into the layer of clayey hamra and the natural kurkar layer below it. Several potsherds, dating to the Late Roman period and a jar fragment from Iron Age II were in found the pit.


1. Tiles with light gray bonding material.

## Ashqelon

## Nir-Shimshon Paran

12/12/2007


1. Plan.

2. The burial structure, looking east

During February 2004 a salvage excavation was conducted on the premises of the Ashqelon College (Permit No. A-4092*; map ref. NIG 15938/61982; OIG 10938/11982), following an antiquities inspection in the wake of preparing the area for construction. The excavation, on behalf of the Antiquities Authority and financed by the Ashqelon College, was directed by N.S. Paran , with the assistance of H. Lavi (administration), V. Essman and V. Pirsky (surveying), R. Vinitsky (metallurgical laboratory) and G. Bijovsky (numismatics).
Five cist tombs (G1-5) and a square burial structure were discovered c. 20 m east of a winepress, which was excavated in 1996 (HA-ESI 110:70*-71*). The tombs were built of roughly hewn kurkar slabs that were placed inside shallow pits dug into the kurkar hill. An infant burial was found in Tomb G2 ( $0.45 \times 0.90 \mathrm{~m}$ ) and a child was apparently interred in Tomb G3 ( $0.65 \times 1.30 \mathrm{~m}$ ). Adults were buried in the remaining three tombs (G1, G4, G5; average dimensions $0.8 \times 1.7 \mathrm{~m}$ ); two of them ( $\mathrm{G} 1, \mathrm{G} 4$ ) were partially destroyed when the area was prepared for construction. The tombs were cleaned but not excavated.
A square burial structure (L101; $3.6 \times 4.2 \mathrm{~m}$; Fig. 2) whose walls (W1-4; thickness $0.35-0.55 \mathrm{~m}$ ) were built of small stones and mortar was discovered in the northwestern part of the area. The walls were cast in a mold that was placed in a kurkar-dug pit and their outer face was not smoothed but conformed to the sides of the pit. Two dressed kurkar stones next to the center of W1 probably served as steps to descend inside. The excavation was suspended at a depth of 0.7 m below surface after bones were exposed and the floor of the structure was not reached.
A few non-diagnostic body fragments of jars and cooking pots were found in the vicinity of the cist tombs. The burial structure contained several ribbed potsherds, glass fragments, a fragment of a bone pin and two coins that dated to the Byzantine period (fourth-sixth centuries CE; IAA 80734, 80735).

The tombs are dated to the Byzantine period based on their construction and the ceramic finds in their vicinity. The finds from the burial structure are also dated to this period, although they originated in the fill rather than on the floor, which was not excavated. Nevertheless, the similarity to other burial structures in the area (HA-ESI 115:60*) and its proximity to the cist tombs imply that this burial structure should also be dated to the Byzantine period.


2. The burial structure, looking east.

## Ashqelon, el-Qabu*



1. Plan.

2. Ceramic and other finds.

Yoram Haimi
24/12/2007
During July-August 2002 a salvage excavation was conducted at el-Qabu, in the compound of the ElatAshqelon Pipeline Company (Permit No. A-3692*; map ref. NIG 15553-61/61681-91; OIG 10553-61/11681-91), after ancient remains were discovered during infrastructure work. The excavation, on behalf of the Antiquities Authority, was directed by Y. Haimi, with the assistance of H. Lavi (administration), A. Hajian (surveying and drafting), T. Sagiv (photography), and I. Lidsky (drawing). Many thanks are extended to Mr. E. Sakal whose help greatly contributed to the success of the excavation.

Four excavation squares were opened, revealing a plastered water channel (W110) and two built pools (L13, L26; Fig. 1). The finds from the excavation are dated to the latter part of the Byzantine period and the beginning of the Early Islamic period. Tunnels dug during infrastructure work throughout the excavation area damaged the site and hindered the archaeological excavation. Veteran workmen at the compound stated that at the beginning of the 1970 s remains of an ancient bathhouse were exposed during the course of development work just east of the excavation area and an administration building was eventually built on top of them.

The plastered water tunnel traversed all the excavation squares (length 17 m ) and apparently conveyed water from a well, as yet undiscovered. Remains of plaster were preserved on the exterior face of the tunnel's eastern wall. Numerous fragments of saqiye vessels were discovered in the excavation and therefore, it may have been a saqiye well. A 9 cm elevation difference exists between the southern and northern ends of the tunnel. A smooth plastered pool (L17) at the southern section of the tunnel had two outlets; the one in the west led to a ceramic pipe sealed with a plug and the one in the south connected to a plastered tunnel (W114; length 2.2 m ), which was lower than the northern tunnel (W110).

The two pools were built parallel to and east of the water tunnel. Fragmentary ashlar stones were exposed in the area between the tunnel and the pools, evincing a wall that once stood and separated between them. The larger of the two pools (L26; $3.3 \times 5.8 \mathrm{~m}$ ) was paved with a white mosaic, enclosed within a frame of red tesserae in three straight rows. The floor sloped northward and was overlaid with numerous fragments of Gaza jars. A settling pit (L27; $0.6 \times 0.7 \mathrm{~m}$ ) was cut in the northwestern corner of the pool and to its south a decorated ceramic bowl was incorporated in the mosaic floor of the pool. An outlet in the center of the pool's southern wall (W102) may have been used to convey liquids to the small pool (L13; $2.35 \times 3.30 \mathrm{~m}$ ), which was entirely plastered and contained a large quantity of plaster remains and potsherds in its southern part.

The ceramic finds from the excavation dated to the end of the Byzantine period and the beginning of the Early Islamic period and included fragments of jars (Fig. 2:1-4), saqiye jars (Fig. 2:5) and a wheel-made lamp from the end of the sixth century CE (Fig. 2:6), as well as fragments of two glass goblets and the lower part of a bottle (Fig. 2:7-9), dating to the Byzantine period, a stone bowl fragment from the end of the Byzantine period (Fig. 2:10) and a fragment of a decorated marble column in secondary use (Fig. 2:11).



## ‘Atlit*



1. The rock-hewn installations, plan.

2. Complex A, Channels $1-4$, looking west.

3. Complex B, The square pool, looking west.

Aviva Buchennino and Ehud Galili
17/4/2007
During September-October 2001 a salvage excavation was conducted in the naval base at 'Atlit (Permit No. A-3500*; map ref. NIG 19349/73224; OIG 14349/23224), following a survey of the beach that the Marine Archaeology Unit performed in the region, prior to a planned construction project. The excavation, on behalf of the Antiquities Authority, was directed by A. Buchennino, with the assistance of S. Ya'aqov-Jam (administration), A. Hajian and V. Pirsky (surveying and drafting), T. Sagiv (photography), S. Ben-Yehuda (drawing), E. Altmark (metallurgical laboratory), G. Bijovsky (numismatics), E. Galili (scientific guidance) and E . Oren (probe trenches).

Three complexes of hewn channels that begin at the shoreline and continue eastward (Fig. 1: A, B, C) and installations in the kurkar bedrock were examined, as well as a number of hewn installations on the shoreline in the northern part of a cove, which were apparently associated with the manufacture of salt in antiquity.

Complex A (Fig. 1: A)
The northern complex was divided into three sections, each having different characteristics. Two hewn channels (Fig. 1:A1 and A2) in the western section begin at the shoreline, slightly below the water level and converge into a single channel (length c. 7.5 m ) in the middle section. It then splits into two channels in the eastern section (Fig. 1:A3 and A4; Fig. 2), each leading separately to a hewn asymmetric basin of water (Fig. 1:A5). One may assume that the sea water was conveyed from this basin to evaporation pans that were probably situated in the trough located to the east. A coin of Heraclius I equivalent to half a follis and dating to the years 630-640 CE (IAA 94753) was found in the eastern part of the installation (Fig. 1:A5). No additional finds relating to the installation were recovered from a probe trench excavated east of the pool.

Complex B (Fig. 1: B)
The middle complex was also divided into three sections, each of a different nature. The western section (Fig. 1:B1) consisted of a hewn channel (length c. 5 m ) and a curved, asymmetric rock-cut installation (diam. 2.3 m , depth 0.53 m ). The middle section (Fig. 1:B2) was a hewn channel (length c. 22.7 m ) whose eastern part had been destroyed over the years. Slightly north of the channel was a shallow, almost square pool ( $2.7 \times 2.8 \mathrm{~m}$, depth 0.5 m ) in which quarrying marks were visible. It is unclear whether the pool was part of the channel complex or was used for other purposes.
A channel in the east section (Fig. 1:B3) led to an asymmetric pool. The continuation of the installation to the east could not be ascertained due to debris covering the area.

Complex C (Fig. 1: C)
The complex was segmented and damaged by the cement foundations of the fence that enclosed the naval base. A section of a shallow hewn channel ( 0.30 m ), similar to Complexes $A$ and $B$ began in the west at an elevation slightly lower than the water level and gradually rose to the east. The course of the channel disappeared in the east beneath debris and fills of the patrol road, surrounding the base.

The channels in each of the three complexes began in the west at sea level or slightly below it and gradually ascended on an incline to the east (Fig. 1). Pools were located at the eastern ends of the channels in the northern and middle complexes.
It seems that the force of the waves pushed the sea water up the channels where it drained into the collecting basins. The water was probably raised from the basins by a 'Persian-wheel' or some other installation and conveyed in wooden channels to evaporation pans that were situated in the clayey trough to the east. These installations cannot be dated with certainty; however, based on the ancient remains in the region of 'Atlit it seems their dates range from the second century BCE until the twelfth century CE. Similar installations for producing salt were documented on the Karmel coast between 'Atlit Bay and the coves of Dor (E. Galili, A. Raban and J. Sharvit, 2002, Forty Years of Marine Archaeology in Israel. In H. Tzalas (ed.), Tropis VII [Proceedings of the 7th International Symposium on Ship Construction in Antiquity, Greece, Pylos 1999]. Pp. 927-961).


1. The rock-hewn installations, plan.

2. Complex A, Channels 1-4, looking west.


## ‘Atlit*



1. The rock-hewn installations, plan.

2. Complex A, Channels $1-4$, looking west.

3. Complex B, The square pool, looking west.

Aviva Buchennino and Ehud Galili
17/4/2007
During September-October 2001 a salvage excavation was conducted in the naval base at 'Atlit (Permit No. A-3500*; map ref. NIG 19349/73224; OIG 14349/23224), following a survey of the beach that the Marine Archaeology Unit performed in the region, prior to a planned construction project. The excavation, on behalf of the Antiquities Authority, was directed by A. Buchennino, with the assistance of S. Ya'aqov-Jam (administration), A. Hajian and V. Pirsky (surveying and drafting), T. Sagiv (photography), S. Ben-Yehuda (drawing), E. Altmark (metallurgical laboratory), G. Bijovsky (numismatics), E. Galili (scientific guidance) and E . Oren (probe trenches).

Three complexes of hewn channels that begin at the shoreline and continue eastward (Fig. 1: A, B, C) and installations in the kurkar bedrock were examined, as well as a number of hewn installations on the shoreline in the northern part of a cove, which were apparently associated with the manufacture of salt in antiquity.

## Complex A (Fig. 1: A)

The northern complex was divided into three sections, each having different characteristics. Two hewn channels (Fig. 1:A1 and A2) in the western section begin at the shoreline, slightly below the water level and converge into a single channel (length c. 7.5 m ) in the middle section. It then splits into two channels in the eastern section (Fig. 1:A3 and A4; Fig. 2), each leading separately to a hewn asymmetric basin of water (Fig. 1:A5). One may assume that the sea water was conveyed from this basin to evaporation pans that were probably situated in the trough located to the east. A coin of Heraclius I equivalent to half a follis and dating to the years 630-640 CE (IAA 94753) was found in the eastern part of the installation (Fig. 1:A5). No additional finds relating to the installation were recovered from a probe trench excavated east of the pool.

Complex B (Fig. 1: B)
The middle complex was also divided into three sections, each of a different nature. The western section (Fig. 1:B1) consisted of a hewn channel (length c. 5 m ) and a curved, asymmetric rock-cut installation (diam. 2.3 m , depth 0.53 m ). The middle section (Fig. 1:B2) was a hewn channel (length c. 22.7 m ) whose eastern part had been destroyed over the years. Slightly north of the channel was a shallow, almost square pool ( $2.7 \times 2.8 \mathrm{~m}$, depth 0.5 m ) in which quarrying marks were visible. It is unclear whether the pool was part of the channel complex or was used for other purposes.
A channel in the east section (Fig. 1:B3) led to an asymmetric pool. The continuation of the installation to the east could not be ascertained due to debris covering the area.

Complex C (Fig. 1: C)
The complex was segmented and damaged by the cement foundations of the fence that enclosed the naval base. A section of a shallow hewn channel ( 0.30 m ), similar to Complexes A and B began in the west at an elevation slightly lower than the water level and gradually rose to the east. The course of the channel disappeared in the east beneath debris and fills of the patrol road, surrounding the base.

The channels in each of the three complexes began in the west at sea level or slightly below it and gradually ascended on an incline to the east (Fig. 1). Pools were located at the eastern ends of the channels in the northern and middle complexes.
It seems that the force of the waves pushed the sea water up the channels where it drained into the collecting basins. The water was probably raised from the basins by a 'Persian-wheel' or some other installation and conveyed in wooden channels to evaporation pans that were situated in the clayey trough to the east. These installations cannot be dated with certainty; however, based on the ancient remains in the region of 'Atlit it seems their dates range from the second century BCE until the twelfth century CE. Similar installations for producing salt were documented on the Karmel coast between 'Atlit Bay and the coves of Dor (E. Galili, A. Raban and J. Sharvit, 2002, Forty Years of Marine Archaeology in Israel. In H. Tzalas (ed.), Tropis VII [Proceedings of the 7th International Symposium on Ship Construction in Antiquity, Greece, Pylos 1999]. Pp. 927-961).


1. The rock-hewn installations, plan.

2. Complex A, Channels 1-4, looking west.


## ‘Atlit (South)*

Dori Inbar
18/12/2007
During July 2003 a trial excavation was conducted in south `Atlit (Permit No. A-3935*; map ref. NIG 19435/73275; OIG 14435/23275), prior to construction work. The excavation, on behalf of the Antiquities Authority and financed by the Rahav family, was directed by D. Inbar, with the assistance of S. Ya'aqov-Jam and Y. Dangor (administration), A. Hajian (surveying and drafting), T. Sagiv (photography), D.T. Ariel (numismatics) and E. Yannai (professional guidance).
The site is located on the western fringes of the middle kurkar ridge, southeast of the Crusader fortress (HA-ESI 112:119*). An excavation square was opened, revealing a square vat ( $2.3 \times 2.5$ m , depth 1.5 m ) that was hewn in hard kurkar bedrock. The vat was probably used for the local needs of industry or agriculture. A drainage channel (L101) and a stone dam (L103) were apparently intended to prevent water from entering the vat. Soft fill of weathered sandstone, probably part of the vat's floor, was found at the bottom of the vat. The rest of the vat and its surroundings were covered with modern fill, mixed with hamra soil (L100). A coin of Antiochus III, minted in Antioch (222-187 BCE; IAA 97628), was found on surface near the vat.

The excavation area was devoid of any ceramic artifacts or other finds, precluding the ability to date the vat.


1. Plan and section.

## Banias, the Southwestern Tower* <br> Moshe Hartal

Moshe Hartal
16/4/2007


1. The tower, plan.

During March 2001 an excavation was conducted in the southwestern tower of the Crusader city wall at Banias (Permit No. A-3390*; map ref. NIG 264830/794556; OIG 214830/294556), following the construction of a new bridge over the Nahal Sa'ar channel. The excavation, on behalf of the Antiquities Authority, was directed by M. Hartal, with the assistance of A. Hajian (surveying) and N. Zak (drafting).
A preliminary examination, carried out by mechanical equipment, ascertained that only the foundation of the tower, which was filled with stone below the floor levels, had survived. No artifacts were discovered in the fill and the excavation's purpose was to document the remains.

The tower had two phases (Fig. 1). A city wall was built in the first phase (W1 and W2; c. 2.4 m thick) of well-dressed travertine stones, without drafted margins. The exposed southern face of W1 ( 40 m long) consisted of ashlar stones ( $0.35-1.50 \mathrm{~m}$ long, $0.9-1.5 \mathrm{~m}$ wide, 0.55 m high) that created a straight outer facade. The wall was excavated to six courses high (c. 2.75 m ) east of the tower. Wall 2 ( 19 m long), which was revealed to its full width (c. 2.4 m ), was built of two rows of stones and a core of stone and soil, without debesh binder. The tower ( $10.6 \times 15.7 \mathrm{~m}$ ) was erected at the point where W1 and W2 met. It comprised three walls built of travertine masonry stones, similar to the city wall (eastern wall [W3]--length 3.5 m , width c. 5 m ; southern wall [W4]--length 15.8 m , width c. 7 m ; western wall [W5]--length 3 m , width c. 1.5 m ). The southern face of W4 was exposed to a height of two courses (c. 1 m ) and its top was covered with a thick layer of cement that served as the foundation for a modern Bailey bridge. The entrance to the tower was not found, yet it seems to have been located at the western end of W1.

The wall continued to be used in the second phase and a new tower was built around the earlier tower. The enlarged tower $(18.8 \times 26.0 \mathrm{~m})$ was survived by its foundation, built of hard, dressed limestone masonry blocks with bosses and bonded with hard mortar. The walls had a built exterior face and the space between them and the earlier tower was filled with large stones, some of which were broken ashlar stones bonded with debesh cement. The eastern wall survived to six courses high (c. 3 m ; W6; 12.6 m long) and clearly abutted the southern wall (W7); its stones were not joined with those of W7 and its method of construction was different, having ashlar stones preserved in its southern part. The stones in its northern part had been plundered and only the core, built of roughly hewn stones bonded with debesh cement, survived.
The middle part of W7 ( 26 m long) was damaged in a blast and destroyed almost to its foundation. It survived to thirteen courses high (c. 6.5 m ; height per course c. 0.5 m ) in its two corners. The upper five courses were built of ashlar stones with drafted margins and the bottom courses consisted of ashlar stones with bosses, smooth ashlar stones and coarsely dressed stones ( $0.88-$ 1.33 m long, c. 0.8 m thick). Most of the ashlar stones were robbed from the northern part of the western wall (W8; 18.8 m long; c. 6.5 m high in the southern corner), which was survived only by the lower courses. Wall 8 was covered with dense vegetation of trees and raspberry bushes so that only its two ends were examined.

The architectural finds clearly indicate a two-phase construction. The interior of the early tower was very small, unlike the other towers of the city wall from the Middle Ages. It is feasible that W4 served as a fighting ramp and was not a closed tower.
The large tower of the second phase differed from the earlier tower in the kind of stone (hard limestone), the method of stone dressing (drafted margins with a prominent boss) and the method of construction (use of mortar to bond the stones and a core of large stones bonded with debesh cement). The history of Banias during the Middle Ages evinces the construction of fortifications on several occasions. During the eleventh century CE, the city was encircled with a wall by the Muslims and became a center for the Ism'aliya sect. In the twelfth century CE, it was handed over to the Crusaders who invested enormous efforts in its fortifications. Therefore, the first construction phase should probably be ascribed to the Muslims and the second to the Crusaders, although this assumption cannot be corroborated in the absence of finds.


1. The tower, plan.

## Baqa al-Gharbiya (East)*



1. Remains of an oil press, plan.

2. Oil press, looking north.

Shireen Mahajna
16/10/2007
During September 2003, an excavation was conducted in Baqa al-Gharbiya (Permit No. A-3997*; map ref NIG 20526-60/70262-305; OIG 15526-60/20262-305), following a survey conducted by E. Yannai in the vicinity of the electronic fence. The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Defense, was directed by S. Mahajna, with the assistance of A. Ababasa (area supervision), A. Hajian (surveying) and E. Yannai (archaeological supervision).
The remains of an olive press, quarries and a winepress were exposed in two areas.
Oil Press (L102; outer diam. 0.65 m, inner diam. 0.27 m, depth 0.18 m; Figs. 1, 2). The collecting vat (L104) was also exposed.
Square rock-cutting (L101; $0.82 \times 1.20 \mathrm{~m}$; Figs. 3, 4). Along the northern side of the rockcutting was a round depression (diam. 0.55 m , depth 0.35 m ), probably natural.
Quarry (L100; $2.5 \times 2.5 \mathrm{~m}$; Fig. 5). The quarry was hewn in nari bedrock. Stones delimited by their severance channels could be discerned in the quarry, as could the shapes of stones that had been extracted
Winepress (depth below surface 1.3 m ; Fig. 6). The collecting vat (L110; $0.75 \times 1.25 \mathrm{~m}$; Fig. 7) was plastered and a settling pit (diam. 0.2 m ) was cut in its bottom. The wide treading floor was hewn in bedrock (L109; $1.55 \times 2.70 \mathrm{~m}$; Fig. 8).
Although the ceramic finds were scanty and non-diagnostic, they seem to date to the Hellenistic or Early Roman period.



5. Quarry, plan.

6. Winepress, plan and section.

7. The collecting vat, looking north.

8. The treading floor, looking east.

## Bet Gamli'el*

## Angelina Dagot

23/7/2007



1. Area A, plan and sections.

2. Area B, plan.

3. Middle Bronze Age II jar.

During April 2003 a trial excavation was conducted alongside the approach road to Moshav Ben Zakay, c. 2 km south of Yavne (Permit No. A-3873*; map ref. NIG 175435-510/640837-970; OIG 125435$510 / 140837-970$ ), prior to the construction of the Ben Zakay Interchange. The excavation, on behalf of the Antiquities Authority and financed by the Department of Public Works, was directed by A. Dagot, with the assistance of S. Navon (administration), A. Hajian (surveying), T. Sagiv (field photography), Y. Nagar (physical anthropology) and M. Shuiskaya-Arnov (drawing).
Two excavation areas (c. $25 \times 60 \mathrm{~m}$ ) were opened 45 m apart, near the eastern boundary of the local cemetery; eight squares and two half squares were excavated. Surface was covered with numerous potsherds and most of the finds and the architectural remains were exposed in a layer of clayey soil that extended from surface to a depth of 0.4 m .
Area A. Squares K3-5 (Fig. 1) were opened in the northern part of the excavation area, on the northern slope of a natural hill, c. 150 m from its peak. A wall, oriented east-west (W107; length at least 15 m , width 0.5 m , preserved height 0.3 m ) was exposed. It was mostly built of two rows of light colored kurkar fieldstones and large ashlar stones (average size $0.3 \times 0.4 \mathrm{~m}$ ). The fill on either side of the wall contained a large quantity of pottery fragments from the Byzantine period.
Parallel to and 0.15 m north of the wall, an irrigation channel of modern cement that sloped to the west, was exposed. The channel watered an orchard in the area and was used until the 1950 s (L106; width 0.3 m , depth 0.15 m ). The fill in the channel contained a small amount of late Islamic pottery. The proximity of the channel to the wall and their corresponding change of direction may indicate that they were built as a single unit and the Byzantine pottery, collected in the fill flanking the wall, was swept from the hilltop. Nonetheless, it is possible that the wall was originally built as a terrace wall in the Byzantine period and the builders of the channel made secondary use of it.

Area B. A jar dating to Middle Bronze Age II was discovered on surface in the middle of Square B5 (Fig. 2). To the south of the jar were fragments of sheep bones and teeth in articulation, indicating a primary burial. Fragments of Middle Bronze Age jars, including two bases one inside the other (Fig. 3), were discovered on surface in the northwestern corner of Square B4. Tiny bone fragments were found between the bases, which may have been the remains of a burial.

The results of the excavation point to a new archaeological site that had previously been unknown. The overwhelming majority of the recovered potsherds were fragments of Gaza jars of the southern type, which was widespread in the area north of Ashqelon during the Byzantine period.


1. Area A, plan and sections.

2. Area B, plan.


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3. Middle Bronze Age II jar.

## Bet Lehem (North)*



1. Plan.

2. Hewn basin, plan.

3. Columbarium cave and hewn installation, plan and section.

4. Columbarium cave, looking north.

5. Pottery.

Irina Zilberbod
10/7/2007
During May 2003 a salvage excavation was conducted in northern Bet Lehem (Bethlehem; Permit No. A3868*; map ref. NIG 21965/62600; OIG 16965/12600), in the wake of constructing the separation fence. The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Defense, was directed by I. Zilberbod, with the assistance of R. Abu Khalaf (administration), A. Hajian (surveying), C. Amit (photography), and Y. Billig (antiquities inspection).

Buildings, installations and a cave were exposed.
Stone Clearance Heap (Rogem; Fig. 1:I). A large heap of fieldstones ( $14 \times 18 \mathrm{~m}$, height 5 m ) was found. It contained stones that were cleared when the nearby area was prepared for cultivation. Apart from the walls that delimited the clearance heap no evidence of ancient construction was discerned.

Hewn Basin (Figs. 1:II; 2). An irregular shaped rock-hewn installation (L11; diam. 1.5 m , depth 1.4 m ), which slightly widened on its western side toward the bottom, was excavated c .7 m north of the stone clearance heap. Several trough-like rock-cuttings were hewn around the basin (Loci $15-18$; length 1 m , width 0.5 m , depth 0.25 m ). No signs of plaster were traced in the basin or the rock-cuttings, which were probably used to process agricultural produce or employed in some other domestic capacity.

Columbarium Cave (Figs. 1:III; 3, 4). A funnel-shaped cave (ceiling diam. 2.25 m , floor diam. 1.25 m , height 2 m ), preserved in its entirety and hewn in relatively soft stratified bedrock, was discovered c. 60 m northeast of the stone clearance heap. The cave opening (L20; $0.8 \times 0.8 \mathrm{~m}$, depth 0.5 m ) was a square shaft, hewn from surface to the center of the ceiling. A breaching from the side of the cliff probably occurred after the cave was abandoned.
Four levels of columbarium niches were hewn along all of the walls of the cave, in keeping with bedrock stratification, from a height of 0.4 m above the floor to the ceiling. Each level consisted of $15-17$ niches (width 0.3 m , height 0.3 m , depth 0.25 m ). Some of the niches in the upper level were connected together, forming a kind of shelf.
Although no datable artifacts were found, the cave should probably be ascribed to the Hellenistic and Early Roman periods. Similar caves are known at sites around Jerusalem, as well as near this cave (A. Kloner, Survey of Jerusalem, The Southern Region, p. 142, Site 90; Survey of Jerusalem, The Northwestern Region, p. 31).

Rock-hewn Installation (Figs. 1:III; 3). A small section of a stone floor (L25) that abutted the wall of a rock-hewn installation was discovered below a fill of agricultural soil. A very small part of the installation ( $1 \times 2 \mathrm{~m}$ ), which precluded defining its nature, was excavated. The recovered pottery fragments included holemouth jars from Iron II (Fig. 5). The site should be regarded as part of Bet Lehem's agricultural hinterland.

Watchman's Booth and Storage Cave (Figs. 1:IV; 6). A rectangular building ( $4 \times 5 \mathrm{~m}$, max. height 1 m ) was exposed $c .15 \mathrm{~m}$ south of the columbarium cave. The building was partitioned by a wall into two rooms and overlaid a natural cave ( $4.0 \times 4.5 \mathrm{~m}$, height 1.7 m ). No datable artifacts were discovered. It seems the building and the cave were used to guard and store agricultural produce.

2. Hewn basin, plan.

3. Columbarium cave and hewn installation, plan and section.

4. Columbarium cave, looking north.

5. Pottery.


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6. Watchman's booth and storage cave, plan.

## Bet She'arim*

Murad Anton Tabar
During March 2003 a trial excavation was conducted in Qiryat Tiv'on (Permit No. A-3857*; map ref. NIG $21122-25 / 73472-76$; OIG 16122-25/23472-76), in an area slated for the construction of a nursery school on Giv'at Ha-Mosadot. The excavation, on behalf of the Antiquities Authority and financed by the Industrial Construction Company and the Tiv'on Council, was directed by M.A. Tabar (photography), assisted by A. Hajian (surveying) and A. Glick (GPS).
Nine seemingly ancient cavities were excavated down to bedrock. It was ascertained that eight cavities were natural and contained alluvium and fragments of Byzantine potsherds. The ninth cavity, in the northeastern corner of the area, was a circular hewn cupmark (diam. 0.23 m , depth 0.13 m ) that contained Roman-Byzantine potsherds.

## Ramat Bet Shemesh, Survey*



1. Survey map, showing sites.

2. Site 8, pathway, looking west.

3. Site 13 , bedrock outcrop with cupmarks, looking west.

4. Site 14a, rock-cut basin (yam) of oil press, looking north.

5. Site 15 , cupmarks, looking west.

Harley Stark
25/2/2007
During September-October 2003, a development survey was conducted along the proposed alignment of Road 5 (Nahal Dan Boulevard) in Ramat Bet Shemesh (Permit No. A-4058*; map ref. NIG 1975-90/624873; OIG 1475-90/1248-73). The survey, on behalf of the Antiquities Authority and financed by the Ministry of Housing and Construction, was directed by H. Stark, with the assistance of D. Weiss, H. Moyal and L. Barda (GPS/GIS).

Beginning at the Nahal Yarmut valley in the south and continuing north along the western slope of one of its tributaries, the proposed road alignment reaches a saddle, located to the west of Khirbat el-'Alya (Fig. 1), from which the road begins to descend northward off the hill and continues along the broad and open valley of Nahal Yimla. Running along its east bank, it reaches an area just east of the confluence of Nahal Yimla and Nahal Yish'i, where it joins an existing road.
The planned road passes close to a number of major regional sites; some were excavated during the development of the Ramat Bet Shemesh neighborhood (ESI 17:81-136), including Khirbat en-Nabi Bulus, Nahal Yarmut, Khirbat el-‘Alya, Deir 'Asfur, Khirbat Fattir, Nahal Yish'i and Khirbat Umm es-Sumud.

A total of forty-five sites were discovered in the surveyed area (c. 2.5 km long, 60 m wide). The majority were concentrated in the hilly area between Kh. en-Nabi Bulus and Kh. el-'Alya, which is covered with redzina soil and thick Mediterranean vegetation. Sites mainly connected with agriculture and food processing were recorded--winepresses, oil presses, cupmarks, a watchtower, quarries, water cisterns terrace walls and stone clearance heaps. Some had previously been investigated by Y. Dagan (ESI 17). Farther north, along the open and broad, largely treeless, bank of Nahal Yimla, the soil changes to a marl type and only sites connected with food cultivation, such as large field systems formed by field walls, long broad terrace walls and a village pathway, were found. The area around Nahal Yimla continues to be intensively cultivated today (viticulture being the main crop) and modern agricultural techniques seem to have erased traces of earlier remains. Little if any ceramic finds were discovered in this region; in the hilly area, potsherds from the Early Bronze Age, as well as the Roman, Byzantine and Early Islamic periods were well represented.

The principle sites in the survey are described hereafter.
Site 8. A pathway (Fig. 2) running along the saddle that connects Khirbat el-‘Alya with Deir 'Asfur (map ref. NIG 198385-437/625083-116; OIG 148385-437/125083-116). The path (width 2-3 m), oriented east-west, was delineated by intermittent individual fieldstones placed upright along either side. It was set on a well worn bedrock base with occasional rock-cuttings and quarry marks intended to make passage easier.
Sites 11 consisted of a rock-cut water cistern (Fig. 3) and two field installations for processing olive oil (bodeda), carved into bedrock outcrops.
Site 12. Remains of an oval mound ( $3 \times 6$, height 1.5 m ; Fig. 4), whose foundation is built of large roughly cut fieldstones $(0.8 \times 1.0 \mathrm{~m})$. This mound may be connected with the remains of a large industrial oil press found nearby.
Site 13 comprised three small cupmarks (diam. c. 0.1 m ) and a larger single cupmark (diam. 0.3 m ; Fig. 5) that were probably used for processing olives.
Site 14a. On the northern slope of the hill south of Nahal Yimla (map ref. NIG 198808/625070; OIG $148808 / 125070$ ), a rock-cut stone basin (yam; Fig. 6) connected with olive-oil production, was found in situ. The basin (diam. 2.2 m ) was carved in a bedrock outcrop and has a raised edge (c. 0.1 m high) around the outside rim of the stone and a central hole ( $0.15 \times 0.15 \mathrm{~m}$ ) where the upright axis would have been located.
Site 15 was composed of two cupmarks (diam. c. $0.4 \mathrm{~m}, 0.25 \mathrm{~m}$ respectively), recessed within a carved frame (Fig. 7).
Site 38. A village pathway (length c. 100 m , width 4 m ; map ref. NIG 198706-810/625984626002; OIG 148706-810/125984-126002) was found on the east bank of Nahal Yimla, leading from the area of Khirbat Fattir westward to the wadi bed and up in the direction of Deir 'Asfur. The path was delineated by two parallel double-faced stone walls (width 1.2 m , height 1.5 m ), built of finely cut and dressed stones, probably in secondary use, with a core of small fieldstones.

The remains recorded in this survey represent the agricultural hinterland of the surrounding settlements. The occurrence of industrial facilities for olive oil extraction and winepresses on the rocky hillsides indicates that the food was processed from probably locally grown foodstuffs in the nearby Yarmut valley, where springs are located. The use of the marl soil area, located to the north, for the cultivation of crops seems to be limited to relatively modern times.


1. Survey map, showing sites.

2. Site 8 , pathway, looking west.

3. Site 11, water cistern, looking south.

4. Site 12 , oval mound, looking south.

5. Site 13 , bedrock outcrop with cupmarks, looking west.

6. Site 14 a, rock-cut basin (yam) of oil press, looking north.

7. Site 15 , cupmarks, looking west.

## Ramat Bet Shemesh - Bir Tawil*

Rina Avner
30/7/2007
During May-June 2003 a salvage excavation was conducted in Ramat Bet Shemesh, next to the summit of Bir Tawil (Permit No. A-3901*; map ref. NIG 19935-7/62345-7; OIG 14935-7/12345-7), in the wake of construction work in a residential neighborhood. The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Housing and Construction, was directed by R. Avner, with the assistance of L. Barda (GPS survey), V. Essman and V. Pirsky (surveying), T. Sagiv (field photography), E. Belashov (drafting), I. Pikovski (pottery drawing) and C. Amit (studio photography).

Three areas were surveyed and excavated, revealing modern remains that apparently belonged to the Arab village of Bet Natif, which was abandoned in 1948. Numerous farming terraces, a building and installations were found. A survey in the region had been conducted in the past by Y. Dagan, who exposed terraces, water cisterns, winepresses, and watchman's booths (License No. G132/1997).

## Be'er Ma'on (Re'ut)*


6. Wall 6, L211 on the right, L212 on the left and Pit 210 in the balk above, looking south.

8. Room 205, krater in the corner, looking south.

11. Pottery and finds from the Early Islamic, Crusader and Mamluk periods.

12. Pottery and finds from the Ottoman period.

Raz Kletter
8/5/2007
During October 2001 a salvage excavation was conducted at Be'er Ma'on (Permit No. A-3747*; map ref. NIG 2019/6438; OIG 1519/1438), in the wake of damage to antiquities caused while preparing a path to a public park, on behalf of the Re'ut Local Council. The excavation, on behalf of the Antiquities Authority, was directed by R. Kletter, with the assistance of R. Abu-Khalaf (administration), V. Essman (surveying) and M. Shuiskaya-Arnov (drawing). The excavator wishes to thank the team of laborers from Ashqelon, as well as M. Avissar (pottery reading), O. Shmueli and Z. Kanias.

The site, located on a hill in Re'ut, was damaged when a public swimming pool was constructed and roads were paved on the slopes of the hill. A former excavation near the pool exposed remains from the Early Islamic period (ESI 18:115). Prior to the expansion of the synagogue, a salvage excavation was conducted in 2000 on the western slope of the site (HA-ESI 117), revealing architectural remains and a winepress from the Late Byzantine period (Fig. 1: Site 1).
The current excavation area, c. 100 m southeast of the previous excavations (Fig. 1: Site 2), had been severely disrupted by earthmoving equipment and later pits that penetrated into the layers of building remains. Three squares were opened, as well as another area, c. 20 m to the south, which only contained mixed fills.

A rock-hewn winepress paved with a white industrial mosaic and a circular settling pit (L213; Figs. $2,3)$ were exposed. Since only the edges of the winepress were excavated, it could not be precisely dated. Overlaying the mosaic was a deposit of black fill (c. 0.2 m thick) that was deposited after the winepress was no longer in use and contained homogenous potsherds dating to the Early Islamic period (ninth-tenth centuries CE). The winepress was probably associated with the early phase of the wall (W5) that enclosed it on the northwest.
Wall 4, whose eastern face consisted of beautiful ashlar construction, was attributed to the first building phase; it formed a corner with an early phase of W5. Wall 4 was parallel to the rock-cutting (marked W13), which was connected to a wall (W11) and both seemed to be part of a large building (Fig. 4). An entrance in W11, installed on the smoothed natural bedrock, at an elevation of 285.5 m above sea level, represented the elevation of the building's floor. The walls of this phase, well-constructed of dressed stones, were all founded on bedrock; no floors bearing vessels were uncovered. The fill opposite the lower eastern part of W4 (L209, unsealed) contained a scant number of potsherds that dated to the Early Islamic Period.
Wall 8 was built in a later phase at a slightly different angle from W4 and formed a corner with a later phase of W5 (Fig. 5), which was partly founded along the line of the early wall. The walls of this phase were also well-built. Attributed to the later phase of W5 was a fill of brown material, visible in the western section of L213 above the black fill overlying the winepress, which was devoid of datable potsherds.

South of W11 and W13 was a large complex of walls (W2,W3, W6, W7, W9 and W10) in the second building phase that belonged to rooms of a large structure. Wall 6 (Fig. 6) abutted W11, but the two walls were not bonded together. The walls of the second phase were also founded on bedrock and their orientation was similar to that of Walls 11 and 13. The rooms of the building (Loci 205, $211,212,214,215$ ) were paved with white plaster and stone (Fig. 7). The floors were laid directly on bedrock or on a fill that was intended to level bedrock and included stone chips and chalk. Evidence of two phases was found in the building. An opening was sealed in W10 during the second, later phase; however, neither phase had floors that yielded sealed deposits.
The fill overlying the floors of the later phase contained potsherds, dating mostly to the Early Islamic period (ninth-tenth centuries CE), mixed with a few later sherds. On the floor in the corner of Room 205 was half of a large upside-down krater (Figs. 8, 11:3) that was probably from the Early Islamic period. On Floor 214 was a fragment of a schematic bone "doll" from the same period (Fig. 11:8). A probe below Floor 212 did not reveal a sealed assemblage that could date the building, except for several non-diagnostic body fragments that were found in the bedding of the floor. It seems that this phase should also be dated to the Early Islamic period.

Several crude, meager walls (W1, W12, W14 and part of W3) were constructed in the third building phase. Wall 12, built above Walls 5 and 8 , was not connected to them. Wall 1 was a square pillar base ( $1 \times 1 \mathrm{~m}$; Fig. 9) whose alignment was similar to that of Wall 11, but at a higher level; only two of its courses had survived after the rest were removed by the bulldozer. The base was set within a foundation trench that contained a gray soil fill. Wall 14 was above W11 and partly resting on it. A tabun (L206; Fig. 10), whose top was at the approximate elevation of the floor ( 286.13 m ), was found to the west of Wall 3. The walls of the third phase differed from those of the earlier phases in the gray cement that was used in their construction, along with ancient masonry stones in secondary use. Although no distinct floor could be attributed to this phase, it can be dated to the Mamluk period based on potsherds recovered from the tabun, as well as the latest sherds from the foundation trench of W1. At a later stage, when the walls were no longer used, pits, sometimes large ones, were dug inside the structure, visible in the balks of Squares B (L210) and C (L207). The pits contained mixed ceramics, mostly from the Mamluk period.

The early finds from the Early Islamic period came mostly from the floors of the rooms (Loci 205, 209), including bowls of common glazed buff ware (Fig. 11:1) and a green-glazed bowl (Fig. 11: 2). The dark red clay cooking pot is typical of the period (Fig. 11:4). The jugs are made of buff ware with thin walls (Fig. 11:5) and a fragment of a similar vessel was found in L209. The jars of the period include a small jar of orange clay (Fig. 11:6) and a large pithos with an upright rim of the type common to Ramla and en-Nebi Samwil (Fig. 11:7).

The few potsherds from the Crusader period were not found in a stratigraphic context and included an extremely worn rim fragment of a St. Simeon-type bowl, dating to the twelfth-thirteenth
centuries CE, with a sgraffito decoration and a yellow and light green glaze (Fig. 11:9; compare to Caesarea, in D. Pringle, Levant 17, 1985: Fig. 13:66; for a general discussion, see E.J. Stern. Qadmoniot 119, 2000:58 [Hebrew])

A relatively large amount of Mamluk pottery was found, especially in the pits and fill. It included green-glazed bowls with a sgraffito decoration (Fig. 11:10); a glazed, mold-made bowl of a type that was produced in Jerusalem (Fig. 11:11), a handmade bowl of coarse clay that contained straw, with a geometric decoration on the interior (Fig. 11:12) and a wheel-made bowl with a thick carinated wall (Fig. 11:13).

Relatively few remains from the Ottoman period were found on surface and in several mixed loci, including a bowl of the Graffita Arcaica family, dating to the sixteenth century CE and imported from Italy (Fig. 12:1), a later glazed bowl (Fig. 12:2), a gray Gaza bowl (Fig. 12:3), a coffee cup fragment of white clay, probably from the eighteenth century CE (Fig. 12:4), the stem of a tobacco pipe from the seventeenth century CE (Fig. 12:5) and the bowl of a tobacco pipe from the eighteenth century CE (Fig. 12:6). Other artifacts from this period included metal fragments, roof tiles and glass bracelets, as well as a stone bead (Fig. 12:7) and a marble stopper (Fig. 12:8) that were found in an unstratified context. Rifle cartridges and barbed wire indicate the area was used by the Israel Defense Force for training during the twentieth century CE.

Remains from the Late Byzantine period were documented in the previous excavation (HA-ESI 117), whereas the current excavation adds information about the site from the Early Islamic period until the present time.


1. Location map.


Third phase (Mamluk) $\square$ שלב שלישי (ממלוכי)

Second phase (Early Islamic?) $\qquad$ שלב שני (אםלאמי קדום?)

2. Plan.

3. The mosaic floor and settling vat of the winepress in L213. Wall 4 is on the left.

4. The front of W4, looking west.

5. Wall 4, L209 to the right, the corner of W5 and W8 above, and W12, looking north

6. Wall $6, L 211$ on the right, L212 on the left and Pit 210 in the balk above, looking south.

7. Room 205, the stone pavement, looking east.

8. Room 205, krater in the corner, looking south.

9. A square pillar base (W1) within foundation trench, looking east.

10. Tabun 206 to the west of W3, looking east.

11. Pottery and finds from the Early Islamic, Crusader and Mamluk periods.

12. Pottery and finds from the Ottoman period.

## Be'er Massu'a



1. Stone vessels.

Boaz Zissu and Amir Ganor
17/4/2007
During December 2001, patrols were carried out in the region of Be'er Massu'a (Khirbat Bir al-Medwar) in the central Judean Shephelah (map ref. NIG 19139/62000; OIG 14139/12000) to evaluate damage to antiquities caused by recent illicit excavations that were discovered by A. Kline, inspector with the Unit for the Prevention of Antiquities Robbery in the Judean Shephelah. The patrols, on behalf of the Antiquities Authority, were conducted by B. Zissu, A. Ganor, A. Kline, S. Ganor, Y. Zissu, N. and A. Greitzer, with the assistance of the Calgary Institute for the Humanities, University of Calgary, Canada.

The site does not appear on new maps. On British Mandatory maps (Beit Jibrin, Sheet $14 / 11 ; 1945)$ the ridge where the site exists is designated by the name of Dhahrat Khirbet Birt el Midwār, whereas the name of the ruin Khirbat Bir el Midwār appears c. 150 m to the south. On new maps the site is called Be'er Massu'a.

The site extends across 10 dunams, on top of a spur that is oriented east-west. The spur connects to Ramat Avishur in the east and is flanked from the north, south and west by tributaries of Nahal Luzit. Fertile soil for cultivation occurs in the adjacent wadi channels and a source of water is present in Be'er Massu'a. Terrace walls and fences that used ancient masonry stones were built inside the ruin, covering the ancient buildings.

The recent illicit digging in the center of the site exposed the remains of a large building whose exterior walls were built of large nari stones and interior walls consisted of well-dressed qirton stones. The accumulation of the ruins and building collapse reaches a height of $1.5-2.0 \mathrm{~m}$. An examination of the debris left by the illicit diggers showed that most of the potsherds from the building dated from the first century BCE to the second century CE. The debris removed from one of the rooms contained a large amount of ash, potsherds typical of the first-second centuries CE and numerous fragments of a large chalk vessel (kalal; Fig. 1:1). The fragments have a gray color that suggests they were originally placed in a layer of ash (a burnt layer). It is quite rare to find vessels of this kind outside of Jerusalem. Alongside the kalal fragments were two bases of stone bowls that were shaped with a lathe (Fig. 1:2,3) and a knife-carved chalk vessel whose purpose is unclear (Fig. 1:4).

Preserved around the site, especially to the south and southwest, were the remains of collapsed buildings that abutted each other and formed a perimeter fortification. Large nari blocks ( 1.5 m long) were used in their construction, as well as some finely crafted architectural elements, such as doorjambs and lintels. The remains in this area were preserved 2.5 m high. The recent wave of illicit digging skipped over this part of the site, which is, nevertheless, dotted with numerous excavation pits from antiquities plundering of past years. Decorated openings of caves and water cisterns are located between the buildings. One of the cisterns in the southern part of the site has a spiral staircase, descending to its bottom.
Most of the potsherds from the heaps of debris and on the site's slopes date to the latter phase of the Second Temple period and the time of the Bar Kokhba Revolt; a small number of ceramic finds were attributed to the Byzantine period.


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1. Stone vessels.

## Be'er Sheva'*



1. Plan.

2. Stratum 1, L106, looking west.

3. Iron Age II pottery.

Svetlana Talis and Gregory Seriy
16/8/2007
During June and November 2001 a salvage excavation was conducted next to the Bedouin market in Be'er Sheva' (Permit No. A-3445*; map ref. NIG 18055-70/57015-20; OIG 13055-70/07015-20), prior to the construction of a conduit. The excavation, on behalf of the Antiquities Authority and financed by the Be'er Sheva' Municipality, was directed by S. Talis and G. Seriy, with the assistance of H. Lavi (administration), A. Hajian (surveying and drafting) and I. Dudin (drawing).
The excavation area was located southeast of the old Bedouin market, on the southern side of Hebron Road. Previous excavations at the site had been conducted by R. Gophna (HA $3: 19 ; 5: 18$ ), Y. Israel (HA $13: 4 ; 17: 3 ; 21: 5 ; 22-23: 29)$, R. Cohen (HA 27:14-16), Y. Guvrin (ESI 7-8:12; 9:167), F. Sonntag (HA-ESI 113:115*) and P. Fabian (Permit Nos. A-1862; A4012; License Nos. G-58/2004; G-64/2005; G-66/2006). Four of the seven excavation squares revealed remains of a building from the Byzantine period (Stratum 1) and a pit from Iron II (Stratum 2).

## Stratum 1

Parts of four rooms (Loci 105-107, 112, 113; Figs. 1, 2) were exposed. The wall foundations (width $0.5-1.1 \mathrm{~m}$; height $0.15-0.80 \mathrm{~m}$ ), mostly preserved to one or two courses high, were built of various sized fieldstones. Walls 14 and 15 were preserved six to eight courses high. The floors of the rooms, apparently at a higher level, were destroyed by modern disturbances. The fill in the rooms consisted of soft loess with some traces of layered alluvium, implying that prior to the building's construction a wadi crossed the area.

## Stratum 2

An unlined pit (L111; diam. 1.5 m , depth 1.2 m ) was discovered below the foundations of the building from Stratum 1. It was dug into the loess and dated to Iron II.
A few fragments of pottery vessels, including bowls, cooking kraters, jugs, lids and jars (not drawn), were found in the rooms of Stratum 1, dating to the sixth century CE.
The ceramic finds from Stratum 2 were pottery fragments from Iron II (end of ninth and eighth centuries BCE), including bowls (Fig. 3:1-7), a krater (Fig. 3:8), a jug (Fig. 3:9), jars (Fig. 3:10 11), one of which resembles a LMLK jar (11) and holemouth jars (Fig. 3:12, 13). Iron II potsherds were also found in three loci of Stratum $1(108,112,113)$.

Due to the small amount of finds recovered from the excavation, it is difficult to evaluate the nature of the building in Stratum 1, although clearly it was part of the city of Be'er Sheva's center in the Byzantine period (fourth-sixth centuries CE). The city included dwellings, churches, a bathhouse, a winepress, a pottery workshop and cemeteries that were excavated in the region. The Iron II pit was probably located on the southern fringes of a large settlement from that period whose remains had previously been discovered in excavations north of the current one, in part of the Turkish city (I. Gil'ad and P. Fabian, 7,000 Years of Settlement: The Archaeological Remains of Beer Sheva from the Sixth Millennium BCE until the end of the First Millennium CE, The Beer Sheva Book, in print).


1. Plan.

2. Iron Age II pottery.

## Be'er Sheva'*



1. Plan.

2. Stratum 1, L106, looking west.

3. Iron Age II pottery.

Svetlana Talis and Gregory Seriy
16/8/2007
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1. Plan.

2. Iron Age II pottery.

## Be'er Sheva', Be'er Zafad (North)*

Vlada Nikolsky
18/12/2007
During May 2003 a salvage excavation was conducted in the Newe Noy neighborhood of Be'er Sheva' (Permit No. A-3990*; map ref. NIG 1786-90/5711-20; OIG 1286-90/0711-20), prior to the construction of a new residential qurater. The excavation, on behalf of the Antiquities Authority and financed by the 'Arim Company of the Ministry of Construction and Housing, was directed by V. Nikolsky-Carmel, assisted by A. Hajian (surveying and drafting).

Remains of walls were exposed in a single square. Wall 10 , discovered c. 0.8 m below surface and built of river pebbles, was preserved five courses high. Wall 11 , parallel to W 10 , consisted of massive flint and kurkar stones. Any possible connection between the two walls is negated on account of the differences in elevation and in construction techniques, as well as the small distance between them. The meager ceramic finds were dated to the Late Byzantine period.


1. Plan.

## Bu’eina*



1. Area A, plan and section.

2. Pottery.

3. Area B, plan and section.

4. Quarry, looking west.

Leea Porat
24/12/2007
During July 2003 a salvage excavation was conducted at Bu'eina on the northern slope of Mount Tur'an (Permit No. A-3961*; map ref. NIG 2343-6/74550-7; OIG 1843-6/2455-7). The excavation, on behalf of the Antiquities Authority, was directed by L. Porat, with the assistance of V. Essman and V. Pirsky (surveying and drafting), H. Smithline (photography), E.J. Stern and D. Avshalom-Gorni (ceramic advice) and H. Tahan (pottery drawing).

Two excavation areas (A, B) were opened. Two half squares were excavated in Area A, revealing a natural cave, two water cisterns, and a hewn bedrock surface; a trench dug by a bulldozer south of the area was cleaned. A quarry and two walls built above it were exposed in Area B $(3 \times 4 \mathrm{~m})$, c. 30 m north of Area A.

Area A (Fig. 1)
A natural cave (L13) in the southern part of the area was exposed, but only partially excavated. Potsherds dating to the Early Islamic period, mostly jar fragments, were recovered from the cave, which was apparently used as a dwelling. Two water cisterns hewn in the limestone bedrock were discovered in the northern part of the area. The smaller of the two (L12; diam. 1.35 m , height 1.4 m ) was hewn above the larger cistern (L15; diam. 6 m , preserved height 2 m ), which was only partly excavated; most of its ceiling had been damaged by the bulldozer. The cisterns contained potsherds dating to the Mamluk period, including numerous glazed bowls (Fig. 2:1-7), unglazed bowls (Fig. 2:8-10), a few cooking pots (Fig. 2:11) and jars (Fig. 2:12-14), as well as animal bones. A hewn bedrock surface (length c. 7.5 m ) with a cupmark was discerned in the trench south of the area. This was probably a quarry or an agricultural work surface.

Area B (Figs. 3, 4)
A quarry hewn in the nari bedrock was discovered. A large stone that had not been detached from the surrounding bedrock (length 0.9 m , height 0.6 m ) was discerned in the eastern part of the quarry. The stone, which had a large depression on top of it, was apparently intended as a weight in an olive press, but its quarrying was never completed. Two walls were constructed on top of the quarry in a later phase. One wall (W20) was built of medium fieldstones ( $0.3 \times 0.4 \mathrm{~m}$ ) and was preserved 0.23 m high. It supported a terrace, whose continuation was hewn. The second wall (W21; width 0.9 m ) was built of large ashlar stones $(0.45 \times 0.60 \mathrm{~m})$, one of which was set inside a recess at the bottom of the quarry, probably to level its floor. The ceramic finds in Area B were meager and included fragments of bowls from the Late Roman period (Fig. 2:15, 16) and a cooking-pot fragment from the Early Roman period (Fig. 2:17). Potsherds from the Byzantine period, which included a cooking-pot fragment (Fig. $2: 18$ ), were found in the soil fill overlying the remains in Area B.



3. Area $B$, plan and section.


## Caesarea*



1. Location map

2. The southern area, plan and sections.

3. The northern area, looking east.

4. The northern area, looking south.

5. Bowls and cooking pots.

Rina Avner and Peter Gendelman
30/1/2007
During January 2002 a salvage excavation was conducted in Caesarea, Neighborhood 2 (Permit No. A3553*; map ref. NIG 19090-5/71290-305; OIG 14090-5/21290-305; Fig. 1), in the wake of damage to antiquities caused during the building of a house. The excavation, on behalf of the Antiquities Authority, was directed by R. Avner, with the assistance of P. Gandelman (pottery), J. Porath (scientific guidance), V. Essman and V. Pirsky (surveying), T. Sagiv (field photography), J. Bukengolts (pottery restoration), H. Biton (pottery drawing) and K. Marks (University of London).

A northern and a southern area were opened, revealing eight cist graves (one is questionable) and four stone sarcophagi.
The Southern Area ( $20 \times 21 \mathrm{~m}$; Fig. 2). Five cist graves were discovered; four (T5, T6, T8, T10) were oriented east-west and one (T9)--north-south. The three western tombs (T8, T9, T10) were covered with stone slabs; T8 and T10 were identical and covered with five slabs ( $0.8 \times 2.2 \mathrm{~m}$ ) . Tomb 9 extended beyond the limits of the excavation, hence its entire length was not exposed; four of its covering slabs were revealed (total length 1.8 m , width 0.85 m ). The two eastern tombs (T5-$-0.85 \times 2.50 \mathrm{~m}$; T6--0.90 $\times 2.25 \mathrm{~m}$ ), built of kurkar slabs, had no covering slabs and were not associated with any finds.
The Northern Area ( $6.0 \times 8.5 \mathrm{~m}$; Figs. 3-5). Eight tombs were discovered. Tomb 27 is a stone sarcophagus $(0.60 \times 1.35 \mathrm{~m})$ covered with four ceramic roof tiles (average dimensions $0.3 \times 0.6$ m ; average thickness 3.5 cm ). The roof tiles partially overlapped each other and only the eastern tile was completely visible. It seems that stone slabs were placed around the sarcophagus to form a modest frame for the tomb; one of the stones was preserved in the east and two remained in the north. A two-cell structure of kurkar slabs (average size $0.18 \times 0.70 \mathrm{~m}$ ), set lengthwise and perpendicular to the soil, was built above the two north stones at a later phase. The stone sarcophagi T20 ( $0.56 \times 1.90 \mathrm{~m}$ ) and T28 $(0.61 \times 1.98 \mathrm{~m})$, ascribed to the sarcophagi group known as 'Samarian Coffins', were placed in the cells ( $0.7 \times 2.3 \mathrm{~m} ; 0.67 \times 2.10 \mathrm{~m}$ ). The sarcophagi were laid in an east-west direction, similar to Sarcophagus T27. A large stone ( $0.4 \times 0.7 \mathrm{~m}$ ) was incorporated in the eastern side of Cell T28 and a similar stone ( $0.45 \times 0.60 \mathrm{~m}$ ) appeared in the western part of the frame that surrounded the sarcophagi, perhaps evidence of family ties between the deceased interred in the two sarcophagi.
North of them was a cist grave (T29; $0.60 \times 2.25 \mathrm{~m}$ ), oriented southwest-northeast, without covering slabs. It was built of stone slabs similar to the frame around Sarcophagus T28. Some 2.5 $m$ north of T29, four tombs (T14, T22, T23, T25) next to each other in a row, oriented north-south, were discovered. The two lateral tombs, T23 ( $0.9 \times \mathrm{c} .2 .5 \mathrm{~m}$ ) and T14 ( $0.85 \times 2.68 \mathrm{~m}$ ), were cist graves covered with stone slabs--six on T23 and seven on T14. The two inner tombs were T22, a stone sarcophagus that was not exposed for its entire length ( $0.75 \times 2.00 \mathrm{~m}$ at least) and T25, which may not have contained a sarcophagus next to T22 (similar to T28 and T20) or may have possibly been a cist grave whose covering slabs were not preserved. Tombs T22 and T25 were probably covered with stone slabs, although only the slabs at their ends were preserved. However, it is possible that these slabs belonged to cist graves, originally situated at a higher level and not preserved.
The Ceramic Finds and Dating of the Tombs. Although the tombs themselves were not excavated, pottery vessels were found near them; some were standing near the tombs and may have served as offerings or tombstones. Among the pottery vessels were imported ones, including a Terra Sigilatta bowl (Fig. 6:2) and krater (Fig. 6:4); amphorae (Fig. 7: 6, 11, 12) from North Africa, one of which (Fig. $7: 12$ ) has two holes (diam. c. 1.5 cm ) that were drilled in antiquity and indicate that the vessel may have been used for libation in Tomb T22; an amphora (Fig. 7:7) whose provenance is southeast of the Black Sea and an amphora (Fig. 7:16) from Crete. The amphorae were probably brought to Caesarea as storage vessels that contained imported products and were put to secondary use in the cemeteries as gravestones. The ceramic finds are dated from the firstfourth centuries CE and indicate that the cemetery was active during the Roman period.
The finds are described according to their proximity to the tombs, in an attempt to date independently each tomb.
T9. Near the southeastern corner of the tomb was an intact discus lamp (Fig. 7:17) from the firstsecond centuries CE. Another discus lamp (Fig. $7: 19$ ) was in the southern balk, next to the tomb. The filling holes in these lamps were broken, probably on purpose. Three amphora bases from the second-third centuries CE (Fig. 7:7) were discovered in the southern balk. One of the bases and the upper part of another amphora (Fig. 7:6) were imported from the region of the Black Sea Therefore, T9 should probably be dated to the second-third centuries CE.
T8 and T10. The fill next to the eastern part of these tombs contained fragments of pottery vessels that dated to the first-fourth centuries CE, but can be assigned with certainty to any of the tombs The vessels included a bowl (Fig. 6:4) from the end of the first-the beginning of the second century CE; a Terra Sigilatta krater (Fig. 6:5) from Cyprus, dating to the second century CE; cooking pots (Fig. $6: 6,7$ ) from the first-beginning of the second century CE; baggy-shaped jars (Fig. 7:1) from the first-second centuries CE; an amphora (Fig. 7:4) from the second-fourth centuries CE and an amphora (Fig. 7:5) that was south of Tomb T10. Two lamp fragments were found; one came from the southwestern corner of Tomb T8 (Fig. $7: 18$ ), dating to the third-fourth centuries CE and the other was to the west, near Tomb T8 (Fig. 7:20), dating from the first-second centuries CE.
T29. An amphora rim (Fig. 7:15) from the second-fourth centuries CE was discovered in the fill of the tomb.

T28. An amphora rim (Fig. 7:8), dating to the second-fourth centuries CE, was found in the fill above the sarcophagus.
T20. The rim of a baggy-shaped jar (Fig. 7:2) from the first-second centuries CE and two amphora rims (Fig. $7: 9,10$ )--one dating to the second-third centuries CE and the other from the end of the first century to the beginning of the second century CE--were found in the fill over the sarcophagus. Although the dates of these finds range from the first-third centuries $C E$, they can probably be dated to the seond century CE.
T27. Fragments of three bowls (Fig. 6:1-3), dating to the second century CE were found in the fill,
next to and south of the sarcophagus. The first two bowls were Eastern Terra Sigilatta and the third originated from Cyprus. A cooking pot (Fig. 6:8) from the third-fourth centuries CE also came from the fill. Since T27 predated Tombs T20 and T28, it seems that the cooking pot belonged to the later tombs and probably infiltrated the fill next to T27. It is proposed that T27 should be dated to the second century CE.
T22. Two amphorae (Fig. 7:11, 12) imported from North Africa were found lying on the sloping western side of the gabled coffin lid. The fill nearby contained a baggy-shaped jar (Fig. 7:3) that is contemporary with the amphorae, which are dated to the second-fourth centuries CE, as well as a cooking pot (Fig. 6:9) from the third-fourth centuries CE. Thus, it can be assumed that the tomb dates to the second-fourth centuries CE.
T25. Three cooking pots were discovered in the fill inside the tomb. The first (Fig. $6: 10$ ) is of the widespread type during the first century and the beginning of the second century CE. The second (Fig. 6:11) dates to the third-fourth centuries CE and the third (Fig. 6:12) is from the second-third centuries CE. A cooking krater (Fig. 6:15) is dated to the first-second centuries CE. An amphora (Fig. $7: 13$ ) dating to the second-fourth centuries CE was probably used as a tombstone. Two other amphorae (Fig. 7:14, 16) are from the second-third centuries CE; the one in Fig. 7:16 was imported from Crete. The precise date of this tomb is uncertain; it probably dates to the secondthird centuries CE.

T23. Two cooking pots (Fig. $6: 13,14$ ) were found in the fill next to and west of the tomb. The first is dated to the third-fourth centuries CE and the second is from the second-third centuries CE. Therefore, the tomb should probably be dated to the third century CE.

The cemetery at Caesarea was located outside the city limits, at a distance of c. 2 km from the city walls. It covered an extensive area and its boundaries are unclear. So far, no tombs that dated to the Hellenistic period were discovered. Next to the southern city wall, J. Porath excavated a mausoleum with a 'nefesh' that dated to the Early Roman period and burial caves, dating to the Late Roman and Byzantine periods. The tombs discovered in the excavations indicate that activity in the vicinity of the necropolis in Caesarea was from the first century through the fourth century $C E$. The two kinds of burials were cist graves and stone sarcophagi. The sarcophagi were enclosed within stone slabs that were arranged around them. The upper part of the sarcophagus was probably visible and memorial ceremonies were apparently conducted atop them, including the lighting of lamps, as evidenced by the lamps placed near Tomb T9, and libation, as evidenced by the holes in an amphora that was placed on Sarcophagus T22. The three amphora bases near Tomb T9 may be indicative of a similar custom. Even though the tombs in the northern area were not excavated, it is possible that the cist graves postdated the sarcophagi


1. Location map.

2. The southern area, plan and sections.

3. The northern area, plan and sections.

4. The northern area, looking east.

5. The northern area, looking south.
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6. Bowls and cooking pots.
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## Caesarea*



1. Location map

2. The southern area, plan and sections.

3. The northern area, looking east.

4. The northern area, looking south.

5. Bowls and cooking pots.

Rina Avner and Peter Gendelman
30/1/2007
During January 2002 a salvage excavation was conducted in Caesarea, Neighborhood 2 (Permit No. A3553*; map ref. NIG 19090-5/71290-305; OIG 14090-5/21290-305; Fig. 1), in the wake of damage to antiquities caused during the building of a house. The excavation, on behalf of the Antiquities Authority, was directed by R. Avner, with the assistance of P. Gandelman (pottery), J. Porath (scientific guidance), V. Essman and V. Pirsky (surveying), T. Sagiv (field photography), J. Bukengolts (pottery restoration), H. Biton (pottery drawing) and K. Marks (University of London).

A northern and a southern area were opened, revealing eight cist graves (one is questionable) and four stone sarcophagi.
The Southern Area ( $20 \times 21 \mathrm{~m}$; Fig. 2). Five cist graves were discovered; four (T5, T6, T8, T10) were oriented east-west and one (T9)--north-south. The three western tombs (T8, T9, T10) were covered with stone slabs; T8 and T10 were identical and covered with five slabs ( $0.8 \times 2.2 \mathrm{~m}$ ) . Tomb 9 extended beyond the limits of the excavation, hence its entire length was not exposed; four of its covering slabs were revealed (total length 1.8 m , width 0.85 m ). The two eastern tombs (T5-$-0.85 \times 2.50 \mathrm{~m}$; T6--0.90 $\times 2.25 \mathrm{~m}$ ), built of kurkar slabs, had no covering slabs and were not associated with any finds.
The Northern Area ( $6.0 \times 8.5 \mathrm{~m}$; Figs. 3-5). Eight tombs were discovered. Tomb 27 is a stone sarcophagus $(0.60 \times 1.35 \mathrm{~m})$ covered with four ceramic roof tiles (average dimensions $0.3 \times 0.6$ m ; average thickness 3.5 cm ). The roof tiles partially overlapped each other and only the eastern tile was completely visible. It seems that stone slabs were placed around the sarcophagus to form a modest frame for the tomb; one of the stones was preserved in the east and two remained in the north. A two-cell structure of kurkar slabs (average size $0.18 \times 0.70 \mathrm{~m}$ ), set lengthwise and perpendicular to the soil, was built above the two north stones at a later phase. The stone sarcophagi T20 ( $0.56 \times 1.90 \mathrm{~m}$ ) and T28 $(0.61 \times 1.98 \mathrm{~m})$, ascribed to the sarcophagi group known as 'Samarian Coffins', were placed in the cells ( $0.7 \times 2.3 \mathrm{~m} ; 0.67 \times 2.10 \mathrm{~m}$ ). The sarcophagi were laid in an east-west direction, similar to Sarcophagus T27. A large stone ( $0.4 \times 0.7 \mathrm{~m}$ ) was incorporated in the eastern side of Cell T28 and a similar stone ( $0.45 \times 0.60 \mathrm{~m}$ ) appeared in the western part of the frame that surrounded the sarcophagi, perhaps evidence of family ties between the deceased interred in the two sarcophagi.
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4. The northern area, looking east.

5. The northern area, looking south.


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## Nahal 'Ada - The High Aqueduct to Caesarea*


2. Area A, plan and section.

3. Area A, Arches 113
and 115 and their thickenings in Aqueduct D, looking north.

5. The narrow passage between Piers 5 and 6 looking south.

6. Pottery from Areas A and $B$.

## Uzi 'Ad

9/5/2007
During July 2001 salvage excavations were conducted in two spots where the Upper Aqueduct to Caesarea crosses Nahal 'Ada (Permit No. A-3455*; map ref. NIG 19270-90/21521-45; OIG 14270-90/71521-45), as part of the project to improve the drainage of the wadi channel and enlarge it. The excavation, on behalf of the Antiquities Authority, was directed by G. Birman and U. 'Ad, with the assistance of H. Eliaz (Area B supervision), S. Ya'aqov-Jam (administration), A. Hajian, V. Pirsky and V. Essman (surveying and drafting), T. Sagiv (photography), M. Shuiskaya-Arnov (pottery drawing), Y. Gorin-Rosen (glass), P. Gandelman (pottery reading), Y. Marom and Y. Sa'ad (conservation), J. Peleg and Y. Porath.

The 'Upper Aqueduct' to Caesarea includes, in this section, the ancient aqueduct (A; Phase $A$ ), another aqueduct that was built next to and north of Aqueduct $A$ in the first half of the second century CE (B; Phase B) and an aqueduct/channel that was built above Aqueduct B, superseding it ( $C$; Phase C). Problems pertaining to the maintenance of Aqueduct A called for a bypass in the shape of a half octagon that was constructed in this section at some point (D; Fig. 1; see J. Peleg 1989. The Water System of Caesarea. The Aqueducts of Ancient Palestine:115-122; ESI 9:130-131).

Area A - The Bypass (D)
The excavation area was northwest of Moshav Bet Hananya in the southwestern corner of the 'bypass', at a point where the aqueduct crosses Nahal 'Ada. It was conducted on both banks of Nahal 'Ada, on either side of the aqueduct whose foundation was exposed for a distance of c. 20 m (Fig. 2) and comprised a system of arches (Loci 100, 112, 113, 115) that supported it. The aqueduct was only survived by its floor in this section.

On the western bank, the area where the aqueduct turns from the west to the northwest was exposed. The northern face of the aqueduct's foundation was thickened, its courses were stepped and the bend in the channel was gentle. One arch with a span of 3.6 m was completely exposed to its foundations (L112). The swampy and unstable soil in this region of the aqueduct caused it to subside and partly collapse, which required repairs and reinforcements over the years. Adjacent to the western pier of the aqueduct's arch a retaining wall (1.0-1 .3 m thick) that narrowed the passage (Fig. 2, No. 1) was built. A thickening ( 4.1 m long, 1 m wide; Fig. 2, No. 2) on the northern side of the aqueduct, west of Arch 112 and another thickening ( 15 m long, $2.5-3.5 \mathrm{~m}$ wide; Fig. 2, No. 3) on the southern side of the aqueduct, were exposed. The upper courses of the thickening were stepped and a bowed aperture, perpendicular to the arch (Fig. 2, No. 3B), was identical in width to the span of Arch 112 after its constriction by Wall 1.

On the eastern bank, the foundation of the aqueduct and the floor of the channel, built the length of two arches ( 10 m ; loci 100,113 ), were excavated. As was the case on the western bank, here too, repairs and reinforcements were applied to the aqueduct. Two plaster floors were visible in the channel (elevation 8.39 and 8.66 m above sea level), attesting to two phases of use. On the southern side of the foundation, opposite the piers, thickenings that were constructed as stepped courses (Fig. 3) were exposed. The eastern end of the thickening next to the western pier was preserved ( 4 m thick; Fig. 2, No. 4). Another thickening ( 2 m thick; Fig. 2, No. 5) was built adjacent to the eastern pier. A wall that varied in thickness from 0.2 m next to Thickening 5 to 1 m next to Thickening 4 (Fig. 2, No. 6) was built between the two. It seems that the two arches (Loci $100,113)$ collapsed at a certain point and were rehabilitated. Arch 100 was rebuilt with a double arch whose exterior arch had the same diameter as the original one. A new arch whose diameter was greater than the original one was constructed in Arch 113. Retaining walls that formed a passage with a rectangular opening (c. 1 m wide; Fig. 2: Section 1-1) were built inside Arch 113.

## Area B (Aqueducts A-C)

The area is located on both banks of Nahal 'Ada, east of the meeting point between the 'High Aqueduct' and the bypass (Fig. 4). The plaster floor of the aqueducts' channels was only preserved north of the connection with Bypass D. The elevation of the original floor in Aqueduct A was 8.18 m ; however, remains of another upper floor were discerned at elevation 8.39 m . The original floor elevation in Aqueduct B was identified at 8.27 m (elevations are above sea level and measured opposite the connection to Bypass D).
Seven piers were exposed in their entirety, two on the western bank of Nahal 'Ada (Nos. 2, 3), three on the eastern bank (Nos. 4-6) and two others were cleaned, one on each bank (Nos. 1, 7). The piers were set on a platform of fieldstones that was meant to provide a stable base for the foundations of the aqueduct on the clayey and swampy ground. The excavation exposed remains of piers from Phases $A$ and $B$ (Fig. 4: Section 2-2), which were dismantled in this section almost to their foundations and the piers of Aqueduct $C$ were constructed above their remains (while in other sections only a new water channel was built). The construction style, the dimensions and the intervals between the piers of Aqueduct $C$ are different from those of Aqueducts $A$ and $B$. The channel's floor of Aqueduct $C$ was not exposed in any part of the excavation area.

On the eastern bank, shaped cornices (imposts; Fig. 4: Section 1-1) were exposed on the upper eastern part of Pier 5 and in the western part of Pier 6 (L202). These were most certainly used as a base for the wooden frame on which the arch that supported Channel C was built. Remains of two ancient piers of Aqueduct D protruded to the south (Loci 203, 216) below Piers 5 and 6. A built blockage between Piers 4 and 5 supported the arch and had within it a narrow passage with a pointed arch at the top for the flowing water (?; Fig. 5). North of the aqueduct, a roadbed (0.3-0.4 m thick) whose width is unknown because its northern edge lies beyond the excavation limits, was exposed. The roadbed, flanked by fieldstones along its sides, consisted of crushed and tamped kurkar (stone-dressing debris). The elevation of the road was 3.5 m above sea level (L213) and it seems to have been a service road for the construction and maintenance of the aqueduct.

On the western bank, the beginning of sloping construction in the upper part of Pier 2 (L206), which
was meant to be the foundation for Channel $C$ and is known from other sections of the aqueduct (Fig. 4: Section 2-2), was exposed. The meager remains of two thin walls (L209), probably retaining walls or a later blockage that connected Piers 2 and 3 were exposed. The remains of the pier of Aqueduct A (L212) protruded to the south beneath Pier 3.

The excavation findings are insufficient to unequivocally date the construction of Aqueducts $C$ and D. However, it is possible to date the construction of the thickenings in Aqueduct $D$ (Area A) to the fifth century CE, based on the late potsherds found in their foundations (Fig. 6:1, 2). The late piers of Aqueduct C (Area B) are also dated to the fifth century CE, based on the late potsherds found below the foundations of the thickenings, which were partly dismantled during the excavation (Fig. $6: 3$ ). This dating corroborates that of Y. Porath ('Atiqot 10:109-110 [Hebrew]).


1. Location map of excavation areas.

2. Area A, plan and section.

3. Area A, Arches 113 and 115 and their thickenings in Aqueduct D, looking north.

4. Area B, plan and sections.


## Caesarea*

Kareem Sa'id
10/7/2007


1. Plan.

2. Pottery.

During October 2003 a salvage excavation was conducted in Qibbuz Sedot Yam, east of ancient Caesarea (Permit No. A-4011*; map ref. NIG 19040-55/71105-20; OIG 14040-55/21105-20). The excavation, on behalf of the Antiquities Authority and financed by Qibbuz Sedot Yam, was directed by K. Sa'id, with the assistance of A. Hajian (surveying), Y. Porath (scientific guidance), M. Shuiskaya-Arnov (pottery drawing) and T. Sagiv (photography).

An area ( 75 sq m ; Fig. 1) opened east of the Roman theater in Caesarea revealed an ashlar-built wall (W126; $30 \times 35 \times 60 \mathrm{~cm}$; preserved length 9 m ), founded on a layer of brown soil and preserved three courses high; its orientation was southeast-northwest. Attached to the wall in the east was another wall (W125) of ashlar stones (preserved length 3.5 m ), preserved three courses high. These walls seem to have been part of the agricultural system that encircled the city of Caesarea, possibly the foundations of fences built of masonry stones, which enclosed cultivation plots. Although sand dunes surround Caesarea and are not considered fertile soil, arability was improved with sorted urban refuse that included organic matter and a few potsherds. It was also augmented by an irrigation system that distributed water pumped from wells, as evidenced by fragments of saqiye vessels (Fig. 2:8-10).

The distribution of water in the field was achieved by a channel, a short segment of which was exposed (L130). The channel was built of masonry stones in secondary use and coated on both sides with an irregular layer of plaster.

The ceramic finds included fragments of red-slipped bowls (Late Roman C; Fig. 2:1-4) and jars (Fig. 2:5-7) that dated to the fifth-seventh centuries CE.


1. Plan.


## Dhahrat et-Tuta*

Pirhiya Nahshoni and Daniel Varga
7/11/2007


1. Area A, plan.

2. Area A, the building, looking southeast.

3. Area $A$, a rolling stone in secondary use in entrance to building, looking south.
4. Pottery.


During December 2002 a salvage excavation was conducted at the site of Dhahrat et-Tuta in the tenth precinct of Ashdod (Permit No. A-3587*; map ref. NIG 16750/63293; OIG 11750/13293). The excavation, on behalf of the Antiquities Authority and financed by the Ashdod Municipal Development Corporation, was directed by P. Nachshoni and D. Varga, with the assistance of H. Lavi (administration), A. Hajian (surveying and drafting) and I. Pikovsky (pottery drawing).
The excavation at the site, on a sand dune c. 100 m west of the large dune, which is c. 3 km east of the shoreline, was undertaken in two areas: Area A, on the eastern slopes of the sand dune and Area $B$, on top of the dune. Remains dating to the Early Islamic period were discovered in both areas.

Area A. The single square opened in this area revealed a rectangular structure, oriented northeastsouthwest ( $4.20 \times 4.55 \mathrm{~m}$; Figs. 1, 2). Its walls (width c. 0.5 m ), preserved six courses high ( 0.65 m ), were built of kurkar stones, some of which were dressed. The entrance to the building (width 0.6 m ; Fig. 3) was set in the northeastern wall. The structure's interior was partitioned by a wall (W8) built of a single row of stones, which was probably erected during a later phase. Remains of a kurkar-slab pavement were discovered north and northwest of the building. The potsherds found in the structure included a bowl (Fig. 4:3), a krater (Fig. 4:19), a lid (Fig. 4:7) and cooking pots (Fig. 4: 9, 10, 12), dating to the Early Islamic period (tenth-eleventh centuries CE).

Area B. Meager remains of a previously destroyed building (Fig. 5), which consisted of two sections of walls, a segment of a pavement, collapse and concentrations of ash, were uncovered. The pottery vessels that mostly dated to the Early Islamic period included bowls (Fig. 4:5, 6), a cooking pot (Fig. $4: 11$ ), jugs (Fig. $4: 14,15$ ) and a krater (Fig. $4: 18$ ). The Middle Ages ceramics consisted of bowls (Fig. 4:1, 2, 4, 8), a cooking pot (Fig. 4:13) and a juglet (Fig. 4:16). Pottery fragments, ranging from the Chalcolithic (Fig. $4: 17$ ) until the Ottoman periods, were also discovered.


3. Area $A$, a rolling stone in secondary use in entrance to building, looking south.
$\longleftarrow \quad$



- $\nabla^{-}$








$\downarrow 16$ $\rho^{-}$


4. Pottery.

5. Area B, plan and section.

## Dhahrat et-Tuta*

Pirhiya Nahshoni and Daniel Varga
7/11/2007


1. Area A, plan.

2. Area A, the building, looking southeast.

3. Area $A$, a rolling stone in secondary use in entrance to building, looking south.

4. Pottery.

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3. Area A, a rolling stone in secondary use in entrance to building, looking south.
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$\downarrow 16$ $\rho^{-}$


4. Pottery.

5. Area B, plan and section.

## Dor - The Southern Anchorage



1. The southern anchorage at Dor, looking north; location of assemblages is marked by arrow.

2. Bronze coins and a clump of coins.

3. A bronze weight in the shape of a woman's bust.

4. An iron basket with a wooden handle.

5. An iron harpoon.

Ehud Galili, Baruch Rosen and Ya'akov Sharvit
24/7/2007
During August-October 1998 underwater salvage surveys were conducted on the southern side of the southern anchorage at Dor (License No. G-29/1998; map ref. NIG 19143/72365; OIG 14143/22365). The surveys, on behalf of the Antiquities Authority, were directed by E. Galili and J. Sharvit of the IAA Marine Archaeology Unit, with the assistance of D. Syon (numismatics), M. Sharon (Arabic script), K. Raveh, D. Moscowitz and H. Sal'i (diving), S. Ben-Yehuda, T. Sagiv and C. Amit (photography), E. Altmark, L. Kupershmidt, M. Levine and R. Vinitzki (metallurgical laboratory).

Remains of a sailing vessel and cargos, scattered across an area of c. 2 dunams (Fig. 1), were discovered. Among the remains pulled out of the sea was an assemblage of objects, which originally was aboard a shipwreck from the seventh century CE, as well as other objects dating to several periods. The finds were noted during a surface survey of the seabed and several were uncovered with the aid of an underwater metal detector.

The artifacts, located at a distance of c. 30-60 m from the shoreline and scattered across an area of $40 \times 50 \mathrm{~m}$, at a depth of $2-4 \mathrm{~m}$ below sea level, were lying on the clay seabed that was exposed during storms when the sand covering it was swept aside. Two clusters of rectangular ashlar stones $(25 \times 25 \times 60 \mathrm{~cm})$, some of which have a rectangular slot, were uncovered c. $5-15 \mathrm{~m}$ west and east of the concentration of finds. Several heaps of unworked ballast stones (length 0.20-0.35 m) were found c. 15 m north of the shipwreck's assemblage and c. 20 m to the west and southwest.

The boat's hull was survived by several dozen iron nails (length $13-21 \mathrm{~cm}$ ), several of which were covered with remains of plant fibers that apparently were used for sealing. Dozens of wooden pulleys (diam. 4 cm ), probably used in the rigging of the sailing vessel or as floats for a fishing net, were found within a marine conglomerate. The numismatic finds included bronze coins dated to the first half of the seventh century CE and a corroded clump of coins (weight 433 grams) that contained 53 coins dating from the time of Anastasius I until Constans II (Fig. 2). The latest coin dated to the years 659-663 CE. A very thick ceramic jar with two small loop handles (Fig. 3) contained the remains of grapes that included pits and soft tissue-like substance (raisins?). The bronze objects consisted of a cooking pot with two loop handles that was probably used by the boat's crew (Fig. 4) and a lead-filled weight with a ring that could be hung from the arm of a steelyard. The weight (weighing 7.41 kg ) has the shape of a human bust, probably that of a woman, whose head is coiffed with curls. The woman is wearing a garment with folds and a necklace (Fig. 5). Her right hand, bent close to her chest, holds a circular object and is partly hidden beneath the garment. Her left hand is also bent close to her chest and holds a rectangular object (goblet?). Attached to the bottom of the weight is a thin bronze plate riveted to the lead fill by six iron nails. The iron objects included tool kit of a boat's carpenter, which comprised an axe with a socket, a carpenter's hammer with a claw for removing nails (Fig. 6), a hand drill with a wooden handle (Fig. 7) and a long pointed iron rod (length c. 90 cm ) perforated at the sharp end. A set of fishing gear included a basket for kindling made of flat iron strips with a socket for a wooden handle (Fig. 8). This object, used for night fishing, would have a fire set in it to attract the fish and aid in trapping them by tossing a casting net or using a harpoon. Other artifacts included the iron head of a harpoon, composed of five pointed bars (Fig. 9), which was used in fishing, dozens of rectangular lead weights for a fish casting net and a lead plumb that was used in measuring the depth of the water and sampling the seabed. A depression at the bottom of the plumb revealed the remains of fat that belonged to a large herbivorous animal. The animal fat in the depression helped the sediment samples on the seabed to stick to it. Such a lead plumb is still used by coastal fishermen in modern times, providing crucial information with regard to the seabed and the depth of the water. Next to the assemblage of objects was a thin bronze plaque ( $7 \times 7 \mathrm{~cm}$ ) that bore horizontal and vertical engraving, forming sixteen squares. Arabic letters that symbolize numbers are engraved in each square. The script is indicative of the Ottoman period and therefore, the plaque cannot be ascribed to the seventh-century CE assemblage. A concentration of seven iron ingots (each weight c. 16 kg ; Fig. 10) was found c. 30 m southwest of the assemblage. Nearby were several unworked tree trunks, apparently oak, with their bark still intact (diam. 0.15-0.30 m, length $0.5-1.5 \mathrm{~m}$; Fig. 11). The wood was not dated due to factors stemming from the condition of the sea and the covering of the finds with sand; therefore, it could not be determined whether the tree trunks and the iron ingots belonged to the seventh-century CE assemblage.

Based on the coins, the size of the iron nails that were used to connect the hull planks to the boat's ribs, and the outline of the scattered objects on the seabed, it is reasonable to assume that a medium-sized wooden boat, dating to the seventh century CE, sank here probably while at anchor, during a winter storm or as a result of some hostile action. The fishing tackle shows that the sailing vessel was engaged in various fishing activities, whereas the basket for kindling is the first viable archaeological evidence for night fishing in antiquity.


1. The southern anchorage at Dor, looking north; location of assemblages is marked by arrow.

2. Bronze coins and a clump of coins.

3. An intact ceramic jar.

4. A bronze cooking pot.



5. An iron basket with a wooden handle.

6. An iron harpoon

7. A cargo of iron ingots.

8. A cargo of tree trunks.

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Ehud Galili, Baruch Rosen and Ya'akov Sharvit
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## El Bi'na


2. Remains of the

Crusader-period building, looking northwest.

3. Plan and section.

4. The excavation area, looking west.

9. Pieces of gold leaf.

10. The Crusader building, an opening with a pointed vault, looking north.

Edna J. Stern
12/12/2007
During September 2003 a salvage excavation was conducted in the middle of el-Bi'na village (Permit No. A3983*; map ref. NIG 22580/75968; OIG 17580/25968), prior to construction. The excavation, on behalf of the Antiquities Authority, was directed by E. J. Stern, with the assistance of N. Getzov (early pottery and flint implements), V. Essman and V. Pirsky (surveying), Y. Ya'aqoby (administration), H. Smithline and C. Amit (photography), R. Abu Raya (inspection), E. Belashov (drafting), L. Kupershmidt (metallurgica laboratory), H. Tahan (pottery drawing), M. Smilanski (flint drawing) and laborers from Kafr Manda.
El- Bi'na village is located on the northern fringes of the Bet Ha-Kerem Valley. The excavation was conducted at the highest point of the village, where an archaeological tell is likely to have existed and next to the remains of a building from the Crusader period that are visible on surface (Figs. 1, 2). An area (c. $3 \times 6 \mathrm{~m}$; Figs. 3, 4) was excavated, wherein three main building phases that dated to the Roman, Mamluk and Ottoman periods were exposed. Flint implements and potsherds, dating to the Neolithic, Late Bronze Age, Iron Age, the Persian, Hellenistic, Byzantine, Early Islamic and Crusader periods were also discovered.

Neolithic Period. A flint 'Byblos'-point arrowhead that dated to the Pre-Pottery Neolithic B period was found (Fig. 5:1).

Late Bronze Age. Flint implements and numerous potsherds that indicate a settlement at the site during this period were uncovered in the fill throughout the excavation areas. The flint items included sickle blades (Fig. 5:2,3), as well as industrial debitage. The pottery vessels consisted of bowls (Fig. 6:1-3), cooking pots (Fig. 6:5,6) and imported Cypriot vessels, such as a milk bow (Fig. 6:4) and fragments of a bilbil (Fig. 6:7, 8).

Iron Age and the Persian and Hellenistic Periods. Potsherds indicating the site was inhabited during these periods were found, including a cooking bowl and krater from the Iron Age (Fig. 6:9, 10), a jar from the Persian period (Fig. 6:11) and a bowl from the Hellenistic period (Fig. 6:12).

Roman Period. A massive wall (W14), oriented north-south, was preserved a single course high. It was built of large ashlars ( $0.5 \times 0.5 \times 1.0 \mathrm{~m}$ ) with diagonally drafted margins and its complete width was not exposed. The foundation consisted of hard limestone and packed earth (at least 0.7 m deep).
The fill contained potsherds from a number of periods, the latest of which dated the wall to the Roman period (third-fourth centuries CE) and included a Kefar Hananiya cooking pot and cooking bowl (Types 4C and 1D respectively; Fig. 6:13, 14). The continuation of W14 could be traced for a distance of 8 m in the eastern wall of the Crusader building (Fig. 7) where it stood four courses high (c. 2 m ) and a molded cornice was incorporated within it. It seems W14 was originally the façade of an opulent building from the Roman period. Visible next to the eastern side of W14 were the remains of a plastered and vaulted water reservoir (Fig. 8), built of large rectangular stones identical to those of
W14; hence, it belonged to the same building. The continuation of the water reservoir was damaged in the past by mechanical equipment. At the bottom part of a later wall, c. 5 m south of the excavation area, was a section of a wall built in a similar style to W14 and it probably also belonged to the Roman-period building.

Byzantine and Umayyad Periods. A few potsherds from these periods, particularly the Byzantine period, were found in the fill above and below the floors of the Mamluk and Ottoman periods. The Byzantine period was represented by a LRC3 red-slipped bowl fragment (Fig. 6:15) and few sections of mosaics, which were not in situ and consisted of small white, red and black tesserae, attesting to the presence of a luxurious building that once stood nearby. Five creased pieces of gold leaf were found; two of them bear the clearly distinguished features of a person's face, surrounded by a halo (Fig. 9). These should be dated to the Byzantine period based on the style of the decoration. The Umayyad period was noted by a red-slipped bowl of Egyptian origin (ERS), dated to the seventh-eighth centuries CE (Fig. 6:16).

Crusader Period. A few potsherds from this period were found, although a building ascribed to it stands c. 5 m north of the excavation area. The building is incorporated today within some of the village houses and it seems to have had an addition that is dated to the Ottoman period. The building has several halls that are covered with barrel or cross vaults and it is built of ashlar stones in the style characteristic of Crusader construction, as manifested in openings with a pointed vault (Fig. 10) and a window shaped like an arrow slit (Fig. 11).

Mamluk Period. A floor extended east of W14, which served as an enclosure wall in this period. The northern part of the floor was composed of small fieldstones and tamped earth and its southern part was tamped plaster. West of W14 was a wall (W21), built of square fieldstones and aligned east-west, which although not well preserved, seems to date to this period of time. Pottery vessels, including a glazed bowl decorated with thick incising (Green and Yellow Gouged Ware; Fig. 6:17) and a jar (Fig. 6:18), were found.

Ottoman Period. The upper stones of W14 were incorporated within a floor that extended east and south of it. The floor, delineated by two walls (W18, W19), consisted of different-sized flat fieldstones and was overlaid with a layer of fine-particle brown soil that contained four stones arranged in the shape of a fallen arch, which were the remains of the collapsed ceiling. It seems the building should be dated to the end of the Ottoman period or the beginning of the British Mandatory era.
probably a public building. It seems the Crusader building made secondary usage of the Roman wall that was preserved to a considerable height--a rare phenomenon in the Galilee. The Crusader building remains probably belonged to a seigniorial castle that served as the center of the St. George de la Baena fief, mentioned in historical sources. It is noteworthy that no other remains from the Crusader period were found, except for a few potsherds.


1. The excavation and nearby ancient remains, plan.

2. Remains of the Crusader-period building, looking northwest.

3. Plan and section.

4. The excavation area, looking west.

5. Flint implements.

6. Pottery.

7. Wall 14 and its continuation in the Crusader building, looking north.

8. Remains of a water reservoir, looking west.

9. Pieces of gold leaf.

10. The Crusader building, an opening with a pointed vault, looking north.

11. The Crusader building, a loophole-shaped window, looking west.

## El-Fureidis*

Eli Yannai
18/4/2007


1. Pottery and stone vessels.

During December 1999 a trial excavation was conducted in the village of el-Fureidis, in a cave located midway up the western slope of the Karmel, above the old part of the village (Permit No. A-3155*; map ref. NIG 196075/723350; OIG 146075/ 223350). The excavation, on behalf of the Antiquities Authority, was directed by E. Yannai, with the assistance of A. Buchennino and M. Shuiskaya-Arnov (pottery and stone drawing).

The cave was filled with bedrock collapse, precluding the completion of its excavation and graphic description due to safety precautions. Only a quarter of the area in the cave's south side was exposed ( $3 \times 7 \mathrm{~m}$, depth c. 2.5 m ), revealing six strata that, based on the potsherds they contained, represented four occupation layers and two layers of alluvium.
Stratum I: Recent fill devoid of finds (depth c. 1 m ).
Stratum II: Alluvium containing abraded potsherds from Middle Bronze Age II and Early Bronze Age IV.

Stratum III: A burial from the Ghassulian phase of the Chalcolithic period.
Stratum IV: Alluvium devoid of finds.
Stratum V: Potsherds from the Ghassulian phase of the Chalcolithic period (thickness c. 0.25 cm ).
Stratum VI: Potsherds dating to the pre-Ghassulian phase on the floor of the cave, only in southern side of excavation.

The Finds (Fig. 1)
Fragments of pottery (not drawn) that dated to the pre-Ghassulian or Wadi Rabah culture in the Chalcolithic period were found. The finds from the Chalcolithic period included large bowls (Fig. 1:1), pithoi (Fig. 1:2), jars (Fig. 1:3,4) and holemouth jars with a rope ornamentation on the rim (Fig. 1:5, 6), bowls on pedestals (Fig. 1:7-9), a cornet (Fig. 1:10) and a churn fragment (Fig. 1:11). Other finds consisted of lug handles (Fig. 1:12), a rope ornamentation on a jar fragment (Fig. 1:13), several fragments of ossuaries (Fig. 1:14, 15), a ceramic object with two depressions (Fig. 1:16) and a pale pink limestone pendant (Fig. 1:17); all of these have comparisons in contemporary sites.
A complete ossuary ( $0.27 \times 0.48 \mathrm{~m}$ ) from Stratum $V$ disintegrated upon its removal. It was made of yellow clay mixed with a large quantity of chalk and flint gravel. An opening ( $0.2 \times 0.2 \mathrm{~m}$ ) was identified in the distorted facade of the ossuary with a shaped 'nose' above it, which is characteristic of this ossuary type.

A holemouth rim fragment (Fig. 1:18) and a typical ledge handle (Fig. 1:19), dating to Early Bronze Age I, were found. Several body fragments (not drawn) from Early Bronze Age II indicate that the cave was used for burial or as a dwelling also during this period.
The finds from Early Bronze Age IV included a goblet fragment alongside a jar fragment with a cut rim. Analogies for the finds from this period come from caves that had been excavated in the past at el-Fureidis (O. Hess, 'Atiqot 14:34-36; Z. Horowitz and M. Masarwah, 'Atiqot 38:1*-4*).

The sterile layer above Stratum V and the study of the finds indicate that the cave was hewn in the pre-Ghassulian phase and was used as a dwelling in this phase (Stratum VI), as well as during the Ghassulian phase (Stratum V). Subsequently, it was filled with dark brown alluvium, probably deposited during Stratum V or Stratum III and intended to separate between the occupation and burial layers. During the following Ghassulian phase (Stratum III), as well as the Intermediate Bronze Age and the Middle Bronze Age (Stratum II), the cave was used for interment.

The artifacts from the cave attest to the presence of a settlement from the pre-Ghassulian period west of the Karmel ridge, which has not yet been discerned in the region. The clay coffin interment in the Chalcolithic period is also unknown west of the Karmel ridge. The evidence from the cave thus contributes to our knowledge of the distribution of settlement sites and burial caves from this period in the country. Evidence of an Early Bronze Age IV burial cave can be added to several contemporary tombs of the period that were excavated at el-Fureidis, whereas the burial evidence from Middle Bronze Age II points to a settlement from this period in the region.


1. Pottery and stone vessels.

## El-Kabri*

Hanaa Abu 'Uqsa
6/6/2007


1. Plan.

2. Treading floors, looking west.

3. Collecting vat, looking east

4. Pottery.

During August-September 2002 a salvage excavation was conducted at el-Kabri (Permit No. A-3711*; map ref. NIG 21462-3/7690-1; OIG 16462-3/2690-1), after a mosaic was damaged during the digging of a drainage trench alongside a road. The excavation, on behalf of the Antiquities Authority and funded by the Department of Public Works, was directed by H. Abu 'Uqsa, with the assistance of Y. Ya'aqoby (administration), A. Hajian, V. Pirsky and N. Getzov (surveying), N. Getzov and E. Stern (field photography), I. Berin (drafting) and H. Tahan (pottery drawing).
The excavation area was damaged by a bulldozer in the south and by a telephone cable trench in the north.

A large winepress, with a central treading floor (c. 5.8 m long, 4.2 m wide) and walls coated with a thick layer of hydraulic plaster, was exposed (Fig. 1). The partially excavated treading floor consisted of bedrock, made smooth by a careful inlay of stones in the cracks. Remains of plaster, which probably covered the floor and walls, were visible on bedrock. The floor sloped to the south and in its center was a circular stone with a trapezoid-shaped mortise in its center, used to anchor the press screw.
East of the treading floor was another cell or secondary treading floor (1.5-2.0 $\times 2.5 \mathrm{~m}$; Fig 2) paved with a white mosaic (average size of tesserae $2.5 \times 3.0 \mathrm{~cm}$ ). Remains of an early phase floor were discerned at the southern end of the surface. Two perforations, which were cut in the wall that separated the two treading floors, were detected in each floor phase, conveying the liquid from the secondary to the main floor. No finds were found in the space between the two floors.
At the southern end of the main treading floor was a circular filtration vat (diam. and depth 0.6 m ) in whose wall a perforation was cut, accommodating a ceramic pipe. The liquid was conveyed from the treading floor through the filtration vat into a large collecting vat that was exposed to its full width (c. 3.5 m ; Fig 3), but not to its complete length. Five steps were built along the eastern wall of the collecting vat, descending to its bottom. The floor of the vat was paved with a white mosaic similar to that of the secondary treading floor. The walls were coated with a thick layer of plaster, which was applied to a layer of potsherds that facilitated the adhesion of the plaster to the walls. The vat had probably a capacity of 18,000 liters of must.
The winepress was dated to the Byzantine period based on the potsherds underlying the plaster on the collecting vat's walls, including a bowl (Fig. 4:1) that dated from the middle of the sixth to the middle of the seventh century CE. After the winepress was no longer in use the collecting vat was turned into a refuse pit (L15), which contained numerous potsherds from the Umayyad period, including kraters (Fig. 4:2, 3), open cooking pots (Fig. 4:4,5), closed cooking pots (Fig. 4:6, 7), a juglet (Fig. 4:8), jars (Fig. 4:9-11) and a pithos (Fig. 4:12).

At a later phase, two walls were built on top of the main treading floor; one wall was built on the installation's press bed, thereby negating its use. A burnt layer (L11) extended from the top of the wall to bedrock.

The ceramic finds recovered from this layer included a krater (Fig. 4:13), a glazed bowl (Fig. 4:14) and cooking kraters (Fig. 4:15, 16), dating to the Abbasid period.


1. Plan.

2. Treading floors, looking west.





3. Pottery.

## El`ad*

Alla Nagorsky
8/5/2007


1. Plan.

During October 2001 a salvage excavation was conducted in the city of El'ad (Permit No. A-3511*; map ref. NIG 195955/661840; OIG 145955/161840), in an area slated for construction. The excavation, on behalf of the Antiquities Authority, was directed by A. Nagorsky (photography and surveying).

To document architectural remains visible on surface and in a probe trench, two squares (5 $\times 6 \mathrm{~m}$; Fig. 1) were excavated.

## Square A

A terrace wall (W11; 1.0-1.1 m wide), oriented north-south, was exposed along the western border of the square, extending beyond its limits. The wall, founded on bedrock and preserved two courses high, was built of large, medium and small fieldstones. The large masonry stones ( $0.4 \times$ $0.5 \times 0.7 \mathrm{~m}$ ) were probably in secondary use.
The soil fill east of the wall contained a large amount of stone collapse and a few potsherds that dated to the sixth-seventh centuries CE. The terra rosa fill to the west of the wall was devoid of finds.

## Square B

The continuation of W11 was exposed along the western border of the square. A section of another wall (W13; width 0.7 m , preserved length 3.7 m ) was discovered in the square's southeastern corner. The wall, founded on bedrock, was preserved two courses high. It was built of two rows of fieldstones, fitted with smaller stones for reinforcement and adjustment of courses. The soil fill contained a few potsherds dating to the Late Roman and Byzantine periods.


1. Plan.

## El’ad*

Anan 'Azab
24/12/2007


1. Plan and section.

2. The later limekiln, looking north.

During January-February 2004 a trial excavation was conducted at El'ad (Mazor East; Permit No. A-4085*; map ref. NIG 2124-6/6464-6; OIG 1624-6/1464-6), prior to construction. The excavation, on behalf of the Antiquities Authority and funded by the Baran Project Management Company Ltd., was directed by A. 'Azab, with the assistance of E. Bachar (administration), A. Hajian (surveying), T. Sagiv (photography), L. YihyeLevi (GPS surveying), K. Sari, M. Masarwa and E. Yannai.

Four half squares $(2.5 \times 5.0 \mathrm{~m})$ were opened in the courtyard of a natural cave, south of the entrance, where the remains of two limekilns and a terrace wall were discovered (Fig. 1). No datable artifacts were found in the excavation. Nearby, a trial excavation had previously been conducted (HA-ESI 117).

The two limekilns, one early and the other late, were built one within the other. The early kiln, in the center of the courtyard, had survived by a curved wall (W15) that was supported by the eastern bedrock side of the cave. The wall comprised large stones (c. $0.3 \times 0.4 \mathrm{~m}$ ) and was preserved two courses high. Some of the stones, mostly on the southern side, were cracked as a result of the heat from the kiln. A later repair of small stones (W16) was discerned in the western side of W15 and it therefore appears that this kiln had at least two phases of operation. Another wall (W5) was exposed east of W15 and preserved a single course high. It seems to have served as a retaining wall for the kiln, based on its construction. It is also possible that W5 was used to seal openings in the northeastern side of the cave, which were not apparent because of its collapsed ceiling. After the early kiln was no longer in use, another slightly smaller limekiln (diam. 3.5 m ; Fig. 2) was built within it. The curved wall of the later kiln (W11) was preserved 2.2 m high and was built of medium-sized dressed stones $(0.25 \times 0.35 \mathrm{~m})$, set on bedrock. The northern part of W11 was supported by W15 of the early kiln and the gap between these two walls (width 0.3 m ) was filled with stones. Signs of burning were discerned on the walls of the kiln and a deposit of ash and charcoal (L124; thickness 0.3 m ) was discovered at the bottom of the installation.


1. Plan and section.

2. The later limekiln, looking north.

## Elon*



1. Square C, looking east; structure is hidden among the trees.

2. Pottery.

Nimrod Getzov
11/9/2007
During December 2003 a trial excavation was conducted at Elon Site 2, c. 500 m north of Qibbuz Elon (Permit No. A- 4051*; map ref. NIG 2209/7751; OIG 1709/2751). The excavation, on behalf of the Antiquities Authority, was directed by N. Getzov (photography and pottery drawing), assisted by Y. Ya'aqoby (administration).

Elon Site 2 lies on a chalky knoll of the Yanoah formation, in whose center is a crater planted with olive trees, on the northern edge of the tableland between Nahal Keziv to the south and Nahal Bezet to the north, which is characterized by dolomite outcrops of the Sakhnin formation. The site was surveyed by the author and the Western Galilee survey team (IAA Reports 14: Site 189). A burial cave with kokhim is on the eastern fringes of the crater and above it, a hewn sarcophagus dating to the Hellenistic or the Roman period. On the northwestern edge of the hill were the remains of a rectangular building $(5.6 \times 8.3 \mathrm{~m})$ with thick fieldstone walls (length of corner stones c. 1.3 m ). Potsherds from Middle Bronze II, Iron I and the Hellenistic period were gathered from the vicinity of the building. To date the structure, an excavation is required.
Five squares ( $2 \times 2 \mathrm{~m}$ each) were excavated c. 50 m southwest of the building. Bedrock was exposed in four of the squares and in the fifth one, surface level that contained terra rosa soil and potsherds from the periods noted above, mostly Iron I, was removed. A soil layer of light color below surface, which contained potsherds characteristic of the settlements from the beginning of the Iron Age in the Galilee, was found in the two adjacent squares.
The ceramic finds from Middle Bronze IIA included a cooking pot with an upright wall (Fig. 2:1) and a jar with an external ridge below the rim (Fig. 2:2). The Iron Age potsherds consisted of a carinated bowl (Fig. 2:3), a cooking pot (Fig. 2:4), a jar (Fig. 2:5) and Galilean pithoi (Fig. 2:6, 7), which are common to Iron Age settlements in the Upper Galilee. Some other collected potsherds included a fragment of a Rhodian jar handle, dating to the Hellenistic period.

It seems that a small settlement was situated here at the beginning of the Iron Age and next to it, beyond its boundaries, was an occupation from the Middle Bronze Age and the Hellenistic period.


1. Square C, looking east; structure is hidden among the trees.


## Enot Nisanit (Ha-Yogev Junction)*



1. Location map of the ruin and other Romanperiod sites in the vicinity of Legio.

2. Plan and section.

3. Kiln, looking south.

4. Pottery.

Yotam Tepper
8/11/2007
During September 2003 a salvage excavation was conducted along the southeastern fringes of the 'Enot Nisanit site ('Uyun al-Mansi; Permit No. A-4003*; map ref. 21741/72229; OIG 16741/22229), after antiquities were damaged during the installation of a water pipeline. The excavation, on behalf of the Antiquities Authority and financed by the Meqorot company, was directed by Y. Tepper, with the assistance of A. Dadush (administration), V. Pirsky (surveying), R. Getzov (GPS), D. Avshalom-Gorni (ceramics) and H. Tahan (pottery drawing).

The site extends west and east of the Megiddo-Yoqne'am road (Fig. 1). It is situated along the fringes of a moderate spur on the upper western part of Al-Mansi, a Turkeman village and temporary camp for immigrants. A Muslim cemetery, used intermittently from the end of the Mamluk period until the time of the village, is located on top of a gentle hill and its slopes, west and east of the Megiddo-Yoqne'am road. Burial caves are located in the northwestern part of the site; a kokhim burial cave dating to the Roman-Byzantine period was documented (Mandatory Archive, Antiquities Authority). Springs ('Enot Nisanit and 'En 'Uzzi) flow from the fringes of the valley's soils; flint tools from the Paleolithic period and potsherds from the Persian until the Mamluk periods were found in the cultivated area (Map of Mishmar Ha- 'Emeq [32], Site 130; ESI 18:40-41).

A circular installation built of burnt limestone was exposed (exterior diam. 5 m , interior diam. 2.5 m , preserved height 0.8 m ; Fig. 2). The absence of rich ceramic finds and/or debris heaps indicates it was not a potter's kiln, but perhaps a limekiln (Fig. 3). Burnt marks were discerned on two exposed courses of large masonry stones $(0.30 \times 0.35 \times 0.50 \mathrm{~m})$. Burnt and cracked small and medium stones ( $0.10 \times 0.15 \times 0.15 \mathrm{~m}$ ) were noted in the eastern section trench. The stones were light gray in color and filled the entire height of the kiln (L105) until a thin layer of ash and the level of a tamped-earth floor. Virgin soil rich in limestone aggregates (L106) was exposed below the floor.
The scant ceramic finds were dated to the Early Roman period, namely the first century BCE-first century CE. The soil above the kiln's floor contained fragments of Kefar Hananya cooking pots (Types 3 and 4a; Fig. 4:1, 2) and two types of jars: a Sikhin jar with a stepped rim (Fig. 4:3) and a jar from the Yodefat pottery workshop (Fig. 4:4) were found in the layer of the kiln's floor.
The location of the kiln east of the rocky slopes, in a leveled area of agricultural soil, integrates well with the settlement picture of the region in the Roman period, when the road from the VI Legion Ferrata camp at Legio to 'Akko (Ptolemais) was paved and aqueducts leading to the legion's camp were built. The settlement of the legion's units at Legio, at the end of Emperor Trajan's reign 98117 CE, brought about the development and expansion of agricultural areas and settlements in the region. The products derived from the limekiln were usually used for private and public needs, such as agriculture, construction and the building of aqueducts.


1. Location map of the ruin and other Roman-period sites in the vicinity of Legio.



## Erez (East)*

## Nir-Shimshon Paran

22/10/2007


1. Plan and sections.

2. Pottery.

3. Coins.

During December 2000, a salvage excavation was conducted at Qibbuz Erez (Permit No. A-3351*; map ref. NIG 1597/6075; OIG 1097/1075), in the wake of damage to antiquities caused by the installation of a water pipeline. The excavation, on behalf of the Antiquities Authority and financed by the Meqorot Water Company, was directed by N.S. Paran, with the assistance of D. Varga, H. Lavi (administration), A. Hajian (surveying), S. Lavi (pottery restoration), I. Dudin (pottery drawing), E. Altmark (metallurgical laboratory) and G. Bijovsky (numismatics).

This site extends across an area of c. 40 dunams in the trough, east of Qibbuz Erez and south of Nahal Shiqma. The excavation was undertaken along the western fringes of the site (c. 80 sq m ), in a field that was plowed to a depth of c .0 .6 m . Two strata that dated to the Byzantine period (sixth century CE) were discovered.
Stratum 2. A room ( $2.7 \times 5.7 \mathrm{~m}$; Fig. 1), enclosed within four walls--Wall 1 (length 5.2 m , width 0.65 m , height 0.6 m ) on the south, Wall 2 (length 3.35 m , width 0.95 m , height 0.7 m ) on the west, Wall 3 (length 4.5 m , width 0.55 m , height 0.25 m ) on the north and Wall 4 (length 3.1 m , width 0.75 m , height 0.2 m ) on the east--was discovered. It seems that W 2 predated the construction of the walls that joined it. A kurkar flagstone floor was in the southeastern part of the room (L118) and a layer of tamped earth (L114) was in its northwestern part. Another wall (W5; height $0.10-0.25 \mathrm{~m}$ ) was discovered $c .0 .5 \mathrm{~m}$ from and parallel to W 4 . Most of W5 remained concealed within the balk and thus, its function and connection to the building are unclear. Nonetheless, it apparently belonged to this stratum. Another wall (W6; length 2.85 m , width $0.90-$ 0.95 m , height $0.30-0.35 \mathrm{~m}$ ), discovered on the eastern side of W2, was built of long ashlar stones arranged as headers and stretchers. It overlaid W2 and continued its line, deviating 0.5 m to the west. Despite the difference in the walls' construction and the lack of congruence, they appear to have been contemporaneous.
A cluster of ashlar stones that do not appear to be collapse was discovered in the eastern corner of the square, east of W5. Although its nature is unclear, the ashlars belong to Stratum 2 since the kurkar layer of Stratum 1 surmounts it.

The pottery recovered from the room included bowls (Fig. 2:1, 2), a goblet (Fig. 2:3), kraters (Fig. 2:4), cooking pots (Fig. 2:5), Gaza jars (2:6-8), jugs (Fig. 2:9), juglets (Fig. 2:10), bottles (Fig. 2:11-13) and lamps (Fig. 2:14), all dating to the sixth century CE. Seven coins that could be identified (Table 1:1-7) were found. One of the coins is dated to the second century BCE (Table $1: 7$ ) and the rest--to the first half of the sixth century CE.

Stratum 1. This stratum, which is clearly apparent in the eastern part of the excavation, consisted of a layer of yellowish white kurkar soil (thickness $5-10 \mathrm{~cm}$; L113) that bore a layer of horizontal potsherds (thickness $10-25 \mathrm{~cm}$ ). The potsherds included mainly fragments of Gaza jars that are dated to the sixth century CE, as well as a few pieces of slag, which could be debris from a pottery workshop. It is apparent from the balks' sections that the pottery horizon and the layer of crushed kurkar overlie the walls of the building from Stratum 2 (Walls 3, 4, 5; Fig. 1: Section 2:2). Two coins, one dating to the fourth century CE (Table 1:9) and the other, to the middle of the sixth century CE (Table 1:8), were discovered in the potsherd horizon.

The room from Stratum 2 was dated to the Byzantine period (first half of the sixth century CE). The multitude of storage jars it contained implies that it was probably a storehouse, although not for a prolonged period. Stratum 1 is dated to the middle of the sixth century CE, indicating that a period of time had elapsed after the destruction of the building. During this short gap, debris from the nearby pottery workshop that was not exposed in the excavation, was discarded at the site.

Table 1: The Coins and their Identification

| No. | Loc. | Strat. | Period / <br> Ruler | Date | Coin | Denomination | IAA No. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 114 | 2 | Vandal / <br> Thrasamund | $496-523$ CE | Carthage | Nummus | 92192 |
| 2 | 105 | 2 | Anastasius I | $512-517$ CE | Constantinople | Follis | 92188 |
| 3 | 105 | 2 | Justin I | $518-527$ CE | Antioch | Follis | 92187 <br> (Fig. $3: 1)$ |
| 4 | 101 | 2 | Justin I | $518-527$ CE |  | 5 Nummi | 92186 |
| 5 | 115 | 2 | Justinian I | $527-538$ CE | Nicomedia | Follis | 92192 |
| 6 | 117 | 2 | Vandalic | Mid sixth <br> century CE | Carthage | Nummus | 92194 |
| 7 | 117 | 2 | Antiochus VII | $136-134$ <br> BCE | Antioch |  | 92193 |
| 8 | 109 | 1 | Justinian I | $538 / 539$ CE | Carthage | Half follis | 92189 <br> (Fig. $3: 2)$ |


| 9 | 112 | 1 | Honorius (?) | $395-423$ CE | Rome (?) |  | 92190 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |




3. Coins.

## Et-Tuweiri*


4. Wall 112, looking south.

6. Marble slab with inscription.

10. Marble balusters.

11. Marble table-top.

15. Glass tesserae; on left, before cleaning; on upper right, after cleaning; on lower right, gold-glass tesserae.

Howard Smithline
26/4/2007
During October 2004, a limited excavation was conducted in the fields of Qibbuz Kabri, south of the Byzantine site of et-Tuweiri (Permit No. A-4258*; map ref. NIG 21260-80/76980-90; OIG 16260-80/26980-90), prior to the planting of an avocado orchard. The excavation, on behalf of the Antiquities Authority and partially funded by Qibbuz Kabri, was directed by Howard Smithline (photography), with the assistance of A. Shapiro (surveying), Y. Nagar (physical anthropology), L. Porat (pottery restoration), H. Tahan (pottery drawing), N. Zak (drafting), Y. Gorin-Rosen (glass) and L. di Segni (inscription reading).

The excavation was undertaken as a result of the appearance of walls, architectura elements and building stones in probe trenches dug in the area. Two adjoining squares were opened.

Et-Tuweiri is a known Byzantine site in the northern 'Akko plain, slightly over 1 km west of Qibbuz Kabri and 2.5 km east of Nahariya (Fig. 1). It is situated on the cultivated plain floor, barely attaining a height of 30 m above sea level. The site has been severely damaged by intensive agricultural activity that turned up numerous artifacts and remains, many of which are stored and exhibited in various local settlements. Guérin (Description géographique, historique et archéologique de la Palestine; Troisième Partie: Galilée, 1-2. 1880. Paris), who visited the site in the nineteenth century CE, observed the occurrence of architectural elements and conjectured the existence of a church. The site was later surveyed by Frankel and Getzov (Map of Akhziv [1], Map of Hanita [2]: Site 2.184). The present excavation exposed the remains of a structure, assumed to be a church, dating to the Byzantine period and a later Muslim grave. This church is possibly the second one attested to on the site.

Evidence of intense destruction, which is characterized by a number of elements, appears at 0.150.40 m below surface. Thousands of roof-tile fragments were found strewn throughout the two squares, as well as collapsed hewn kurkar and limestone masonry stones. Many of the stones had a thick plaster application and some were architectural elements, such as pillars, pillar bases, capitals and small decorative pillars (Fig. 2). Fragments of red-painted plaster were also ubiquitous. A large number of stones and elements were scarred by fire and intense heat, attesting to the destruction. The section of a single, well-built wall (W112) that belonged to a large structure was found along the southern edge of the excavation (Fig. 3). This wall (width 0.6 m , exposed length 3.5 m ) was constructed from two rows of hewn stones and a small-stone core; only two courses of its northern face were exposed, as its base was not reached (Fig. 4). The western end of W112 continues into the western balk and its eastern end is badly disturbed.
A rectangular, stone-built grave (L111; $0.8 \times 1.6 \mathrm{~m}$ ) abutted the northern face of W112 at its eastern end. The grave was clearly later than the wall it abutted, since it had four walls of upright stones and did not utilize the existing W112 as one of its sides. Stones and fragments of marble elements from the earlier destroyed structure were incorporated in the walls of the grave. A large stone used apparently to cover the grave was found pried up above the opening. The grave contained the poorly preserved remains of a $30-40$ year-old male, lying on his right side, facing south and not accompanied by offerings. It may be assumed that this is a later Muslim burial of indeterminable date. A similar, but smaller, stone-built unit (L110; $0.40 \times 1.07 \mathrm{~m}$ ) that did not contain any human remains, was located 1.75 m further west and also abutted W112. An additional, partially exposed stone construction (L113) was directly south of W112. To facilitate the construction of L110 and L111, an area (L108) was prepared to the north of W112. It was cleared of collapsed stones, which were partly retained. Moreover, the eastern end of L110 was partially built on the collapsed stones.
The sterile alluvial soil directly below the collapse and destruction (Fig. 5) yielded no finds other than a few random, small and extremely weathered potsherds.

Aside from W112, many indicative finds enable us to define the structure as a church. A large quantity of marble architectural elements was present, including numerous profiled marble slabs (thicknesses 3-5 cm), probably remains of chancel screens, as well as a fragment of a channelec square chancel pillar.
A partial inscription, dating probably to the sixth century CE or possibly the late fifth century CE was discovered on a broken profiled marble slab (Fig. 6). It is an invocation to St. Sergius who was commonly referred to during the Byzantine period. The remaining inscription is too short to enable its unequivocal identification. Di Segni suggests that it may be reconstructed as Boethi agie Sergi amen (St. Sergius, help! Amen), as found on an inscription from Nessana.
A portion of a marble slab with a carved out triangle pattern, possessing pecked and roughly surfaced areas that were possibly prepared for inlay applications, can be partially reconstructed (Fig 7). The acute and obtuse external angles of the slab suggest it had served as a screen for a galler staircase banister. The smoothed edges surrounding its protruding obverse imply that it was itsel inset, possibly in a frame. Fragments of additional slabs worked in a similar manner were also founc (Fig. 8).

Marble was utilized for the columns, bases and capitals and for wall and floor applications, as evidenced by hundreds of marble tile fragments of varying thicknesses (1-3 cm; Fig. 9). The edge of the tiles are rounded, squared or beveled, while their shape may be square, rectangular ol irregular. Remains of two spindle-shaped balusters, one of which could be partially reconstructed tc a height of at least 0.75 m , were unearthed (Fig. 10). They may have served in a balustrade or as table legs. A section of a marble tabletop (Fig. 11), which has a concave profile and its corner is styled as a fold, was recovered. These properties appear to be more distinctive of ritual tables thar chancel screens that usually possess a flat profile. Similar styling is visible on a ritual table uncovered in the North Church of Shivta (S. Margalit, PEQ 118-119:106). Another fine piece of white marble shows a relief of either a floral or faunal representation (Fig. 12). Numerous rectangular pieces of cut marble, perhaps intended for inlay, were among the finds.

Commonly found were large white tesserae, but concentrated in the northeast quadrant (L102) were hundreds of very small glass, colored stones and ceramic tesserae (average size $5 \times 5 \times 7$ mm ); some of the glass tesserae contained a gold leaf (see Gorin-Rosen, below).

The ceramic assemblage is typical of the western Galilee in the sixth and seventh centuries CE. It includes imported bowls (Fig. 13:1-5), many ribbed storage jars that were the most common vessel-type present (Fig. 13:6-9), including a Gaza storage jar (Fig. 13:10) and over twenty jar covers (Fig. 13:11-14). The ten rims and several large ridged handles of pithoi and doliyas (Fig $14: 1-5$ ) and the one imported amphora (Fig. 14:6) are also common elements in the western Galilee repertoire at this time. Fragments of only three cooking vessels and a casserole cover were identified (Fig. 14:7-9).
Other than ceramic finds, many iron nails were retrieved from the destruction layer.
The remains uncovered in the excavation point to the existence of a church at the site. This discovery is well incorporated into the known picture from the western Galilee, particularly the northern coastline, which was the center of an extensive Christian settlement during the Byzantine period, as reflected in the various researches of M. Aviam (Five Ecclestiastical Sites in Western Upper galilee. In Eretz Zafon: Studies in Galilean Archaeology. Jerusalem 2002, pp. 165-218; Jews, Pagans and Christians in the Galilee: 25 Years of Archaeological Excavations and Surveys, Hellenistic to Byzantine Periods. Rochester 2004, pp. 181-204).
The lack of finds datable to later than the mid-seventh century CE attests to the destruction of the church at this time, either due to the Persian conquest of 613 CE or the later Muslim conquest in the mid-seventh century CE. Many of the church-related structures in the region were similarly abandoned at this time. Nonetheless, it is not a universal occurrence, since a number of sites continued to exist into the Early Islamic period. Continuing occupation is evident at Kh. eshShubeika, Shelomi, Kh. el-Ghureiyib and Horbat Bata.
The final utilization of the site was for Muslim burials, as evinced by the built grave with a single interment. The two additional similarly built units possibly served the same function, although no proof or verification for this proposal is evident. Similar opportunistic use of existing walls for Muslim burials occurs frequently at ancient ruins, e.g., at nearby Kh. esh-Shubeika (D. AvshalomGorni and A. Tatcher. 2002. In Eretz Zafon, pp. 220-254).

The present limited excavation revealed the existence of an unknown, yet quite ornate church in the midst of the fertile agricultural soil of the northern coastal plain, an area that was a center of Christian habitation in the Byzantine period. The church, located on the southern periphery of a large Byzantine site (et-Tuweiri), was destroyed and abandoned in the first half of the seventh century CE.

## The Glass Finds

Yael Gorin-Rosen
The majority of glass finds from the excavation were glass tesserae that included an impressive quantity of gold-glass tesserae (Fig. 15), as well as some broken vessels, window panes and glass debris. The glass vessels, dating to the Byzantine period, include bowls with hollow, out-folded rims, beakers and wine glasses with rounded rims, hollow ring bases and stems (Fig. 16), bottles with a neck decorated with wound wavy trails, various rims of bottles and fragments of bottle bases, bowl-shaped oil lamps with hollow out-folded rims and three handles (Fig. 17) and oil lamps with hollow, conical stems (Fig. 18).
Most of the c. 40 fragments of window panes belonged to the rectangular thick window type (Fig. 19) that has at least one rounded side (fragment on right). Other window pane fragments have traces of plaster left from the original window frames.
The c. 500 pieces of glass tesserae were made of bluish green, green, dark blue, cobalt blue, yellow, yellowish green, emerald green, brown and red glass, as well as colorless glass that sometimes has a light yellowish hue (Fig. 20). Most tesserae were of translucent glass and a minority was of opaque glass. A significant component of the tesserae were gold-glass tesserae, composed of two glass layers, a thick bottom layer and a very thin upper one, usually colorless or yellowish, with a thin golden sheet inserted between them (Fig. 21). Many of the gold-glass tesserae came from the margins of the original tile, as evidenced by the edges of the upper glass layer that were not fully spread over the lower glass layer. A large number of gold-glass tesserae were found split; sometimes the powdery gold traces were visible upon both layers and at other times, no traces of gold were discerned (Fig. 22).
The majority of tesserae were relatively small ( $0.4-0.8 \mathrm{~cm}$ ) of low quality and irregular in shape; they were broken asymmetrically and had at least one rounded side. Other tesserae, which were elongated with one rounded side, reflected a particularly economical usage by the craftsmen who exploited the margins of the original tile, so that some of the tesserae were left with a rounded side that was not straightened as a precise cube.
Several of the vessels and window panes were found distorted by heat (Fig. 23) that may have resulted from the conflagration that consumed the building. At the same time, some of the distorted artifacts may have been part of debris from glass production that was carried out at the site However, the melted glass debris, the chunks (Fig. 24) and the distorted vessels are insufficient to determine their source, whether industrial or from a destructive raging fire. The occurrence of the glass items together with the numerous glass tesserae may indicate that all derived from the destroyed church building.


1. Location map

2. Broken baluster among collapsed roof tiles.


3. The sterile alluvial soil below the collapse and destruction, looking west.

4. Marble slab with inscription.

5. Marble slab with triangle pattern.

6. Pecked marble-slab fragments.

7. Broken marble tiles.



8. Marble relief.





9. Fragments of window panes

10. Close-up of colored glass tesserae.

11. Close-up of gold-glass tesserae.

12. Detailed close-up of gold-glass tesserae.

13. Distorted wine glass, side and upper views.

14. Glass chunk.

## Fassuta*



1. General view of excavation.

2. Level 2, Hellenistic jar with a floral decoration.

3. Level 2, pottery and a stone vase from the Hellenistic period.

4. Level 2, Pottery from the Early Bronze, Late Bronze/Iron Ages and the Hellenistic period.

5. Level 3, plan and sections.

Hendrik (Enno) Bron
22/4/2007
During February-March 2004, a salvage excavation was conducted in the village of Fassuta (Permit No. A4114*; map ref. NIG 22920/77295; OIG 17920/27295) in the wake of damage to antiquities caused by the construction of a private house. The excavation, on behalf of the Antiquity Authority, was directed by H . Bron, with the assistance of Y. Ya'aqoby (administration), V. Essman (surveying and drafting) and H. Tahan (ceramic drawing).

The village of Fassuta in the upper Galilee is situated between Nahal Keziv and the 'Akrab valley. It is a known antiquity site that has been excavated in the past (A-4065). The current excavation is located on the northern fringes of the site, close to the modern cemetery. Two rectangular excavation areas $(3 \times 4 \mathrm{~m})$ were opened within the limits of the newly constructed building.

The excavation areas, distanced 2 m from each other, were in close proximity to bedrock, which was visible in part of the area. After cleaning bedrock in both areas (L 100, L101; Fig. 1), it became apparent that the area between them was composed of a thick accumulation of soil. The removal of this soil (L104) revealed a rectangular-shaped aperture ( $2.5 \times 3 \mathrm{~m}$ ) in bedrock, which proved to be the roof entrance into a collapsed cave that was used as a refuse pit during the Hellenistic period. The collapsed cave was bell shaped (width at bottom 4 m , width on top 2.5 m ; preserved depth c .3 m ) and chisel marks were clearly visible on its interior.

Three levels and a single wall were identified.
Level 1. The light white to grayish surface soil in both areas was probably the result of accumulations created by the leveling activities for the construction of the modern house on the site. The mixed potsherds in this layer point to the various occupation periods at the site, including the Early and Middle Bronze Ages and the Persian, Hellenistic and Mamluk periods.
The soft, light colored limestone bedrock in most of the excavated area, which did not evidence any installations or quarrying, was reached at 0.1-0.2 m below surface.

Level 2. The reddish brown soil fill within the cave contained a large amount of ceramics, mainly from the Hellenistic period with some Early Bronze and Iron Age intrusions. Vessel fragments were dispersed throughout the fill, probably disposed of on purpose, pointing to its creation within a short time span. One of the fragmented vessels is of particular interest. It is a large jar decorated with a floral pattern on its shoulder (Fig. 2). The vessel is orange slipped and the floral decoration is reddish brown and seems to imitate the West Slope decoration of the Hellenistic period. The other vessels included a miniature jug, probably intended for cosmetics or medical oils (Fig. 3:1), a small juglet (Fig. 3:2), a platter (Fig. 3:3), a large bowl or krater with a wavy rim decoration (Fig. 3:4), a spindle whorl (Fig. 3:5), a wide range of bowl fragments (Fig. 3:6, 7), an array of jar and jug rims (Fig 3:8-12) and half of a basalt grinding bowl (Fig. 3:13). A bowl with a bar handle probably represents the Late Bronze /Iron Ages (Fig 4:1) and the Early Bronze Age fragments include a jar base fragment (Fig. 4:2) and a jar rim (Fig. 4:3).
The dark colored fill in the cave contained large pieces of chalk that probably resulted from the ceiling collapse, as well as a nearly complete Hellenistic cooking vessel (Fig. 3:14).

Level 3. A small stone-built wall on bedrock (W109; Fig. 5), located at a depth of 2 m and preserved c. 1 m high, was discovered at the northern part of the cave. Near the wall, a small area was filled up with stones, creating a podium whose purpose is unclear (L110). Pottery from the layer overlaying W109 included Hellenistic jar rim fragments (Fig. 4:4,5) and an oil lamp spout (Fig. 4:6). The date of the wall is ambiguous because no potsherds were found in or near its base. The ceramics from the lower part of the cave, dating from the Early Bronze Age and the Hellenistic period, suggest a date for the last use of W109 in the Hellenistic period, while its construction might be of a much earlier date.

The cave in Fassuta is obviously man-made and its original task could have been meant for burial or storage. The purpose of W109 is unknown and its construction upon the cave's floor shows it was probably built when the cave was empty of soil. The accumulated fill in the cave had a short time span, as indicated by the potsherds from the Hellenistic period and it appears that the collapse of the cave's ceiling and the fill happened during this period. Most of the fill came from an ancient dump, as the range of ceramics seems to indicate.


1. General view of excavation.


## 2. Level 2, Hellenistic jar with a floral decoration.


4. Level 2, Pottery from the Early Bronze, Late Bronze/Iron Ages and the Hellenistic period.

5. Level 3, plan and sections.

## Haifa, Kafr Samir



1. The bowl, in situ, plan.

2. Wooden bowl.

3. Braiding pieces, in
situ.

4. Braiding pieces after conservation.

Ehud Galili, Baruch Rosen and Elisabetta Boaretto
10/7/2007
From 1991 to 1995, underwater surveys of the southern shore of Haifa (Kafr Samir; License Nos. G26/1992; G-21/1994; map ref. NIG 19616/74442; OIG 14616/24442), were conducted. The surveys, on behalf of the Antiquities Authority, were directed by E. Galili and J. Sharvit of the IAA Maritime Archaeological Unit, with the assistance of S. Ben Yehuda (drawing and drafting), T. Sagiv (photography), M. Rasovsky (treatment of organic material) and E. Boaretto of the Weizmann Institute (Carbon 14 dating).

Vegetal artifacts, which originated in the inundated remains of a prehistoric settlement, were exposed. The finds were mapped, documented, removed from the sea and transferred to the laboratories of the Israel Museum in Jerusalem for treatment.

During the winter of 1991 , a pavement section of small unworked stones ( $5-7 \mathrm{~cm}$ ) was exposed on the clay seabed of the Kafr Samir site, at a depth of 0.5 m and 15 m from the shoreline. A fragment of a pot-shaped wooden bowl (rim diam. c. 0.2 m , base diam. c. 0.16 m , height c. 0.22 m ; Fig. 1), survived by part of the flat base, the straight wall that is slightly inverted and a section of the rim (Fig. 2), was discovered on the pavement. An elongated knob handle (c. 8 cm long, c. 2 cm wide) on the upper part of the wall is perpendicular to the rim and has a narrow lateral perforation (diam. c. 5 mm ). A complete bowl of carob wood had been found in the past, c. 300 m to the south (ESI 10:163).
During the winter of 1994 , a pit (diam. 0.9 m , depth 0.55 m ) that was cut into the clay seabed was exposed at a depth of $2.3 \mathrm{~m}, \mathrm{c} .65 \mathrm{~m}$ west of the paved section. The excavation of the pit uncovered soft gray clay, which contained waterlogged pieces of braided tree branches (Fig. 3) and dozens of olive pits. The three braiding pieces, made of thin branches (diam. 3-5 m), were probably parts of a vessel that fell apart. One of the braiding pieces is round (Fig. 4: A) and seems to be the base of the vessel; the other two (Fig. 4: B, C) probably come from its walls. The braiding used the method of alternate pair twining. The warps emerge from the center of the base, perpendicular to its rim and parallel to each other. The wefts are alternately twined around two warps and cross over after each pass (Fig. 5). In several places the wefts are twined around three warps or only around a single warp. Usually the warps are made of one branch; however, in a few places they consist of a pair of thin branches next to each other. It seems that the braiding is the remains of a receptacle or a basket ('aqal; diam. over 0.3 m ) used for pressing olives in the production of oil. The braiding was dated by Carbon 14 to 5000-4730 BCE (calibrated date; Sample RT 4689).
An installation for producing olive oil was exposed several dozen meters to the south of the pit. It contained olive-oil extraction that consisted of thousands of crushed olive pits (ESI 13:31-32). The Carbon 14 dates of the braiding and of the olive pits indicate that the finds should be ascribed to the first half of the fifth millennium BCE--the Pottery Neolithic period and the Wadi Rabah culture.
5. Scheme of braiding technique.


Clay
1-1

1. The bowl, in situ, plan.

$\qquad$
2. Wooden bowl.

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5. Scheme of braiding technique.


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Clay
1-1

1. The bowl, in situ, plan.

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2. Wooden bowl.

3. Braiding pieces after conservation.

4. Scheme of braiding technique.

## Har Dov (Khirbat Shab'a)*



1. The burial cave, plan.

2. The clay tiles that covered the troughs.

3. Pottery.

Hagit Tahan and Moshe Hartal
7/3/2007
During May 2001 a survey was conducted along the fringes of Har Dov (License No. G-70/2001*; map ref. NIG 2627-31/7958-61; OIG 2127-31/2958-61) in the wake of development work for paving a road. The survey, on behalf of the Antiquities Authority, was conducted by H. Tahan (surveying, drafting and drawing) and M. Hartal.

Three burial caves, hewn in chalk bedrock near Kh. Shab‘a, were surveyed.
A small section of the eastern cave, which could not be entered, was exposed.
One corner of the middle cave, which contained two arcosolia, each with four burial troughs, was preserved.
The western cave (Fig. 1) was preserved almost in its entirety, except for its southern part that was damaged when the road was paved. The cave was entered by way of a square shaft ( $1 \times 1 \mathrm{~m}$ ), whose depth was not ascertained because its western side was destroyed. The shaft led to the cave entrance (width 0.6 m ) that was higher than the floor of the chamber and apparently, several steps descended into it.The cave walls were neatly dressed and the roof was vaulted. Arcosolia were cut in three walls of the chamber $(2.25 \times 2.40 \mathrm{~m})$, each containing four hewn burial troughs (1.7-1.8 m long, 0.65 m deep). Different-sized roof tiles covered the troughs and were affixed and reinforced with plaster (Fig. 2). Another arcosolium, blocked with alluvium, was installed in the eastern wall of the northern arcosolium; it is unclear whether it contained any burial troughs. A meticulously carved cornice was left at the top of the northern arcosolium while it was hewn. Two adjacent arcosolia were cut in the western wall of the cave, whereas in the damaged southern wall were remains of an arcosolium with four troughs. A total of sixteen troughs were discerned.
All the burial troughs were plundered and no bones were discovered. Two lamps dating to the second century CE (Fig. 3:1, 2), together with a jar (Fig. 3:3) and fragments of glass vessels were found in the troughs of the southern wall.

The caves were part of a cemetery that extended along the foot of Kh. Shab'a. A group of shaft tombs ( 1.8 m deep) located on a hard limestone hill c. 100 m south of the caves was discerned. These tombs are of the type that originated in the Horan and have been found, to date, only in the northern cemetery of Banias. They probably represent the northern part of the western cemetery of Banias, which extended along the edge of the Banias plateau and the foot of the Hermon Mountain.


1. The burial cave, plan.

2. The clay tiles that covered the troughs.


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1. The burial cave, plan.

2. The clay tiles that covered the troughs.


## Har Hiya



1. Location map.

2. Section of the pit and the installation.

3. Pottery.

## Leea Porat

16/12/2007
During January 2004 a salvage excavation was conducted next to the Movil Junction along Highway 77, on the northern slope of Har Hiya (Permit No. A-4070*; map ref. NIG 2241-53/7410-20; OIG 1741-53/241020; Fig. 1), prior to widening the road. The excavation, on behalf of the Antiquities Authority and financed by the Department of Public Works (North), was directed by L. Porat, with the assistance of A. Shapiro (surveying and drafting ), D. Syon (numismatics), L. Kupershmidt (metallurgical laboratory), Y. Alexandre (pottery consultation) and H. Tahan (pottery drawing).

The northern part of a pit was damaged by a bulldozer-dug trench and its southern part was exposed (Fig. 2). The pit, hewn in soft limestone (height 3.4 m ), had a bell-shaped cross-section and a circular opening (diam. 0.77 m , height of neck 1.7 m , base diam. 1.8 m ). At the bottom of the pit, a layer of stones that had been detached from the sides of the pit overlaid numerous fragments of pottery vessels, including cooking pots (Fig. 3:1-6) and jars (Fig. 3:7, 8) from the Hellenistic period. Other artifacts included loom weights (Fig. 3:9), pieces of a bronze needle and a coin from the reign of Antiochus III, minted in 'Akko (198-187 BCE; IAA 106082).
A rock-hewn installation, mostly destroyed by the bulldozer work, was 6 m east of the pit.
The bell-shaped pit was used, in all likelihood, as a storing facility rather than serving as a water cistern since it had no traces of plaster on its walls.


1. Location map.

2. Section of the pit and the installation.

3. Pottery.

## Herzliya Beach*



1. The scattered millstones on the seabed.

2. Documenting the millstone cargo on the seabed.

3. Bronze nails.

Ehud Galili, Ya'akov Sharvit and Baruch Rosen
17/4/2007
During November 1999 an underwater survey was conducted in the area between the Sharon and Sidni `Al beaches in Herzliya (License No. G-13/1999*; map ref. NIG 18146/67680; OIG 13146/17680), following a report by Z. Chen of stone objects lying on the seabed. The survey, on behalf of the Marine Archaeology Unit of the Antiquities Authority, was directed by E. Galili and J. Sharvit, with the assistance of D Moskowitz, A. Ya'aqobowitz, H. Sal'i (divers), D. Peled, J. Turgeman (logistical assistance) and S. BenYehuda (drafting and drawing).

A shortage of sand was created in the wake of the marina construction and a load of basalt millstones and copper-alloy nails that originated in a shipwreck were exposed. The finds were mapped and photographed and the site was surveyed by divers with the aid of an underwater metal detector. One upper and one lower millstones from the site were taken to the Antiquities Authority.

The site, located at a depth of c. 4 m , is c. 100 m from the shoreline and c. 300 m south of the Appollonia anchorage (ESI 10:119). A cargo of donkey millstones--six conical lower stones and five biconical upper stones--was scattered along the flat rocky seabed. Three of the upper stones and the six lower stones were concentrated in one dense group across an area of c. $6 \times 6 \mathrm{~m}$. One of the upper millstones was c. 5 m east of the group and another upper millstone was c. 30 m southeast of the group (Figs. 1, 2). The sides of the lower stones (diam. 0.8 m , height 0.85 m , weight of each 395 kg ; Fig. 1, No. 2) are slightly concave. Their upper part is shaped like a truncated cone and a shallow depression is in their bottom. The upper stones (diam. 0.6 m , height 0.57 m , weight of each 250 kg ; Fig. 1, No. 10) have two square projections ('ears') that are approximately opposite each other and the characteristic perforation is missing. It is apparent that the stonework on the millstones is incomplete. The absence of perforations in the 'ears' and the roughness of the interacting parts indicate that the millstones were never used. Several fragments of bag-shaped jars with small loop handles were discovered near the stones; they probably belonged to the ship whose cargo included the millstones.
Copper-alloy (bronze?) nails and parts of nails were discovered between the stones and near them, below a layer of sand (c. 20 cm thick; Fig. 3). All the nails have a shank with a square crosssection. Ten of the nails are complete and the three broken ones include two points of nails and a fragment of a nail with a head. The nails have a flat, mushroom-shaped head and all are bent and distorted. It seems the nails were twisted by the forces created in the disintegrating vessel wrecked on the shore. The intact nails can be divided into three size groups: three are 8-9 cm long (Fig. $3: A$ ), five are $10-12 \mathrm{~cm}$ long (Fig. $3: B$ ) and two are $13-16 \mathrm{~cm}$ long (Fig. 3:C, D). The maximum thickness of the nail's shank below the head is $5-6 \mathrm{~mm}$.

Some twenty meters southwest of the millstones an iron anchor ( 2 m long) with a rope ring ( 20 cm long) was discovered. The anchor stock found inside the anchor shank was ready for anchoring-one arm was embedded in the seabed and the other was broken. The crown of the anchor faced west and the ring faced the beach. The anchor probably belonged to the assemblage. The nails and the cargo are indicative of a merchant boat (c. 20-25 m long) that carried millstones from a region where basalt is located near the coast, probably the northern Levant (Syria, Turkey or possibly from farther away in the Mediterranean Sea) and was wrecked on its way to the southern shore of the country or to Egypt. When ancient boats were sailing empty they carried a load of stones (ballast) for stability. Sometimes the seamen would swap the ballast for a paying-ballast. It is reasonable to assume that after unloading the millstones the seamen planned to return with a cargo of Egyptian wheat. The finds indicate that the boat dates to the first-fourth centuries CE.


1. The scattered millstones on the seabed.


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## Herzliya Beach*



1. The scattered millstones on the seabed.

2. Documenting the millstone cargo on the seabed.

3. Bronze nails.

Ehud Galili, Ya'akov Sharvit and Baruch Rosen
17/4/2007
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Ehud Galili, Ya'akov Sharvit and Baruch Rosen
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1. The scattered millstones on the seabed.


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## Hittin

Nimrod Getzov
15/1/2007


1. Stratum II, plan.

2. Stratum II remains (below), overlain by Stratum I remains, looking east.

3. Stratum I, plan.

During February 2003 a limited excavation was conducted west of the village remains of Hittin (Permit No. A-3844; map ref. NIG $24255 / 74610$; OIG $19255 / 24610$ ). The excavation, on behalf of the Antiquities Authority and financed by the Electric Company, was directed by N. Getzov (surveying and photography), with the assistance of Y. Ya'aqoby (administration), A. Grishna (registration) and H. Tahan (pottery drawing).
A square $(4 \times 5 \mathrm{~m})$ was opened, revealing two settlement layers.
Stratum II (Fig. 1). The meager remains of a wall and several adjacent installations were exposed directly above virgin soil (Fig. 2). The lithic finds and potsherds indicate that the stratum should be dated to the end of the early Chalcolithic period, contemporary with Stratum 16 at Horbat 'Uza (HAESI 118).

Stratum I (Fig. 3). Directly above the Stratum II accumulations was a wall foundation built of a row of stones. It was probably surmounted by a wall of mud bricks or organic material. Abutting the top of the foundation was a floor of small stones. The potsherds recovered from this stratum dated to Early Bronze Age IA and included a dominant quantity of Gray-Burnished Ware, such as carinated kraters and plain bowls. The distribution of the plain bowls sheds light on the connection of the site to the Hula and Western Galilee sites and its dissimilarity to the sites from the Jezre'el Valley.

Close to surface, unstratified potsherds from the Pottery Neolithic Age (probably contemporary with Jericho IX), Early Bronze Age IB, Intermediate Bronze Age and a coin from the Mamluk period, were discovered.


1. Stratum II, plan.

2. Stratum II remains (below), overlain by Stratum I remains, looking east.


## Horbat Anusha

## Mordechai Haiman

15/1/2007


1. Plan.

2. Fragments of a
crushing basin (yam) in the terrace wall.

3. An olive press weight in the terrace wall.

During June 2002 a salvage excavation was conducted on the northwestern fringes of Horbat Anusha (Permit No. A-3650; map ref. NIG 19810-20003/66100-78; OIG 14810-5003/16100-78), in the wake of damage to antiquities by mechanical equipment. The excavation, on behalf of the Antiquities Authority, was directed by M. Haiman, assisted by A. Hajian (surveying).

A section of a terrace wall that had been discovered in a preliminary survey was damaged. It had drawn the surveyors' attention because fragments of a crushing basin from an olive press were incorporated in it. The excavation ascertained that the parts of the olive press were in secondary use. The terrace wall was curved; its northern part was washed away and the southern end, lying beyond the limits of the excavation, abutted the remains of a building at Horbat Anusha, c. 20 m from the excavation site.

The terrace wall section (length c. 9 m , width c. 2.2 m ; Fig. 1) was preserved two courses high (c. 0.6 m ). It was built of two rows of large stones (max. length c. 0.6 m ) with a core of smaller stones. The olive press parts within the wall included fragments of a crushing basin (yam; diam. 1.6 m , thickness c. 0.4 m ; Fig. 2). A trapezoid-shaped weight from an olive press (broad base--0.40 $\times$ 0.53 m ; narrow base--0.25 $\times 0.25 \mathrm{~m}$; height 0.63 m ), with two holes (diam. c. 5 cm ) in its center, was set at the northern end of the wall.

This is one of many terrace walls at Horbat Anusha, which were apparently used as boundaries of cultivation plots. A few potsherds dating to the twelfth-thirteenth centuries CE, when the ruin was inhabited, were found.


1. Plan.

2. Fragments of a crushing basin (yam) in the terrace wall.

3. An olive press weight in the terrace wall.

## Horbat Darkemon (East)*



1. Location map.

2. Tomb 10, looking
west.

3. Pottery.

During January 2003 a trial excavation was conducted at Horbat Darkemon (Permit No. A-3766*; map ref. NIG 19370-75/72400-05; OIG 14370-75/22400-05) after mechanical equipment exposed ancient remains. The excavation, on behalf of the Antiquities Authority and financed by Moshav Dor, was directed by S. Mahajna, with the assistance of A. Hajian (surveying), T. Sagiv (photography), A. Glick (GPS), M Shuiskaya-Arnov (drawing), J. Sharvit (identification of seashells) and E. Yannai (pottery reading).
The site is located along the eastern fringes of the kurkar ridge (Fig. 1; ESI 19:24*-25*; 103*-104*). Dressed kurkar masonry stones were found in probe trenches dug prior to the excavation. The surface layer was removed by mechanical equipment down to the top of stones and subsequently, seven squares of various sizes were opened (Fig. 2).

Twelve rectangular cist graves hewn in the kurkar bedrock were exposed. Two graves (Nos. 8, 10; depth $0.6-1.0 \mathrm{~m}$; Figs. 3,4 ), devoid of any archaeological artifacts, were excavated. Some of the graves were oriented east-west, while others were aligned north-south (max. length 2.3 m , width $0.59-1.32 \mathrm{~m}$ ). The graves were covered with long dressed kurkar slabs, set widthwise across the grave. Along the edge of the grave natural bedrock was quarried in a straight line to facilitate the placement of the covering stones.

A few fragments of pottery vessels were found around and above the graves. These potsherds included Eastern Terra Sigilatta bowls from the Late Roman period (Fig. 5:1, 2), baggy-shaped jars from the Byzantine period (Fig. 5:3-5), Gaza jars (Fig. 5:6, 7), Rhodian amphorae without seal impressions (Fig. 5:8,9) and an amphora rim (Fig. 5:10) that cannot be identified with certainty. Fragments of glass vessels and metal were also discovered. The nature of the vessels is incongruent with that of funerary offerings and therefore the date of the graves is unclear. No burial remains or human bones were found and in all likelihood, the graves were never used.
A heap of seashells was discovered near Grave 5. One hundred ninety five thick, curved bivalves with a smooth face and of equal size were counted in a single mass. They are Glycymeris violacescens (Lamarck 1819), which is a very common bivalve along the Israeli coastline that washes up onto the beach during a storm. The large concentration of shells may be related to the ancient remains because the site is not located along the shoreline.

It is difficult to date the rock-hewn remains; however, similar ones were discovered along the northern coastal plain in the past. Similar kurkar-hewn tombs dating to the Persian and Roman periods were dug in the vicinity of Tel el-Ras (near Qibbuz Lohamey Ha-Geta'ot; 'Atiqot 37, 1999:141-163 [Hebrew]) and a group of tombs that more closely resembled tombs at Tel Dor was excavated in 'Akko, dating to the Hellenistic period ('Atiqot 50:153-159). Fragments of pottery vessels from the Hellenistic period were found at the site and may substantiate the quarrying date to this period.


1. Location map.

2. The excavation areas, plan.

3. Tomb 10 , looking west.

4. Tomb 8, looking south.

5. Pottery.

## Horbat Gilan



1. Location map.

Amir Gorzalczany and Ya'akov Sharvit
16/10/2007
During October-November 2003, a salvage excavation was conducted at Site 201 of the Cross-Israel Highway, near Horbat Gilan (Permit No. A-4005; map ref. NIG 20323-60/709839-10030; OIG 15323-60/209839-10030). The excavation, on behalf of the Antiquities Authority and financed by the Cross-Israel Highway Ltd., was directed by A. Gorzalczany and J. Sharvit, with the assistance of S. Ya'aqov-Jam and E Bachar (administration), A. Hajian and T. Kornfeld (surveying and drafting), T. Sagiv (photography), Y. Nagar (physical anthropology), Y. Mor, E. Yannai, Z. Horowitz and E. 'Awawdy.

The site (Fig. 1) is located on the southern slopes of Ramat Menashe, along the northern bank of Nahal 'Iron, slightly south of Horbat Gilan and east of Tel Esur. It lies in a region of extensive areas of chalk from the Menuha formation that are covered with a thin layer of nari and brown forest soil. At the site, which is situated inside the cemetery of adjacent Tel Esur, concentrations of rock-cuttings and installations were documented, among them hewn stones of various sizes, stones that were not completely quarried and abandoned at the site, as well as the negatives of ashlar stones. The quarrying sites are of different sizes; in some a single stone was cut and from others, many stones were extracted. Their outlines are square, rectangular or ribbed, with sharp breaks in the corners and straight walls.

The artifacts comprised a few ribbed and worn potsherds that probably date to the fourth-fifth centuries CE and one coin. The stonemasons were apparently interested in the layer of nari, which is easily extracted and quite suitable for quality construction. They did not continue down to the layer of soft chalk and instead, moved on to new areas. This explains the extensive distribution of the quarry along the top of the spurs south and north of Nahal 'Iron.
A hewn elliptical $(3.5 \times 4.0 \mathrm{~m})$ burial cave that was entered from the south through a narrow corridor that became wider on the inside was exposed. The burial chamber was lower than the entrance corridor and contained at least two burial phases that included numerous individuals, some in full anatomical articulation and others in secondary burial. It seems this was a family tomb that was used over several generations; its prolonged usage required the orderly removal of previous interments and offerings to the sides of the cave. The burial phases were sometimes separated by a stone pavement.
The cave was first used in Early Bronze IB (3300-3100 BCE) and continued until the later part of Early Bronze II. Articulated skeletons from the first burial phase were covered by the partial collapse of the cave's ceiling. When burial was resumed, some of the collapse in the center of the cave was removed and older interments were removed sideways, to make room for the newly interred.
The funeral offerings included 119 counted pottery vessels, weapons, including a well-preserved bronze dagger from the last burial phase, several dozen beads of various materials, quartz or calcite and carnelian, and a bronze earring. Most of the beads were found during sifting of soil and therefore, it is impossible to ascribe them to the deceased; however, it seems they belonged to all phases of interment. Animal bones, mostly rodents, as well as several flint tools and flint debitage, were also found. A correlation was observed between the burial phases and the funerary offerings. During the early phase, jugs, juglets and teapots were common and bowls, which appear in the later phase, were absent.
The articulated position of some of the skeletons provided information regarding age, gender and other details. Preliminary assessment points to at least 60 individuals that were buried in the cave and ranged from infancy to old age (c. 60 years).
The cave was apparently part of the Tel Esur cemetery and its recovered artifacts are in keeping with the data we have today from excavations of other tombs at the site.


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1. Location map.

## Horbat Hammim (south)



1. Circular, rock-cut installation.

2. Vertical shaft of the cave/cistern.

3. Animal bones from the lower levels of the cave/cistern's fill.

Edwin C.M. van den Brink
23/12/2007
During July 2007 an excavation was conducted in a development plot at Horbat Hammim (South; Permit No. A-5203; map ref. NIG 196705-98/644142-237; OIG 146705-98/144142-237). The excavation, on behalf of the Antiquities Authority and financed by Mega Or Ltd., was directed by E.C.M. van den Brink (photography), with the assistance of S. Ya'aqov-Jam and E. Bachar (administration), A. Hajian (surveying), T. Sagiv (field photography), L.K. Horwitz (archeozoology) and O. Marder (flints).

Prior to the excavation, the area was probed by mechanical equipment under the inspection of T. Kanias, revealing four sites with potential archaeological remains. Upon excavation, two of the four sites turned out to be natural, shallow bedrock pockets, filled with natural soil and devoid of any anthropogenic materials. The remaining two sites represented archaeological features within the limestone bedrock outcrop.

Rock-cut, circular installation (Fig. 1)
This seemingly isolated feature consisted of a large, circular and shallow rock-cut pit, with a slightly tapering wall and a flat floor (max. diam. c. 2 m , preserved depth c. 0.4 m ). The pit was devoid of any diagnostic finds. Scores of similar stationary installations, some of which were tentatively dated to the Chalcolithic period or possibly even earlier, had been exposed in previous excavations at the nearby site of $\underline{H}$. Hadat-Be'erit (HA-ESI 119). This type of circular installation, whose actual function is still being debated, was perhaps a threshing or grinding floor for grain.

Cave/water cistern (Fig. 2)
Located c. 6.5 m north of the installation, the sub-rounded to oval aperture in bedrock (max. diam. 0.8 m ) led through a slightly oblique shaft into a manmade, rock-cut cavity that widened toward the bottom (max. diam. c. 3 m , depth 4.5 m ). It was filled up to the brim with soils, swept in from the surrounding bedrock surface by rain and wind, mixed with large amounts of chalk fieldstones, potsherds, flints and animal bones. The absence of in situ finds on the floor of this cave indicates perhaps that it was not intended for dwelling or storage, but rather served as a water cistern. Another option is that after an initial use for dwelling or storage, the cave might have been adapted for the collection of rainwater. A rock-cut channel leading from the surrounding bedrock surface down to the opening of the cave/cistern seems to corroborate its usage as a water cistern Traces of possible plaster were observed and sampled around the cistern's opening interior. Since all the finds derived from fills in the cave/cistern, its dating is problematic. With the notable exception of two jar handles, which seem characteristic of Tel 'Erani C or early EB IB horizon and were found in the upper level of the fill, i.e. still within the shaft proper, all other ceramics from the cave dated from the early EB I (EB IA). This very homogeneous assemblage suggests that its construction probably did not post-date the early EB I. However, it could have been quarried at the same time as the circular rock-cut installation, whose presumed date is the Chalcolithic period.

The pottery, flints and animal bones, recovered by sieving the entire cave/cistern's fill, evince human occupation at the site as early as at least EB IA. Future analysis of the animal bones, which included cattle, equids, pigs, dogs and birds (Fig. 3), should provide a better insight into the paleoenvironment and possibly into the diet of the people who lived in these environs during early EB I. Relating to the cave/cistern, two other nearby caves, c. 40 m to the northwest, had previously been excavated (Permit No. A-4693) and contained some Gray Burnished Ware potsherds that are also dated to early EB I. Furthermore, four additional rock-cut pits, situated less than 30 m to the northwest of the present site, were recently excavated (Permit No. A-4913) and also dated to EB I It would appear that the remains are part of a community of early EB I dwellers, who lived in the nearby caves, processed and stored their agricultural commodities, perhaps in the circular installation and rock-cut pits and during the winter possibly collected rain water in the rock-cut cistern.


1. Circular, rock-cut installation.

2. Vertical shaft of the cave/cistern.


## Horbat 'Illin (North) (A)*

Irina Zilberbod
18/10/2007
During July 2004 a trial excavation was conducted in the northern part of Bet Shemesh (Permit No. A4204*; map ref. NIG 2000/6290; OIG 1500/1290), prior to the paving of Highway 14. The excavation, on behalf of the Antiquities Authority and funded by the Ministry of Construction and Housing, was directed by I. Zilberbod, with the assistance of R. Abu-Khalaf (administration) and H. Stark (GPS surveying).

Three trial squares were opened on the northern slope of the hill. The excavation area was c .800 m northwest of the excavation at Mahseya (HA-ESI 113:124*) and c. 300 m north of another excavation at the site (A-4094). Numerous stones, some of which were extremely large (max. dimensions $1.1 \times 1.7 \mathrm{~m}$ ), were discovered randomly scattered in no apparent context. The ceramic finds included fragments of pottery vessels from Iron II and the Byzantine period. It seems that the stones and the potsherds were swept from a nearby site located farther up the hill.

## Horbat 'Illin (North) (B)*



1. Northern winepress, plan and section.

2. Northern winepress, looking southwest.

3. Southern winepress,
plan and section.

4. Southern winepress, looking southwest.

Irina Zilberbod
18/12/2007
During February 2004, a salvage excavation was conducted adjacent to the northern industrial zone of Bet Shemesh (Permit No. A-4094*; map ref. NIG 2000/6288; OIG 1500/1288), prior to preparing the area for construction. The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Construction and Housing, was directed by I. Zilberbod, with the assistance of H. Lavi (administration), T. Kornfeld (surveying) and T. Sagiv (photography).

Two winepresses and several cupmarks were exposed c. 400 m northwest of the Mahseya site, which was excavated in 1999 (HA-ESI 113:124*).

Northern Winepress F1 (Figs. 1, 2). This small rock-hewn winepress had an almost square treading floor (L11; $1.0 \times 1.2 \mathrm{~m}$, depth $0.2-0.3 \mathrm{~m}$ ), a square collecting vat (L12; $0.65 \times 0.65 \mathrm{~m}$, depth 0.5 m ) near its eastern side and a settling pit (L13; diam. 0.2 m , depth 0.08 m ) in the northwestern corner of the vat's floor.

Southern Winepress F2 (Figs. 3, 4). This bedrock-hewn winepress, c. 35 m south of the northern one, consisted of a treading floor and a collecting vat. The treading floor was almost square (L21; $2.3 \times 2.9 \mathrm{~m}$, depth $0.30-0.45 \mathrm{~m}$ ) and a broad natural fissure ran its length (L24; width $0.4-0.7 \mathrm{~m}$ ). Along its northern side was a rectangular collecting vat (L22; $0.7 \times 1.4 \mathrm{~m}$, depth 1 m ), in whose floor's southeastern corner a settling pit (L23; diam. 0.8 m , depth 0.25 m ) was cut. Sections of a thick grayish white plaster layer ( 15 mm ) were visible on the floor and walls of the vat.

Cupmarks F3, F4 (Figs. 1, 5). A round hewn basin (L31; diam. 0.65 m , depth 0.3 m ) was discovered between the two winepresses. A small cupmark (L32; diam. 0.13 m , depth 0.1 m ) was c. 1.3 m north of the basin and another small cupmark ( L 41 ; diam. 0.2 m , depth 0.15 m ) was c. 1.8 m west of the northern winepress.

No datable artifacts were recovered from any of the installations.


1. Northern winepress, plan and section

2. Northern winepress, looking southwest.

3. Southern winepress, plan and section.

4. Southern winepress, looking southwest.

5. Cupmarks, plan and sections.

## Horbat 'Illit*



1. Route of separation
fence and sites discovered in preliminary survey.

2. The ruin, general view, looking north.

3. Wall 1 , looking south.

4. Burial Cave 101, the southern wall and its two hewn kokhim.

5. Cave 102, pottery.

Zvi Greenhut
11/6/2007
During February-March 2005 a salvage excavation was conducted on the southeastern fringes of Horbat 'Illit (Permit No. A-4385*; map ref. NIG 2030/6187; OIG 1530/1187), following an archaeological survey in the region carried out by A. Nagorski and H. Stark and prior to the construction of the separation fence (Fig. 1). The excavation, on behalf of the Antiquities Authority and funded by the Ministry of Defense, was directed by Z. Greenhut, with the assistance of V. Essman, V. Pirsky and T. Kornfeld (surveying), E. Belashov (drafting), A. Pikovski (pottery drawing), C. Amit (studio photography), D.T. Ariel (numismatics), A. Nagorski and H. Stark (logistic and professional support) and K. Sozab (fieldwork coordination).

The site is located in the upper Shephelah, c. 490 m above sea level (Fig. 2), c. 3 km northeast of the Zurif village and c. 10 km south of Bet Shemesh. The ruin affords a view over the Hebron Hills to the east (Fig. 3), the hills of the upper Shephelah to the north and south and the lower Shephelah and coastal plain to the west. Nahal Gadur, which begins at Khirbat Jadur in Gush 'Ezyon, flows to the north and east below the ruin.
The site had been surveyed in the past by Y. Dagan who described a large ashlar-built structure, other buildings, pits and industrial installations, as well as potsherds from the Hellenistic, Roman and Byzantine periods. N. Tal discovered a hiding complex at the site in 1996. A. Ganor and A. Klein discerned another hiding complex at the site in 2000, or the continuation of the one found by Tal, which included a long tunnel, caverns and a water cistern. B. Zissu noted that the potsherds recovered from the complex dated to the Early Roman period and the time of the Bar-Kokhba Revolt. The current excavation did not locate the hiding complex (or complexes); yet, the finds indicate that a settlement did exist at the site from the latter part of the Second Temple period until the Bar-Kokhba Revolt.

The excavation area on the southeastern slope of Horbat 'Illit (Fig. 4) included two farming terraces that were separated by a wall (W1) built of a single row of large fieldstones (Figs. 5, 6). The construction method of the wall closely resembled the housing remains of the Arab village at the top of the hill and the wall should, therefore, be dated to this period.
Four underground cavities, identified in the survey (Fig. 1:16, 17, 19, 20; Fig. 4: 108, 103, 102, 106), were excavated, as well as other spots discerned during the excavation (Fig. 4:101, 101A, $104,105)$. Fieldwork began in Points 101, 101A, 102-106, which mostly turned out to be burial caves that formed part of the settlement's cemetery. A new alternate route was selected for the fence, designed to run along a topographically lower terrace than the original route, through Point 16 of the survey (Fig. 1)--Point 108 of the excavation (Fig. 4) and through the water cistern (Point 107), which is used by the local residents to date. Hence, the excavation began in the lower area where the new route is scheduled to pass.

Cave 101 (Fig. 7)
This kokh-type burial cave is characteristic of the latter part of the Second Temple period (first century BCE-first century CE). The cave was documented and not excavated. It was hewn in qirton bedrock of poor quality, especially in the ceiling and the eastern wall. The cave included a rectangular main chamber ( $3.5 \times 4.0 \mathrm{~m}$ ), which was breached in its northeastern corner that joined the cave with Cave 101A. The entry to the cave was probably located here. Six kokhim (I-VI; 0.4$0.5 \times 1.9-2.0 \mathrm{~m})$, two in the southern wall, three in the western wall and one in the northern wall, were discovered. The opening to Kokh VI had a shaped frame (Figs. 7: Section 2-2; 8) and its ceiling was broken prior to the excavation (Fig. 9). The absence of ossuaries in the cave could be due to: (1) the cave was plundered in the past and the ossuaries were removed, (2) People who could not afford ossuaries were interred in the cave and (3) The cave slightly predated the initial use of ossuaries.
It is noteworthy that following the completion of the documentation, the breach connecting Caves 101 and 101A was sealed.

## Cave 101A

A collapsed cavern to the north of Cave 101, probably a cave, was discovered (Fig. 10). Beneath the collapsed qirton ceiling of the cave was an accumulation of brown soil that contained human bones, indicating this cavern functioned as a burial cave. The original plan of the cave is unclear and its excavation was suspended when the brown accumulation was uncovered.

Cave 102 (No. 19 in survey)
A circular breach at the top of the cave postdated the period of the cave's original use. The cave was only partially cleared because as soon as human bones appeared, the excavation was suspended. Thus, the plan of the cave is incomplete and segmented.
A carefully qirton-bedrock hewn corner was preserved in the southeastern section of the main chamber, which was excavated to a depth of c. 0.3 m (Figs. 11, 12). An arcosolium (Fig. 11: I; length 1.25 m , depth 0.7 m , max. height 1 m ) in the northern part of the burial chamber was coarsely finished, probably due to the inferior quality of bedrock. The arcosolium contained human bones that were left in situ.
The entrance to the main chamber, probably in its southern side, was found blocked with large stones. A bottle-shaped recess in the southwestern corner of the chamber had a wide bottom, tapering toward the narrow top (Fig. 11: II: diam. 0.7 m , depth 0.3 m ); its nature remains unclear. Next to it was another niche (Fig. 11: III). The western side of the chamber sloped from top to bottom, toward the interior of the burial chamber.
The excavation was suspended following the exposure of human bones.
Ceramic Finds (Fig. 13)
The upper part of the accumulation that filled the cave contained animal bones and numerous fragments of pottery vessels (Fig. 13:3-13) from the Hasmonean period, as well as a few potsherds from Iron Age II.
Fragments of two bowls (Fig. 13:1, 2) attributed to Iron Age II, have a folded out rim. These
fragments had probably penetrated the cave from the outside through the breach in the ceiling and did not belong to the cave's original use. Their appearance attests to the existence of a settlement from this period at Horbat 'Illit.
The overwhelming amount of the ceramic assemblage dated to the Hasmonean period and included jars with a flared rim (Fig. 13:3-5), characteristic of the second-first centuries BCE and jars with a thickened, folded out rim (Fig. 13:7-10) that are dated to the second century BCE. It seems that the jug (Fig. 13:11) whose rim resembles that of the jars should also be ascribed to this type of vessel. Another jar (Fig. 13:6) with a wide mouth, an everted rim and a curved shoulder is either a geniza or an archival jar.
Two lamps, a wheel-made pinched lamp (Fig. 13:12) characteristic of the Hasmonean period and an intact carinated lamp (Fig. 13:13) next to the cave's wall, with a convex ring base and traces of soot, were discovered. The wick-hole of the latter is surrounded by a sunken band and on its upper rear part the beginning of a lug handle was preserved. A shallow semicircular depression on one of its sides was possibly intended for placing a finger when the lamp was held. The lamp is typical of the second century BCE.
It seems that most of the ceramic assemblage is dated to the second half of the second century BCE, which may possibly be the date of Cave 102. It is noteworthy that no evidence of kokhim was discerned in the cave.

Cave 103 (No. 17 in the survey; Fig. 4)
The front of the cave was excavated to bedrock and no finds were discovered.

Cave 104 (Fig. 14)
This kokhim cave was filled with alluvium to the top of the kokhim (Fig. 15). The cave was only measured and not excavated. It consisted of a square chamber ( $3.4 \times 3.4 \mathrm{~m}$ ) and an entrance ( 0.85 m wide) in the east that was mostly destroyed. Three kokhim ( $0.5 \times 1.7-2.1 \mathrm{~m}$ ) were hewn in each of its western and northern walls. In the northeastern corner of the chamber was a small recess $(0.3 \times 0.5 \mathrm{~m})$ that may have served as a bone repository. The southern wall had no kokhim and in the eastern wall was a breach. The reasons for the absence of ossuaries in Cave 101 are probably valid with regard to this cave as well. Upon completing the documentation, the entrance was sealed and covered with stones and earth.

Point 105 (Fig. 4)
An opening ( 0.8 m wide) in the cliff of the upper bedrock terrace, c. 6 m south of Cave 104 , led to a blocked cavern that was neither examined nor surveyed.

Cave 106 (No. 20 in the survey; Fig. 16)
The cave, only partly excavated, was at the top of the slope, south of the hilltop. It included a corridor ( 1.3 m wide), blocked in its northern part with dark brown alluvium, 3 m of which were excavated and proved to be devoid of finds. The corridor was created by narrowing the bedrock benches on either of its sides, which were 0.3 m higher than the floor (Fig. 17). The nature of the corridor is unclear; the sloping of its floor from north to south seems to indicate that the entrance to the underground chamber was from the north. To its south was an open space without a ceiling, possibly a collapsed cave (Fig. 18).

Water Cistern 107 (Fig. 19)
A bell-shaped water cistern located east of the hillside. The lower part of the cistern's opening (diam. 0.7 m ) was bedrock-hewn (depth 0.8 m ) and the upper part consisted of three fieldstonebuilt courses (height 0.8 m ). The water in the cistern, which is still used to date by the local residents, reached a level of 6.7 m below the top. A square iron cover ( $0.5 \times 0.5 \mathrm{~m}$ ) overlies the top of the opening and a concrete surface ( $2.4 \times 3.5 \mathrm{~m}$ ) around it has two troughs one at either end.

Water Cistern 108 (No. 16 in the survey)
A cave was identified at this spot in the survey; however, in the wake of a backhoe-dug probe it was ascertained to be a plastered water cistern (diam. 4.6 m , depth c. 6 m ; Fig. 20), whose upper part was not preserved. At 3-6 m below the opening, which was visible on surface, a plastered water cistern whose ceiling and aperture were not preserved, was discerned (Fig. 21). Its sides were coated with a gray plaster layer, overlaid with a smooth plaster layer. On the lower part of the cistern's walls a third gray plaster layer that contained numerous small inclusions was applied. Small depressions and cavities were made in the smooth plaster layer so that it adhered to the gray layer with inclusions, which was common to the Second Temple period and enables us to date the cistern to the period when the burial caves were used.

## Numismatic Finds

Two coins were discovered on surface with the aid of a metal detector. One coin was of Constantius II (351-361 CE) and the other, a Mamluk coin.

The ceramic artifacts recovered from Cave 102 indicate a settlement dating to Iron Age II existed at the site. The occurrence of an arcosolium shows that this cave predated caves of a similar type ir Jerusalem. Arcosolia caves, common to the Shephelah, were initially described in research as a Phoenician or Egyptian type, dating to the Seleucid period. It is now known that Arcosolia caves dated to the third century CE. Arcosolia caves in Jerusalem were first dated to the Hasmonear period, e.g., the Eshkolot Cave, but it is currently suggested that their appearance in Jerusalem was a phenomenon of the first century CE and scholars assume that this burial type began to be usec only in the last decades of the Second Temple period. It is further presumed that the origin anc essence of arcosolia in Second Temple period Jerusalem can be traced to the internal development of burial forms, which provided answers to functional and halachic problems (see The Necropolis o Jerusalem in the Time of the Second Temple [2003]:39-40).
Cave 102 seems to contradict this assumption. Although the arcosolium in this cave is certain, it is irregular, has an inferior finish perhaps due to the poor quality of bedrock and it differs from the
well-hewn arcosolia caves that are dated to the beginning of the second century CE and particularly to the Byzantine period. The ceramic finds from the cave are mostly dated to the second half of the second century BCE and the provenance of the intact clay lamp seems to be from the cave itself rather than penetrating from outside in a phase postdating the use of the cave. One can therefore contend that the finds at Horbat 'Illit corroborate the claim that arcosolia caves existed in the Shephelah during the second century BCE.
Burial Caves 101, 104 point to a settlement from the first century BCE to the first century CE at the site. Furthermore, the evidence of a hiding refuge complex at the site alludes to the settlement's continuation until the time of the Bar-Kokhba Revolt, similar to most of the sites in the region. In addition to using this area as a burial site, the water cistern from the Second Temple period evinces agricultural activities in the region.


1. Route of separation fence and sites discovered in preliminary survey.

2. The ruin, general view, looking north.

3. View from ruin, looking east toward Hebron Hills and Gush `Ezyon.


4. Wall 1 , passing between two farming terraces.

5. Wall 1 , looking south.


1-1


8. Burial Cave 101, the southern wall and its two hewn kokhim.

9. Burial Cave 101, the breached ceiling of the southwestern kokh, looking northwest.

10. Cavern 101A, looking southwest



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13. Cave 102, pottery.

14. Burial Cave 104, plan and sections.

15. Burial Cave 104, northwestern corner and openings to kokhim, looking northwest.


18. Cave106, looking north.

19. Water Cistern 107, looking east.

20. Water Cistern 108, plan and sections.

21. Water Cistern 108, looking north.

## Horbat Kaduran*

Edna Amos
16/10/2007
During November 2003 a salvage excavation was conducted on the western slope of Horbat Kaduran, east of Highway 65, from the Golani Junction to Kefar Tabor (Permit No. A-4024*; map ref. NIG 2390/7340; OIG $1890 / 2340$ ), following the installation of a water pipeline from Kefar Qish to the Kadury Junction. The excavation, on behalf of the Antiquities Authority, was directed by E. Amos (surveying), with the assistance of $N$. Getzov and workmen from Bet She'an.

A half square ( $3 \times 4 \mathrm{~m}$; Fig. 1) was opened, revealing the remains of a building. The structure, which was part of the settlement that was abandoned in 1948, was built on top of bedrock that slopes to the west. On surface and on bedrock below a wall (W1) were potsherds from the Middle Bronze Age and the Roman-Byzantine period, as well as a few fragments of glazed Mamluk bowls. Another area (c. 10 sq m ) was examined c. 5 m northwest of the square. Bedrock was exposed several centimeters below surface. Numerous natural depressions were discerned on bedrock, containing potsherds from the Middle Bronze Age and the Roman period, as well as a fragment of a handle that belonged to a stone measuring cup, dating to the Early Roman period.


1. Plan and section.

## Horbat Kefira*



1. Location map

2. Burial cave and quarry, plans and sections.

3. Cave, looking north.

4. Quarry, looking south.

Gideon Solimany
8/11/2007
During April 2005 a salvage excavation was conducted at Horbat Kefira (Permit No. A-4448*; map ref. NIG 2094/6375; OIG 1594/1375). The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Defense, was directed by G. Solimany (photography), with the assistance of R. Abu-Halaf (administration), T. Kornfeld (surveying), O. Shor (pottery restoration) and C. Hersch (artifact drawing).

Two squares were opened at the confluence of Wadi al-Harfish and Nahal Kefira (Fig. 1). Area A was on the northern slope of Nahal Kefira and Area B, on the southern slope.

Area A. A rock-hewn burial cave was documented. A coherent plan of the cave could not be obtained because it was completely filled with alluvium (Figs. 2, 3). The openings to three kokhim were discerned in the western wall of the burial chamber $(1.3 \times 1.8 \mathrm{~m})$. A soil fill outside the entrance to the cave (L100), which had probably been removed from the cave by antiquities looters, was excavated. It contained fragments of pottery and glass vessels (Fig. $4: 2$ ), as well as crushed bones from the Early Roman period. A rock-hewn niche (L101) that proved to be a burial kokh $(0.5 \times 0.6 \times 1.3 \mathrm{~m})$ was excavated east of the cave entrance. A complete jar from the Early Roman period (Fig. 4:1) was found in it, resting on a layer of human bones, which were not examined. The kokh was part of another burial chamber to the south, which had completely collapsed.

Area B. An ancient stone quarry ( $2 \times 5 \mathrm{~m}$; Figs. 2, 5) filled with alluvium was excavated. Its wall was straight and on its western side were three cut steps. The floor was bedrock and natural soil that bore neither rock-cutting signs nor negatives of stones. The fill included a few non-diagnostic potsherds, which did not provide a date for the quarry. Based on the plan of the cave in Area A and the finds recovered therein, it can be dated to the Early Roman period (first century BCE-first century CE). The cave and the quarry were probably part of the Early Roman settlement in Nahal Kefira, situated several hundred meters to the west, next to 'En Kefira.


1. Location map.


2. Cave, looking north.

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4. Jar and fragments of glass vessels.

5. Quarry, looking south.

## Horbat Kenes*

## Leea Porat

13/6/2007
During November 2003 a trial excavation was conducted at Horbat Kenes in Karmi'el (Permit No. A-4035*; map ref. NIG 22780-5/75801-2; OIG 17780-5/25801-2), in the wake of constructing a sports ground. The excavation, on behalf of the Antiquities Authority and financed by the Karmi'el Municipality, was directed by L. Porat, assisted by A. Shapiro (surveying and drafting).

Two squares, one c. 3 m north of the church excavated in 1993 (ESI 15:25-27) and the other c. 20 northwest of it, were opened. Rock-hewn foundations and mosaic floors were mostly all that remained of the church. Bedrock was exposed $0.1-0.3 \mathrm{~m}$ below surface in both squares and no building remains were discovered. Several tesserae, a marble fragment and a few potsherds dating to the Byzantine period were collected. In addition to the excavation, bedrock was exposed in an area slated for construction, revealing no ancient remains; hence, it appears that the church was an isolated structure in the area.

## Horbat Kosit (South)*


2. The excavation areas, map.

4. Middle Bronze Age I pottery.

5. Area $A$, flint implements.

6. Area $B$, rock-cuttings and installations, plan.

12. Area $D$, Installation 509, looking southeast.

Amir Gorzalczany, Dori Inbar and Janet Abbas
12/6/2007
During February-March 2003 a salvage excavation was conducted along the planned route of Highway 9 , within the Cross-Israel Highway Project (Permit No. A-3823*; map ref. NIG 2014-20/7020-50; OIG 1514$20 / 2020-50$ ). The excavation, on behalf of the Antiquities Authority and funded by the Cross-Israel Highway, was directed by A. Gorzalczany and D. Inbar, with the assistance of J. Abbas (area supervision), S. Ya'aqov-Jam (administration), A. Hajian and T. Kornfeld (surveying), M. Shuiskaya-Arnov (drawing), H. Khalaily (flint implements), E. Barzilay (geomorphology), I. Berin (drafting), E. Oren (archaeological inspection and general assistance) and laborers from Umm el-Fahm. Additional assistance was provided by E. Yannai, Z. Horowitz and E. 'Awawdy.

The site, located east of Moshav Ma'or and Highway 581, is situated on a low hill of Eocene qirton of the 'Adulam formation and rock of the Mt. Scopus group, belonging to the Senonian epoch. The excavation area (Fig. 1) was c. 500 m south of Horbat Kosit, identified by A. Zertal as 'En-Kushi (Qadmoniot 38-39:84-86 [Hebrew]). Limited excavations at the site and nearby had been conducted in the past by E. 'Awawdy (Permit Nos. A-3499; A-3716) and A. Gorzalczany (HA-ESI 118)

Numerous cavities on surface that contained much fill were examined in four opened areas (Fig. 2). Most cavities were circular or elliptical and had a funnel-shaped cross-section. The geomorphologic report that investigated the origin of the cavities stated that they resulted from karstic activity and were apparently enlarged, sometimes using building additions and utilized by the people of the region. Ribbed potsherds dating to the Byzantine period and several Iron Age fragments were collected.

Area A. Several rock-cuttings, which contained fragments of pottery vessels from Middle Bronze Age I, were explored in the north of the area (Loci 131-133; Fig. 3). The potsherds included bowls (Fig. $4: 2-4,6$ ), cooking pots (Fig. $4: 1,5,7-10$ ), jars (Fig. 4:11-18), a teapot (Fig. 4:19), fragments with rope ornamentation (Fig. $4: 20-22$ ) and a juglet (Fig. 4:23). Other finds were fragments of animal bones, as well as several retouched and sickle blades in L131 (Fig. 5). The implements, made of high-quality dark brown Eocene flint, included four high-quality sickle blades missing a proximal end, which were knapped from a core with two percussion surfaces and shaped by a thin fine retouch (average width 3 cm ). The distal end was truncated by a semi-abrupt retouch. One of the tools was made on a backed-blade, with a minimum of retouch. The minimal amount of sickle sheen on the cutting working edge indicates that the tool was in use for a short time. In general, the sickle blades are wider than the average Canaanean blades common to the Early Bronze Age lithics and can therefore, be dated to Middle Bronze Age I.

Area B. Several rock-hewn installations were exposed (Fig. 6); one of them ( $1.0 \times 1.5 \mathrm{~m}$ ) was shallow and probably used for quarrying a masonry stone whose shape could be discerned.
A somewhat circular rock-hewn installation was discerned in the southern part of the area (L213; max. diam. 5 m ). Its southern wall was hewn smooth and straight and its northern wall was irregular. The installation consisted of two round rooms, a western ( $3 \times 5 \mathrm{~m}$ ) and an eastern one (1 $\times 3 \mathrm{~m}$ ), which faced north and contained potsherds from Middle Bronze Age I. The installation was probably a collapsed burial cave. A refuse pit in the northern part of the area contained potsherds from the Byzantine period (L225) and to its south was another hewn space, probably natural, that was expanded (L223).

Area C. Numerous karstic cavities were discovered (Fig. 7), containing cooking pots (Fig. 8: 1, 2) from the Iron Age, a krater (Fig. 8:3) from the Persian period, as well as fragments of kraters (Fig. $8: 4$ ), cooking pots (Fig. 8:5,6), jars (Fig. 8:7-10) and flasks (Fig. 8:11, 12) from the Byzantine period. The remains of two fieldstone-built structures, preserved a single course high, were uncovered. The eastern building (L319) was survived by its southwestern corner that comprised W327 ( 2 m long, $0.4-0.5 \mathrm{~m}$ wide), W328 ( 1.5 m long, 0.4 m wide) and a floor of various sized pebbles, abutting them. Another wall (W329; 1.2 m long, 0.4 m wide) was exposed 1.3 m south of the building's corner and along the same alignment as W327.
To the west of Building 319 was the southeastern corner of another building (L317) that consisted of a wall (W326; 1.3 m long, 0.4 m wide) and another wall segment that extended westward (W350).
The building remains were preserved in the karstic hollows of the area's lower part. It is assumed that other building parts, topographically higher, were destroyed when the area was cultivated. An installation, oriented east-west, was exposed in the north of the area. Three rock-hewn steps ( $0.5 \times 1.5 \mathrm{~m}$; height of first step 0.3 m , second step 0.35 m , third step 0.1 m ) descended to the west of the installation, leading to a hewn room, opening to the north, which probably was not completed and contained unidentifiable worn potsherds. Only the northern part of the installation was partially excavated. A round, bell-shaped pit (diam. 0.5 m , depth 1.8 m ), probably used as a water cistern, was exposed within the installation. The pit contained potsherds dating to Middle Bronze Age I, including a goblet base of the Megiddo family (Fig. 4:23), primarily known from burial assemblages at Megiddo and Ma'ayan Baruch ('Atiqot 3: Ill. 6:7 [Hebrew]) and rarely found in occupation layers.

Area D. A rock-hewn water cistern with a circular aperture (L500; diam. 0.5 m ; Figs. 9, 10) was exposed in the soft chalk bedrock at the foot of the hill, descending westward to the alluvial soil. Signs of other cisterns (Loci 501, 502) were discerned nearby, one of which was partly excavated. A shallow rock-hewn installation (L511) to the north of Cistern 500 was probably used as a channel conveying runoff to the cistern. To the north, segments of a shallow bedrock-hewn channel (Loci 503,504 ; total length $15 \mathrm{~m}, 0.4 \mathrm{~m}$ wide) were exposed; its eastern side was taller, straighter and smoother than its western side and it turned east at a right angle at the northern end (L505). Farther along the channel to the north was a wall section (W508; 5.5 m long, 1.5 m wide), oriented north-south, which served as a farming terrace that followed the contour line. The wall was built of
different sized fieldstones, some were roughly hewn. It seems the channel drained the surface runoff to the water cisterns in the south of the area. However, since the relationship between the water cisterns is not sufficiently clear, the possibility that the channel was part of W508's foundation trench, should not be negated. Some 30 m east of the channel, an opening to a square shaft (L509; $1.5 \times 2.3 \mathrm{~m}$; Figs. 11 , 12) that had five very steep rock-hewn steps, descending to the east, was exposed. The steps had different height and width and were well-preserved, except for the partly missing

The remains of two main periods were found at Horbat Kosit (South), Middle Bronze Age I and the Roman-Byzantine period. Several potsherds from the Iron Age and the Persian period were found on surface. The numerous caverns in the area were formed by karstic dissolution and used for water storage, burial and extraction of masonry stones. Evidence for the cultivation and the construction of farming terraces was noted at the site.
Remains of several buildings survived in the lower section of the area, yet none were found in the higher terraces, probably due to agricultural activities at the site.
The remains from Middle Bronze Age I relate to contemporary sites in the region, e.g., the cemetery and settlement at Migdal ('Atiqot $22: 1-8^{*}$ ), a robbed tomb at Horbat Kosit whose contents were found in a private house in Baqa al-Gharbiya, another tomb (HA-ESI 110:92*) and two sites excavated in Baqa al-Gharbiya (HA-ESI 114:41*) and in Horbat Borin (Permit No. A3542). Settlements from the Roman and Byzantine periods in the vicinity were excavated at Jatt ('Atiqot 37:36-45) and at Baqa al-Gharbiya (ESI 10:113)


1. Location map.

2. Area $A$, rock-hewn installations, plan.

3. Middle Bronze Age I pottery.

4. Area $A$, flint implements.


5. Area C, building remains, plan.

6. Iron Age, Persian and Byzantine pottery.


7. Area D, Water Cistern 500, looking south.

8. Area D, Installation 509, plan.

9. Area D, Installation 509, looking southeast.

## Horbat Kosit (South)*


2. The excavation areas, map.

4. Middle Bronze Age I pottery.

5. Area $A$, flint implements.

6. Area $B$, rock-cuttings and installations, plan.

12. Area $D$, Installation 509, looking southeast.

Amir Gorzalczany, Dori Inbar and Janet Abbas
12/6/2007
During February-March 2003 a salvage excavation was conducted along the planned route of Highway 9, within the Cross-Israel Highway Project (Permit No. A-3823*; map ref. NIG 2014-20/7020-50; OIG 1514$20 / 2020-50$ ). The excavation, on behalf of the Antiquities Authority and funded by the Cross-Israel Highway, was directed by A. Gorzalczany and D. Inbar, with the assistance of J. Abbas (area supervision), S. Ya'aqov-Jam (administration), A. Hajian and T. Kornfeld (surveying), M. Shuiskaya-Arnov (drawing), H. Khalaily (flint implements), E. Barzilay (geomorphology), I. Berin (drafting), E. Oren (archaeological inspection and general assistance) and laborers from Umm el-Fahm. Additional assistance was provided by E. Yannai, Z. Horowitz and E. 'Awawdy.

The site, located east of Moshav Ma'or and Highway 581, is situated on a low hill of Eocene qirton of the 'Adulam formation and rock of the Mt. Scopus group, belonging to the Senonian epoch. The excavation area (Fig. 1) was c. 500 m south of Horbat Kosit, identified by A. Zertal as 'En-Kushi (Qadmoniot 38-39:84-86 [Hebrew]). Limited excavations at the site and nearby had been conducted in the past by E. 'Awawdy (Permit Nos. A-3499; A-3716) and A. Gorzalczany (HA-ESI 118)

Numerous cavities on surface that contained much fill were examined in four opened areas (Fig. 2). Most cavities were circular or elliptical and had a funnel-shaped cross-section. The geomorphologic report that investigated the origin of the cavities stated that they resulted from karstic activity and were apparently enlarged, sometimes using building additions and utilized by the people of the region. Ribbed potsherds dating to the Byzantine period and several Iron Age fragments were collected.

Area A. Several rock-cuttings, which contained fragments of pottery vessels from Middle Bronze Age I, were explored in the north of the area (Loci 131-133; Fig. 3). The potsherds included bowls (Fig. $4: 2-4,6$ ), cooking pots (Fig. $4: 1,5,7-10$ ), jars (Fig. 4:11-18), a teapot (Fig. 4:19), fragments with rope ornamentation (Fig. $4: 20-22$ ) and a juglet (Fig. 4:23). Other finds were fragments of animal bones, as well as several retouched and sickle blades in L131 (Fig. 5). The implements, made of high-quality dark brown Eocene flint, included four high-quality sickle blades missing a proximal end, which were knapped from a core with two percussion surfaces and shaped by a thin fine retouch (average width 3 cm ). The distal end was truncated by a semi-abrupt retouch. One of the tools was made on a backed-blade, with a minimum of retouch. The minimal amount of sickle sheen on the cutting working edge indicates that the tool was in use for a short time. In general, the sickle blades are wider than the average Canaanean blades common to the Early Bronze Age lithics and can therefore, be dated to Middle Bronze Age I.

Area B. Several rock-hewn installations were exposed (Fig. 6); one of them ( $1.0 \times 1.5 \mathrm{~m}$ ) was shallow and probably used for quarrying a masonry stone whose shape could be discerned.
A somewhat circular rock-hewn installation was discerned in the southern part of the area (L213; max. diam. 5 m ). Its southern wall was hewn smooth and straight and its northern wall was irregular. The installation consisted of two round rooms, a western ( $3 \times 5 \mathrm{~m}$ ) and an eastern one (1 $\times 3 \mathrm{~m}$ ), which faced north and contained potsherds from Middle Bronze Age I. The installation was probably a collapsed burial cave. A refuse pit in the northern part of the area contained potsherds from the Byzantine period (L225) and to its south was another hewn space, probably natural, that was expanded (L223).

Area C. Numerous karstic cavities were discovered (Fig. 7), containing cooking pots (Fig. 8: 1, 2) from the Iron Age, a krater (Fig. 8:3) from the Persian period, as well as fragments of kraters (Fig. $8: 4$ ), cooking pots (Fig. 8:5,6), jars (Fig. 8:7-10) and flasks (Fig. 8:11, 12) from the Byzantine period. The remains of two fieldstone-built structures, preserved a single course high, were uncovered. The eastern building (L319) was survived by its southwestern corner that comprised W327 ( 2 m long, $0.4-0.5 \mathrm{~m}$ wide), W328 ( 1.5 m long, 0.4 m wide) and a floor of various sized pebbles, abutting them. Another wall (W329; 1.2 m long, 0.4 m wide) was exposed 1.3 m south of the building's corner and along the same alignment as W327.
To the west of Building 319 was the southeastern corner of another building (L317) that consisted of a wall (W326; 1.3 m long, 0.4 m wide) and another wall segment that extended westward (W350).
The building remains were preserved in the karstic hollows of the area's lower part. It is assumed that other building parts, topographically higher, were destroyed when the area was cultivated. An installation, oriented east-west, was exposed in the north of the area. Three rock-hewn steps ( $0.5 \times 1.5 \mathrm{~m}$; height of first step 0.3 m , second step 0.35 m , third step 0.1 m ) descended to the west of the installation, leading to a hewn room, opening to the north, which probably was not completed and contained unidentifiable worn potsherds. Only the northern part of the installation was partially excavated. A round, bell-shaped pit (diam. 0.5 m , depth 1.8 m ), probably used as a water cistern, was exposed within the installation. The pit contained potsherds dating to Middle Bronze Age I, including a goblet base of the Megiddo family (Fig. 4:23), primarily known from burial assemblages at Megiddo and Ma'ayan Baruch ('Atiqot 3: Ill. 6:7 [Hebrew]) and rarely found in occupation layers.

Area D. A rock-hewn water cistern with a circular aperture (L500; diam. 0.5 m ; Figs. 9, 10) was exposed in the soft chalk bedrock at the foot of the hill, descending westward to the alluvial soil. Signs of other cisterns (Loci 501, 502) were discerned nearby, one of which was partly excavated. A shallow rock-hewn installation (L511) to the north of Cistern 500 was probably used as a channel conveying runoff to the cistern. To the north, segments of a shallow bedrock-hewn channel (Loci 503,504 ; total length $15 \mathrm{~m}, 0.4 \mathrm{~m}$ wide) were exposed; its eastern side was taller, straighter and smoother than its western side and it turned east at a right angle at the northern end (L505). Farther along the channel to the north was a wall section (W508; 5.5 m long, 1.5 m wide), oriented north-south, which served as a farming terrace that followed the contour line. The wall was built of
different sized fieldstones, some were roughly hewn. It seems the channel drained the surface runoff to the water cisterns in the south of the area. However, since the relationship between the water cisterns is not sufficiently clear, the possibility that the channel was part of W508's foundation trench, should not be negated. Some 30 m east of the channel, an opening to a square shaft (L509; $1.5 \times 2.3 \mathrm{~m}$; Figs. 11,12 ) that had five very steep rock-hewn steps, descending to the east, was exposed. The steps had different height and width and were well-preserved, except for the partly missing

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1. Location map.

2. Area $A$, rock-hewn installations, plan.


3. Area $A$, flint implements.


4. Area C, building remains, plan.

5. Iron Age, Persian and Byzantine pottery.


6. Area D, Water Cistern 500, looking south.

7. Area D, Installation 509, plan.

8. Area D, Installation 509, looking southeast.

## Horbat Kosit (South)*


2. The excavation areas, map.

4. Middle Bronze Age I pottery.

5. Area $A$, flint implements.

6. Area B, rock-cuttings and installations, plan.

12. Area $D$, Installation 509, looking southeast.

Amir Gorzalczany, Dori Inbar and Janet Abbas
12/6/2007
During February-March 2003 a salvage excavation was conducted along the planned route of Highway 9, within the Cross-Israel Highway Project (Permit No. A-3823*; map ref. NIG 2014-20/7020-50; OIG 1514$20 / 2020-50$ ). The excavation, on behalf of the Antiquities Authority and funded by the Cross-Israel Highway, was directed by A. Gorzalczany and D. Inbar, with the assistance of J. Abbas (area supervision), S. Ya'aqov-Jam (administration), A. Hajian and T. Kornfeld (surveying), M. Shuiskaya-Arnov (drawing), H. Khalaily (flint implements), E. Barzilay (geomorphology), I. Berin (drafting), E. Oren (archaeological inspection and general assistance) and laborers from Umm el-Fahm. Additional assistance was provided by E. Yannai, Z. Horowitz and E. 'Awawdy.

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1. Location map.

2. Area $A$, rock-hewn installations, plan.


3. Area $A$, flint implements.


4. Area C, building remains, plan.

5. Iron Age, Persian and Byzantine pottery.


6. Area D, Water Cistern 500, looking south.

7. Area D, Installation 509, plan.

8. Area D, Installation 509, looking southeast.

## Horbat Liqit*

## Yoram Haimi

18/12/2007


1. Plan.

During February 2002, an excavation was conducted in Horbat Liqit (Permit No. A-3588*; map ref. NIG 18615-55/58112-79; OIG 13615-55/08112-79), for the purpose of exposing tombs in an area slated for the construction of a new residential neighborhood. The excavation, on behalf of the Antiquities Authority and financed by the Bedouin Administration, was directed by Y. Haimi, assisted by V. Essman and V. Pirsky (surveying and drafting).

An olive grove was uprooted from the area of the site $(50 \times 100 \mathrm{~m})$. Forty-four tombs that are characteristic of the Byzantine period (Fig. 1) were exposed at a depth of 2.3 m below surface
The tombs and the covering slabs are built of various-sized limestone blocks (length $1-2 \mathrm{~m}$, width $0.7-1.0 \mathrm{~m}$; Fig. 2). The tombs were not excavated.


1. Plan.

2. Tomb, looking west.

## Horbat Medav*

Eliezer Stern
10/6/2007


1. Plan.

During August 2003 a salvage excavation was conducted at Horbat Medav next to the village of Julis in the Western Galilee (Permit No. A-3970*; map ref. NIG 21670/76209; OIG 16670/26209), prior to the construction of a water pool. The excavation, on behalf of the Antiquities Authority and funded by the Meqorot Water Company, was directed by E. Stern, with the assistance of A. Dadush (administration), A. Shapiro (surveying) and D. Avshalom-Gorni (pottery consultation).
During the 1990s, M. Aviam exposed the remains of a monastery from the Byzantine period at Horbat Medav (Eretz Tsafon. Ed. Z. Gal, 2002:205*-209*).

The current excavation was located c. 50 m east of the wall that enclosed the monastery. An ashlar-built wall, oriented east-west, was discovered in a preliminary survey. A square (Fig.1) was opened to investigate this wall, which proved to be a farming terrace founded directly on natural bedrock and built of two rows of ashlar stones with debesh between them ( 0.8 m wide, 0.5 m preserved height). Potsherds dating to the Roman period (third century CE) were collected above bedrock.

It had been ascertained in previous surveys and in Aviam's excavation that the site was first settled in the Byzantine period. The present excavation indicates that initial activities at the site had already taken place in the Roman period.


1. Plan.

## Shimshit*


2. Area A, Roman road, plan.

3. Area B, winepress, plan and sections.

4. Winepress, the treading floor, looking west.

5. The collecting vat,
looking north.

6. Pottery.

Leea Porat
17/10/2007
During August-September 2002, an excavation was conducted in the Shimshit Forest (Permit No. A-3705*; map ref. NIG 2331-7/7384-8; OIG 1731-7/2384-8), aiming to expose a Roman road and a quarry. The excavation, on behalf of the Antiquities Authority and financed by the Jewish National Fund, was directed by L. Porat, with the assistance of V. Essman and V. Pirsky (surveying and drafting), H. Tahan (pottery drawing), D. Avshalom-Gorni (ceramic consultation) and D. Syon (numismatics).
Two areas were opened on the northern slope of the site. A section of the Roman road from Legio to Sepphoris (Fig. 1), between Mile XIII and Mile XIV (Yediot 25: 175-186) was exposed in Area A. A winepress and agricultural installations that were hewn in a stone quarry after it was no longer in use were excavated in Area B. A previous excavation that revealed remains of an Ottoman floor and farming terraces was located between the current excavation areas (HA-ESI 118). Potsherds that ranged in date from the Iron Age to the Byzantine period were recovered from a probe that was cut in an adjacent natural cave.

Area A. A section of the Roman road (length 12 m , width c. 6 m ; Fig. 2) paved with small fieldstones and oriented east-west was exposed. Large and medium-sized curbstones (length 0.300.55 m ) were preserved along its northern edge and a row of medium-sized stones ran parallel to and south of them. The southern edge of the road was supported on a bedrock ledge and had no curbstones. A few jars fragments from the Roman period and a coin of 'Abd al-Hamid I (17741789) were discovered.

Area B is located on a nari slope where ashlar stones were first hewn, followed by a winepress (Fig. 3 ) that consisted of a treading floor $(3.5 \times 5.0 \mathrm{~m})$ and a collecting vat ( $1.5 \times 1.5 \mathrm{~m}$, depth 1.89 m ) to its west. The square treading floor (L24) was coated with a thick layer of pink plaster embedded with potsherds and had a recess for the press bed (L26; $1.1 \times 1.2 \mathrm{~m}$, depth $0.45-0.53 \mathrm{~m}$; Fig. 4) hewn in its center. The press bed, which was not found, had a curved western side and three stones found there were used to stabilize it. A channel covered with stone slabs (length 1.2 m , width 0.4 $m$ ) led from the press bed to the collecting vat, whose walls were coated with a layer of gray plaster (thickness $5-10 \mathrm{~cm}$ ) and six hewn steps along its northern and eastern walls descended to its bottom (Fig. 5). The floor of the vat was paved with a coarse white mosaic (c. 30 tesserae per decimeter) and a circular plastered settling pit (diam. 0.5 m ) was cut in its northwestern corner. Three square cavities that may have been used to support an awning and a hole to hitch a donkey to were in the southern wall of the treading floor. Another hole was noted in a large stone lying west of the winepress. The potsherds embedded in the plaster dated to the Roman period (secondfourth centuries CE), whereas the potsherds recovered from the collecting vat (Fig. 6) dated to the Byzantine period (sixth-seventh centuries CE). It seems that the winepress was established in the Late Roman period and was used until the end of the Byzantine period.


1. Roman road, location map.

2. Area A, Roman road, plan.

3. Area $B$, winepress, plan and sections.

4. Winepress, the treading floor, looking west.

5. The collecting vat, looking north.


0
10
6. Pottery.

## Horbat Tohelet*

Tzach Kanias
20/12/2007


1. Area A, Square C3, plan.

2. Area A, Square A1, plan.

3. Pottery.

During April-May 2003 a trial excavation was conducted at Horbat Tohelet in Kefar Habad (Permit No. A3874*; map ref. NIG 1855-60/65563-600; OIG 1355-60/15563-600). The excavation, on behalf of the Antiquities Authority and funded by Kefar Habad, was directed by T. Kanias, with the assistance of A. Bachar (administration), A. Hajian (surveying), T. Sagiv (photography) and M. Shuiskaya-Arnov (drawing).

The ruin is located northwest of Kefar Habad, in a region of hamra soil mixed with modern refuse. Two excavation areas were opened, c. 500 m apart.

## Area A

Square C3. A section of a wall (W1; Fig. 1), built of large fieldstones, was exposed. The eastern side of the wall was abutted by a layer of tamped earth (L104), mixed with small stones and potsherds, including a bowl (Fig. 3:1) and jars (Fig. 3:6,7), dating to the Byzantine period.
Square A1. A wall stump (W2) was exposed inside a foundation trench (L101; width 0.9 m , depth 1.3 m ) that overlaid several layers of fill (Fig. 2):
I. A layer of plaster mixed with small stones and potsherds, such as a krater (Fig. 3:2), from the Byzantine period (L103).
II. A layer of Byzantine potsherds, mostly body fragments (L108) of jars (Fig. 3:3, 4).
III. A layer of wet alluvium mixed with Byzantine potsherds (L114), including a jar (Fig. 3:5). The foundation trench severed mud-brick material whose nature was unclear (L107).

## Area B

Square D3. A settling pit, dating to the time of the British Mandate, was exposed.


1. Area A, Square C3, plan.

2. Area A, Square A1, plan.


## Horbat Zanoah <br> Archive report

Haim Moyal
18/10/2007
During June 2003 a trial excavation was conducted on Nahal Dolev Street in Ramat Bet Shemesh (Permit No. A-3988*; map ref. NIG 1991-2001/6239-6250; OIG 1491-1501/1239-1250). The excavation, on behalf of the Antiquities Authority was conducted by H. Moyal.
A fill of soil and debris that was piled on top of rock-hewn installations, which had been exposed during previous excavations, was excavated and found devoid of finds.

## Horbat Tirat Tamra*



1. Plan.

2. Winepress 3, looking west.

Edna Amos
18/12/2007
During October 2003, a salvage excavation was conducted on a rocky ridge, c. 600 m east of Horbat Tirat Tamra in the Western Galilee (Permit No. A-4014*; map ref. NIG 2168/7509; OIG 1668/2509). The excavation, on behalf of the Antiquities Authority and financed by the Meqorot Water Company, was directed by E. Amos, assisted by V. Essman and V. Pirsky (surveying).

A large water cistern was cleaned and two simple winepresses, rock-cuttings and a farming terrace wall were exposed.

The water cistern had a rectangular aperture ( $1.0 \times 2.2 \mathrm{~m}$; Fig. 1:1), from which three steps descended into the installation ( $7 \times 10 \mathrm{~m}$, depth c. 4.5 m ) whose walls were coated with hydraulic plaster mixed with potsherds.
Next to the cistern was a simple bedrock-hewn winepress (Fig. 1:2), which consisted of an irregular-shaped treading surface that was linked by way of two perforations to a collecting vat ( 0.7 $\times 1.0 \mathrm{~m}$, depth 0.7 m ).
Another simple winepress (Fig. 1:3) had a carefully worked elliptical treading floor ( $1.3 \times 1.9 \mathrm{~m}$ ) with two perforations in its southern side that connected it to a collecting vat, which had not survived (Fig. 2).
Small rock-cuttings (Fig. 1:4-6) and a farming terrace wall (Fig. 1:7) were found to the west of Winepress 3.
It is apparent from the excavation that the rocky ridge east of the site was used for agricultural purposes. It was not possible to date the remains, although similar winepresses had been dated in the past to Middle Bronze II.


1. Plan.

2. Winepress 3 , looking west.

## Hura*



1. Plan.

2. Pottery and marble finds.

Nir-Shimshon Paran
7/11/2007
During June 2001 a salvage excavation was conducted at the entrance to the Bedouin settlement of Hura (Lot 602; Permit No. A-3440*; map ref. NIG 19284-96/57809-20; OIG 14284-96/07809-20). The excavation, on behalf of the Antiquities Authority and financed by the Hura Local Council, was directed by N.S. Paran, with the assistance of H. Lavi (administration), A. Hajian (surveying), S. Lavi (pottery restoration) and $\mathrm{N} . \mathrm{Ze}^{\prime} \mathrm{evi}$ (artifact drawing).

A watchman's booth, a section of a courtyard wall and a raised surface (Fig. 1), all dating to the Byzantine period or the beginning of the Early Islamic period (fifth-sixth centuries CE), were discovered on a hill, looking out to the west and south toward the Be'er Sheva' Valley and on the edge of the hills that continue to the north and east, south of the Judean Mountains.

The square watchman's booth ( $5.1 \times 5.5 \mathrm{~m}$ ) was enclosed on the northeast by Wall 6 (length 5.3 m , width 0.85 m , height 0.5 m ), on the southeast by Wall 5 (length 5.1 m , width 0.7 m , height 0.45 m ), on the southwest by Wall 2 (length 5.25 m , width 0.85 m , height 0.75 m ) and on the northwest by Wall 4 (length 5.15 m , width 0.75 m , height 0.75 m ). The walls, coated with white plaster on the interior and exterior, were built of roughly hewn flints for the two lower foundations courses and roughly hewn chalk stones for the upper courses. The entrance to the building, in the middle of W4, was survived by the southern doorjamb and the threshold, built of large stones that were leveled to the height of the top of the foundation course. A table or a stone-built shelf (W7; $0.35 \times 0.90 \mathrm{~m}$, height 0.35 m ) was exposed next to the southern corner of the building. The table was built after the structure was completed as indicated by the plastered wall behind it and the stone pavement beneath it. Another section of the pavement was preserved in the western corner of the building (L112). After W2 was erected, a raised rectangular surface (W3; length 5.15 m width 1.45 m , height $0.5-0.8 \mathrm{~m}$ ) was attached to it. The surface was also built of a flint foundation to the height of one or two courses and surmounted with chalk stone courses. The exposed sides of the surface were coated with plaster; between it and the wall of the building, the exterior plaster of the wall, which was different than that of the surface, was preserved. The upper level of the surface sloped to the south and its original height is unclear, as is its function. A wall (W1; length 8.3 m , width 0.6 m , height 0.75 m ) built of chalk stones without a foundation extended northwest from the northwestern corner of the building. Based on the manner of its construction, it seems that W1 delineated a courtyard, to the west of and adjacent to the watchman's booth. A section of a tamped earth floor was discovered in the corner formed by Walls 1 and 4 and apparently the plaster that coated W4 also covered the floor.
Below the southwestern corner of the raised surface (W3), a wall (W8; length 2.65 m , width 0.55 m , height 0.15 m ) oriented east-west was discovered. The wall predated the building but its connection to it remains unclear. The ceramic finds from the floor levels of the building and next to its walls were dated to the end of the Byzantine period or the beginning of the Early Islamic period (sixth-seventh centuries CE) and included Fine Byzantine Ware bowls (Fig. 2:1, 2), a Cypriot RedSlipped bowl of Form 9 (Fig. 2:3), kraters (Fig. 2:4-6), a cooking krater (Fig. 2:7), cooking pots (Fig. 2:8, 9), a jar (Fig. 2:10) and lids (Fig. 2:11-13), as well as a clay plug bearing a stamped impression (Fig. 2:14) and a fragment of a marble slab bearing an inscription (Fig. 2:15).

The structure was identified as a watchman's booth, the likes of which were abundantly discovered in the Be'er Sheva' Valley and its surroundings. The raised surface next to W2 renders it unique, since it is unknown in other contemporary watchman's booths. One may assume that the surface was intended for an activity connected with the booth and was used as a work surface on which agricultural produce was processed or dried.


1. Plan.


## 'Iraq Suweidan*

## Gregory Seriy

18/12/2007


1. Plan and section.

2. Stratum 1, pottery.

3. Stratum 2, pottery.

4. Stratum 3, pottery.

During September 2002 a trial excavation was conducted at the 'Iraq Suweidan site (Permit No. A-3721*; map ref. NIG 171185-225/617250-80; OIG 121185-225/117250-80, in the wake of widening Highway 35 (Ashqelon-Plugot Junction). The excavation, on behalf of the Antiquities Authority and financed by the Department of Public Works, was directed by G. Seriy, with the assistance of H. Lavi (administration), V. Pirsky (surveying and drafting), T. Sagiv (studio photography), A. Pikovski (pottery drawing), L. Kupershmidt (metallurgical laboratory) and D.T. Ariel (numismatics).

Three squares were opened; three occupation strata that had been disturbed by two trenches for communication lines were exposed (Fig. 1).

Stratum 1. This is the earliest stratum to which a large refuse pit (L110) is ascribed. The pit, situated in the eastern part of the excavation, contained numerous fragments of pottery vessels, including deformed ones and pieces of plaster and slag that indicate the presence of a nearby workshop. The variety of vessel types from the pit included red-slip bowls (Fig. 2:1), kraters (Fig. 2:2), different-sized cooking kraters (Fig. 2:3, 4), frying pans (Fig. 2:5), bag-shaped store jars (Fig. 2:6) and Gaza jars and juglets (Fig. 2:7), as well as a fragmentary clay figurine of a horse (Fig. $2: 8$ ), which is ascribed to the tradition of animal figurines found at sites from the Early Roman and the Byzantine periods in the south of the Land of Israel, reflecting the importance of horses and camels in the economy and daily life of these periods. Three folles were found; one from the time of Justinian I (527-537 CE; IAA 108195) and two, from the mint of Constantinople, the reign of Heraclius I (630-641 CE; with a counter mark, IAA 108194; 634/5 CE, IAA 108193).

Stratum 2. Remains of possibly two buildings were found. Two walls (W1, W2) that formed a corner were exposed in the western part of the area. A section of stone pavement (L106) abutted W2 on the south and another section of pavement was found north of W2. The walls (width c. 0.6 m ) were built of dressed kurkar stones and partially preserved a single course high.
A surface paved with small kurkar stones (L113) and a hearth (L114) above it was exposed c. 7 m east of these walls. A section of a stone pavement (L112; $2.5 \times 3.0 \mathrm{~m}$ ), composed of medium-sized kurkar stones, was exposed farther east. In the north, the pavement abutted on a wall (W3) of dressed kurkar stones and in the south, it abutted on a pilaster built of medium and large kurkar stones (W4). The wall adjacent to the pilaster had been destroyed by the communications trench The paving stones covered the pit from Stratum 1 and it therefore seems that the remains of the building postdated the pit. Despite the disturbance caused by the installation of the communication wires, it is presumed that the remains belonged to one or two buildings. Numerous fragments of pottery vessels were found on the floors, including various bowls (Fig. 3:1-6, 21), deep kraters (Fig. 3:7, 8), cooking kraters and lids (Fig. 4:9, 13), cooking pots (Fig. 3:10-12), frying pans (Fig 3:14), juglets (Fig. 3:15, 16), jugs (Fig. 3:17), FIW-type jugs (Fig. 3:18) and jars (Fig. 3:19, 20). An Umayyad coin that was struck in Ramla was also found (c. 737 CE; IAA 108196). Based on these finds, one may assume that the two buildings whose remains were exposed in the excavation were built in the latter part of the Byzantine period and no longer functioned at the latest in the Umayyad period.

Stratum 3. The remains of a tamped-earth floor (L109) and a refuse pit (L111) that contained a large quantity of pottery vessels and metal objects (not illustrated) were exposed in the layer that sealed the Stratum 2 remains. The rich ceramic assemblage, including bowls (Fig. 4:1, 2), jars and amphoriskoi (Fig. $4: 3,4$ ) and a pipe (Fig. 4:5), dated the layer to the end of the Ottoman period and the British Mandate era.


2. Stratum 1, pottery.


4. Stratum 3, pottery.

## Jerusalem, Shikune Nusseiba (A)*



1. Quarry 2, looking east.

2. Quarry 3, looking northeast.

Zubair 'Adawi
27/2/2007
During August 2001 and June and August 2002 salvage excavations and documentation were conducted in three quarries $(1-3)$ in the Beit Hannina neighborhood of Jerusalem, prior to construction. The excavations (Permit No. A-3662*), on behalf of the Antiquities Authority and financed by A. Taiya ( 1 ; map ref. NIG 22110/63715; OIG 17110/13715); N. `Iit (2; map ref. NIG 22092/63769; OIG 17092/13769) and N. Abu Khalaf (3; map ref. NIG 22102/63724; OIG 17102/13724), were directed by Z. 'Adawi, with the assistance of A. Hajian, V. Essman and V. Pirsky (surveying), B. Zissu (photography), D. Weiss and L. Barda (GPS measurement), G. Solimany, T. De'adle, B. Tori and H. Abu Ta'a.

Quarries 1 and 3 were located on one hill, south of the road leading to Beit Hannina. Quarry 2 was located on another hilltop where some 30 quarries were recorded with the aid of GPS along its peak and upper sections. All three quarries were first exposed by mechanical equipment and later manually excavated. Intensive quarrying activity in the hard bedrock was evident in all three of them, yet no datable finds were discovered.

Quarry 1. The quarry is on the northwestern slope close to the hilltop. Three sections that were slated for construction were excavated. The upper alluvium layer overlaid a layer of quarrying debris. The quarrying in the first section (1-2 $\times 12 \mathrm{~m}$ ), which occupied the northwestern part of the excavation area, was done along 5-6 levels to a depth of 2 m in the east, west and south. The quarried stones had varied dimensions ( $0.6-0.9 \times 0.2-0.5 \times 0.3-0.9 \mathrm{~m})$. Hewn severance channels ( $5-7 \mathrm{~cm}$ ) were occasionally discovered around the stones that were slated for removal. The second section ( $8 \times 10 \mathrm{~m}$ ) was in the middle of the area's northern part. The quarrying was done in several levels to a depth of c .2 m , in an east and west direction. The stones were hewn in a variety of sizes $(0.5-1.0 \times 0.4-0.6 \times 0.3-0.5 \mathrm{~m})$ and the severance channels ranged from $5-10 \mathrm{~cm}$ in width. The quarrying in the third section was apparently performed in all directions, but the western part seems to have been damaged by mechanical equipment. The dimensions of the stones varied (0.5$2.0 \times 0.5-0.9 \times 0.3-0.4 \mathrm{~m}$ ) and the severance channels were c .10 cm wide.

Quarry 2 (Fig. 1), located at the top of the hill, was covered with three layers. The upper layer contained a few fieldstones that originated from modern rock-cutting, the second layer ( $2-3 \mathrm{~m}$ ) was dark brown and contained small and medium-sized fieldstones from the top of the hill and the third layer ( $0.3-0.5 \mathrm{~m}$ ) was white gravel (quarry debris) with stones that were removed from the quarry but their dressing was not completed. Three to four levels of rock-cutting were found in the quarry the upper level was severely damaged by modern quarrying that utilized explosives. The quarry (max. dimensions length c. 30 m , width c. 7.5 m depth below surface c. 4 m ) extended to the south beyond the boundaries of the excavation. The stones had varied dimensions (0.7-2.0 $\times 0.3-1.2 \times$ $0.3-0.5 \mathrm{~m}$ ) and the severance channels were $7-10 \mathrm{~cm}$ wide.

Quarry 3. Two sections, mostly exposed before the excavation, were discovered. The first in the west (max. dimensions 17.5 m long, 14 m wide; Fig. 2) was located in the middle of the hill's northern slope. The quarrying was done in several directions, thereby creating a 'courtyard' surrounded by walls, in which two openings that were meant to facilitate the removal of the extracted stones, were discerned. One opening (width 0.9 m ) was in the quarry's northern wall and the other (width 0.7 m )--in the southern wall. Furthermore, the quarrying activity created corners, steps and vertical surfaces that reached 7 m in height; some were very wide and others narrow and crowded. The dimensions of the hewn stones were varied ( $0.7-2.5 \times 0.3-0.7 \times 0.3-1.0 \mathrm{~m}$ ). Throughout the quarry rectangular and trapezoid severance channels ( $7-15 \mathrm{~cm}$ ) were discerned. An accumulation of alluvium at the bottom of the quarry, which included a small amount of quarrying debris that originated from the slope of the hill, overlaid a layer of quarrying debris (max. thickness 0.5 m ).

The second section was several meters east of the first and the scope of quarrying in it was smaller, reaching $3.5-4.0 \mathrm{~m}$ in depth. The quarrying was deepened to the bottom of the quarry in the middle of the northern wall and the opening that was thereby formed probably facilitated the removal of stones. The quarried stones had varied dimensions ( $0.4-2.5 \times 0.2-0.8 \times 0.3-1.0 \mathrm{~m}$ ). The severance channels had a maximum width of 10 cm . The 'courtyards' in the two quarries, as well as the openings and narrow steps on the upper level of the western section indicate intentional activities and advanced planning, which were mainly meant to allow the easy removal of stones.

The three quarries and the numerous other quarries that were discerned on the two hills probably served several sites in the vicinity, such as Kh. 'Addasa to the north (Survey of Jerusalem, the Northeastern Sector: Site 4), Kh. el-Biyar to the west (Archaeological Survey of the Hill Country of Benjamin: Site 319), Er-Ras to the south (Survey of Jerusalem, the Northeastern Sector: Site 114) and Tell el-Ful to the east.


1. Quarry 2, looking east.

2. Quarry 3, looking northeast.

## Jerusalem, `Ein el-Lauza



1. Location map.

2. Cave A, plan and section.

3. Cave B, plan and sections.

4. Cave C, plan.

Zubair 'Adawi
10/1/2007
During February 2003 a salvage excavation was conducted at 'Ein el-Lauza in the Silwan neighborhood of Jerusalem (Permit No. A-3824; map ref. NIG 22246/63028; OIG 17246/13028), after two natural caves were damaged during the paving of a street. The excavation, on behalf of the Antiquities Authority and financed by the Moriya Company, was directed by Z. Adawi, with the assistance of B. Tori, T. De'adle, Y. Nagar (physical anthropology), V. Pirsky (surveying and drafting) and D. Weiss (GPS).
The two caves, located at the bottom of one of the spurs descending to Nahal Qidron, c. 1 km south of the Dung Gate, are 50 m apart (Fig. 1).

Cave $\mathbf{A}$ has two chambers (Fig. 2), a round one (diam. 8 m ) and a rectangular one to its southeast. A substantial part of the ceiling collapsed. An excavation square was opened in the rectangular chamber. A dark gray layer that yielded a very large quantity of potsherds from Iron Age II was discovered beneath a layer of alluvium that contained modern material. Poorly preserved bones that were left in the cave represented at least five individuals, including a newly-born infant, a child, 2-4 years of age, two young people, 15-19 years of age and an adult, 30-40 years of age.

Cave B ( $5.5 \times 15.0 \mathrm{~m}$; 1 m high above the fill; Fig. 3) had three chambers, a square one in the south $(5.5 \times 7.0 \mathrm{~m})$, an oval one in the center $(4.0 \times 5.2 \mathrm{~m})$ and a round one in the north (diam. c. 3 m ). The original rectangular entry (width 0.75 m ), set in the cave's eastern wall, was outlined by a frame (width $0.75 \mathrm{~m} ; 0.5 \mathrm{~m}$ high above the base of the fill). The enclosing bedrock on the northeastern side of the cave was missing. A sounding was excavated widthwise across the southeastern part of the cave that had been damaged during the development work. The finds included fragments of pottery vessels from Iron Age II and scattered human bones in a poor state of preservation.

Cave C, next to Cave A, was not excavated (Fig. 4). It consisted of a rectangular chamber (c. $2.3 \times$ $3.0 \mathrm{~m} ; 0.85 \mathrm{~m}$ high above the fill) whose entry ( $0.47 \times 0.53 \mathrm{~m} ; 0.48 \mathrm{~m}$ high above the fill) was in the eastern side. A rolling stone was lying in situ, perpendicular to the entry. An opening in the southern wall (width 0.55 m , depth 1.45 m ) was probably a passage to another chamber or niche. Pottery vessels from the Early Roman period were found; skulls and bones of at least thirteen individuals were identified.


1. Location map.

2. Cave A, plan and section.

3. Cave $B$, plan and sections.


## Jerusalem, Ohel Yzhaq Synagogue



1. Early Roman Period, plan.

2. Early Roman Period, monumental staircase, looking south

3. The Byzantine secondary Cardo, looking southwest.

4. Crusader period, plan.

5. Mamluk public bath (Hammam), plan.

Hervé Barbé and Tawfik De'adle
18/2/2007
During 2004 and 2005 three seasons of archaeological excavations were conducted in the Ohel Yizhac Synagogue on Ha-Gāy Street, in the Old City of Jerusalem (Permit Nos. A-4128, A-4436; map ref. NIG 2220/6316; OIG 1720/1316), as part of rebuilding the synagogue. The excavations, on behalf of the Antiquity Authority and financed by Everest foundation, were directed by H. Barbe and T. De'adle, with the assistance of V. Essman and V. Pirsky (surveying), T. Sagiv (photography), D.T. Ariel (numismatics) and E. Boaretto (14Carbon dating).

The site was divided into areas, corresponding to the Ottoman buildings that are still standing. The initial results of the excavations are presented in a chronological order, from earliest to latest. The chronology is based on stratigraphical observations and a preliminary analysis of pottery and coins.

The Early Roman Period (first century BCE-first century CE; Fig. 1)
Two portions of a masonry core (W125 and W409; width over 3 m ), oriented north-south, were uncovered in the southeast corner of the excavated area, c. 7 m below the elevation of Haggay Street. A large staircase abutted the masonry on the east side (W416; Fig. 2). Three steps were exposed and a fourth was reached in a limited sounding. The second and third steps were covered with slabs, identical in the type of limestone, the dressing and the wear to those found on top of the masonry core. Three dry-stone walls, built of large masonry (W126, W127, W415), bordered the masonry core on the west side. Two walls of similar construction (W412, W413) were oriented east-west and linked up with W415. Several voussoirs, still in situ on W413, indicate that the inner face of these walls, built of limestone stretchers and dressed with a claw chisel, were the remains of a vaulted hall.
The excavation did not yet reach the floor of the vaulted hall. However, the lowest excavated layer coincided with a destruction layer (L4036) that comprised the collapsed stones of the vaulted hall (elevation of 723.7 m above sea level). Maps based on a topographical study of Jerusalem (L.H. Vincent and A.M. Steve. 1954. Jérusalem de l'Ancien Testament, Recherches d'archéologie et d'histoire, Pls. I, II) show contour lines at 720 m above sea level in the immediate surroundings of Ohel Yizhaq. Hence, the lowest point reached in the excavation is close to the floor/bedrock. A section of a wall (W215) was uncovered in the northwest corner of the excavation, in a probe beneath the flagstones of the Byzantine paved street (the secondary cardo). Its slightly damaged eastern face was apparently coated with a lime layer. Its western face abutted a paved floor (L2054) whose exposure was very limited. However, earlier work in this area had revealed a Herodian street, c. 1.7-2.1 m beneath the Byzantine street. The 1.8 m difference observed at our excavation between the level of the Byzantine flagstone street and that of the paved floor on the west side of W215, may suggest that the latter was a Herodian street.
The pottery in the destruction layer of the vaulted hall dated to the end of the Second Temple period (first century BCE-first century CE). The associated coins included issues dating to the prefect Ambibulus (11/12 CE; IAA 101904), Agrippa I ( $41 / 42$ CE; IAA $76762,76776,76777$ ) and the procurator Festus ( 59 CE; IAA 101906). None was later than the second year of the Jewish War (67/68 CE; IAA 76774, 101903, 101905). The deposits sealing these remains and the thickness of the fills (up to 2 m ) attest to the scale of the destruction, as well as to the leveling activities of subsequent rebuilding at the site.

The Roman Period (second-third centuries CE; Fig. 3)
The fills covering the Early Roman remains were cut by the foundation trench of a wall (W402; exposed length 4.9 m , thickness 1.2 m , average height 0.6 m ) whose base rested on the masonry core of the staircase (W409). It indicates that W402, oriented north-south, was not erected before the end of the first century CE. Some of the stones in W402 were more than 1 m long, rendering it a monumental aspect. To the east of W402, three additional walls (W407, W408 and W414) were built at a later stage, forming a closed rectangular space. Wall 414 abutted the east face of W402. It was oriented east-west and its north face consisted of large, dry-laid blocks, dressed with flat bosses, made with a punch or point, which were surrounded by claw-chiseled margins. The technique is similar to Herodian dressing and we presumed that the stones were re-used, although the general unity of construction disagrees with this hypothesis. In any case, the north face of W414 turned out to be the outer face of a building that extended southward. The west face of the north-south oriented W408 abutted the north face of W414 and its foundations rested on the steps of the Early Roman staircase. A few slabs that adjoined W408 belonged to a pavement whose west part corresponded to the top of the masonry core of the Herodian staircase. Two slit windows (height 1 m , width $0.6-0.7 \mathrm{~m}$, depth 1 m ) were in the inner face of W 408 , which was entirely coated with a lime layer, indicating the thickness of the wall. Wall 408 seemed to continue northward but no additional segment was found. Only the southern face of W407 was exposed in the present excavation; it was oriented the east-west and built of small stones.
The debris sealing these walls contained Roman pottery, dating to the second and third centuries CE, together with numerous fragments of roof tiles (tegulae and imbrices). Some of the tiles bore the GXF stamp of the Tenth Roman Legion (Fretensis), which was based in Jerusalem at that time. Among the coins dating to the same period, some were minted in Aelia Capitolina, the latest of which by the emperor Elagabalus (218-220 CE; IAA 76767, 76778).

The Byzantine Period (fourth-seventh centuries CE; Fig. 4)
This period is mainly represented by a relatively large section of the secondary cardo (L1057, L2038) that was oriented north-south (exposed length c. 14 m , width $3.0-3.5 \mathrm{~m}$; Fig. 5). The flagstones of this pavement, some of impressive size (length 1.6 m , width 1 m ), were laid diagonally in relation to the axis of the street. Grooves on some of the flagstones were meant to hold the chariot wheels. Their various orientations were apparently the result of street repairs.
One flagstone of the cardo was temporarily lifted to probe the fills beneath, aiming to obtain material concerning the construction of the street. Most of the pottery dated to the time of the city's destruction in 70 CE and a few potsherds, found immediately beneath the pavement, were clearly dated to the Byzantine period. The coins discovered in this probe should aid in refining the
chronology.
The façade of a building was built at the east edge of the flagstone street (W211 and W212). The base of W212 rested on the cardo's flagstones; one of the base stones was the shaft of a smal column, which clearly indicates repair. The foundations of W211 penetrated into the underlying fills, attesting to the absence of flagstones at the time of its construction. The building's doorway opened onto the street and was intentionally blocked during the Early Islamic period. It is assumed that the building was erected between the end of the Byzantine period and the beginning of the Early Islamic period.
The Byzantine period in the south part of the excavation is represented by a drain (L4008). Its west side was built of limestone ashlars and its east side had cut a large Early Roman wall (W402). A new wall (W404) that abutted the inner face of an earlier wall (W408) and whose foundation trench had cut the fills of the Roman period was built. It was constructed in two, south and north parts, leaving an empty space for the drain, which suggests that W404 and the drain, were contemporary. The drain flowed from east to west, toward the contemporaneous Ha-Gāy (El-Wad) Street, in the opposite direction of the site's natural topography.

The Early Islamic Period (eighth-eleventh centuries CE; Fig. 6)
A plaster floor (L1070) is attributed to this period, as well as a small wall (W209) that was built directly on the cardo flagstones and abutted the blocked doorway of the building (W214). Pottery fragments found in the fills between W209 and W211 (L2010) show that the building erected on the street was no longer in use during this period. However, the Byzantine street continued, albeit damaged and reduced in size.

The Crusader Period (twelfth-thirteenth centuries CE; Fig. 7)
During this period, a new building was erected over the east edge of the cardo, its north wall abutting the south corner of the Byzantine-period building. The façade of this building consisted of two walls (W134, W135), flanking a doorway that opened onto the street. The foundation trench of W135 had cut the plaster floor of the Early Islamic period. An east-west partition wall (W131) formed the south limit of a room. Its north face was coated with a lime layer and abutted, on the west side, a short wall (W132), which enclosed a small plastered structure (L1065), most likely a pool, whose walls were coated with two layers of plaster. The bottom plaster layer contained potsherds and the upper layer consisted of lime mixed with crushed potsherds, which rendered it a pink-orange hue. Since this technique clearly indicates that the coating was meant to be waterproof, the structure, undoubtedly, contained liquids. This building served, most likely, as a shop or a workshop. Documents dating to the Crusader period show that this street was called Tanners'/Curriers' Street and Furriers' Street, attesting to the presence of craftsmen who produced or sold leather and fur goods.
The date of the building is provided by the pottery found below and above its floor (L1062), attributed to the Crusader period (twelfth-thirteenth centuries CE). This dating is corroborated by an Ayyubid coin (al-'Adil I, 1198-1218 CE; IAA 76714). At a later date, when the doorway was still in use, a stone wall (W130) was erected against the outer face of the building, on the cardo flagstones. This small wall looks like a podium and may be part of a staircase masonry core. Some time later, but not after the fourteenth century CE, the doorway of the building was intentionally blocked (W136).
Farther south, part of the north doorjamb of an entrance (W410) was uncovered on the same axis and at the same elevation as the store/workshop building. This doorway, which was found blocked opened onto a room whose floor had been preserved. In the threshold area (L4025), the floor was made of small stones but in the rest of the room, it consisted of much worn flagstones (L4028). The debris found on this floor contained pottery dating to the Crusader period, indicating that, like the other building, the room ceased to be used at that time.
A new pavement (L4011), composed of large flagstones, was laid above Floor 4028, at a date ranging between the thirteenth century CE-when the other building was abandoned-and the beginning of the fourteenth century CE-the beginning of the public bath's construction (see below). Slabs and shafts of columns in secondary use, which were found farther east, seem to belong to Pavement 4011 that must have covered, originally, a large area. As this pavement was not connected with any architectural features, it is difficult to interpret, yet it may have been part of a Crusader-period street.

The Mamluk Period (fourteenth-fifteenth centuries CE; Fig. 8)
This period is represented by a public bath (hammam) that extended across the entire site. Despite some destruction in the central area, due to the construction of a water reservoir in the Ottoman period, and some limitations because of existing buildings, the excavation revealed the nearly complete plan of this hammam, including its west façade (W100, W200). The changing room (Fig. 9) was preserved in its entirety. A cross-ribbed vault covered a monumental door, which was flanked by benches on either side and was blocked at the end of the Mamluk period (end of fifteenth century CE). A drainage system (L1028) for emptying the latrines was preserved in the warm- dry rooms that led to the furnaces. The octagonal room was flanked by small rooms, one on the east and the other on the west. A similar plan existed for the warm-dry room located in the central part of the bath. During the 2005 season, part of an adjacent eastern room in a good state of preservation was uncovered. It had the base of a dome, with a few brick courses above W139, which was its easternmost border, whose interior décor was of stucco.
The pools (Loci 2055, 3025, 3026) that had plastered floors were built above the furnaces and produced steam while a double system of channels carried hot air. The first, leading from the furnaces, consisted of a network of closed channels built under the floors of the octagonal room and the two small rooms (L2040, L3027). The second, leading from the floors of the pools, ensured the circulation of hot air through pottery pipes to the warm-dry rooms. All the channels converged at the south end of the façade wall (W100), where the air was drawn up into a chimney (L1079). The material associated with the floors of these baths and their levels of abandonment can be attributed to the early fourteenth-late fifteenth centuries CE. A Carbon 14 analysis of mortar samples from the construction phase of the changing room and of samples of plaster that coated its walls after its conversion into a water reservoir, confirmed this dating. Although slightly smaller, the plan of this
bath is identical with that of Hammam al-Ayn, located immediately to the north of the excavated site. An archival text from the year 1531 allows us to identify the hammam on the site of Ohel Yizhaq with the Mamluk Hammam, known as Mustahamm Daraj al-Ayn.

The excavations at Ohel Yizhaq provide important results and most of all, new information regarding the different periods at the site. The discovery of a well-preserved public bath, dating to the fourteenth century CE, add to the knowledge of the town planning in an area of the city, which was drastically remodeled in the Mamluk period. Excavating a portion of the 'Secondary Cardo' contributes to our knowledge of this main street and allows a more precise dating of its construction and the duration of its use. The exposure of the Roman-period monumental remains, north of the Decumanus, including a wall with loopholes, evidences a fortification system and hints at the nature of military settlement at the site. This new data is relevant to the location of the Tenth Legion encampment in the city. The excavations also uncovered significant remains from the Second Temple period, which substantially contribute to the proposed reconstruction of the topography of this central part of Jerusalem in the last century of Jewish autonomy before the destruction of the temple.


1. Early Roman Period, plan.

2. Early Roman Period, monumental staircase, looking south

3. Roman Period, plan.


4. The Byzantine secondary Cardo, looking southwest.



5. Mamluk public bath (Hammam), plan.

6. Mamluk public bath, the changing room, looking east.

## Jerusalem, Ohel Yzhaq Synagogue



1. Early Roman Period, plan.

2. Early Roman Period, monumental staircase, looking south

3. The Byzantine secondary Cardo, looking southwest.

4. Crusader period, plan.

5. Mamluk public bath (Hammam), plan.

Hervé Barbé and Tawfik De'adle
18/2/2007
During 2004 and 2005 three seasons of archaeological excavations were conducted in the Ohel Yizhaq Synagogue on Ha-Gāy Street, in the Old City of Jerusalem (Permit Nos. A-4128, A-4436; map ref. NIG 2220/6316; OIG 1720/1316), as part of rebuilding the synagogue. The excavations, on behalf of the Antiquity Authority and financed by Everest foundation, were directed by H. Barbe and T. De'adle, with the assistance of V. Essman and V. Pirsky (surveying), T. Sagiv (photography), D.T. Ariel (numismatics) and E. Boaretto (14Carbon dating).

The site was divided into areas, corresponding to the Ottoman buildings that are still standing. The initial results of the excavations are presented in a chronological order, from earliest to latest. The chronology is based on stratigraphical observations and a preliminary analysis of pottery and coins.

The Early Roman Period (first century BCE-first century CE; Fig. 1)
Two portions of a masonry core (W125 and W409; width over 3 m ), oriented north-south, were uncovered in the southeast corner of the excavated area, c. 7 m below the elevation of Haggay Street. A large staircase abutted the masonry on the east side (W416; Fig. 2). Three steps were exposed and a fourth was reached in a limited sounding. The second and third steps were covered with slabs, identical in the type of limestone, the dressing and the wear to those found on top of the masonry core. Three dry-stone walls, built of large masonry (W126, W127, W415), bordered the masonry core on the west side. Two walls of similar construction (W412, W413) were oriented east-west and linked up with W415. Several voussoirs, still in situ on W413, indicate that the inner face of these walls, built of limestone stretchers and dressed with a claw chisel, were the remains of a vaulted hall.
The excavation did not yet reach the floor of the vaulted hall. However, the lowest excavated layer coincided with a destruction layer (L4036) that comprised the collapsed stones of the vaulted hall (elevation of 723.7 m above sea level). Maps based on a topographical study of Jerusalem (L.H. Vincent and A.M. Steve. 1954. Jérusalem de l'Ancien Testament, Recherches d'archéologie et d'histoire, Pls. I, II) show contour lines at 720 m above sea level in the immediate surroundings of Ohel Yizhaq. Hence, the lowest point reached in the excavation is close to the floor/bedrock. A section of a wall (W215) was uncovered in the northwest corner of the excavation, in a probe beneath the flagstones of the Byzantine paved street (the secondary cardo). Its slightly damaged eastern face was apparently coated with a lime layer. Its western face abutted a paved floor (L2054) whose exposure was very limited. However, earlier work in this area had revealed a Herodian street, c. 1.7-2.1 m beneath the Byzantine street. The 1.8 m difference observed at our excavation between the level of the Byzantine flagstone street and that of the paved floor on the west side of W215, may suggest that the latter was a Herodian street.
The pottery in the destruction layer of the vaulted hall dated to the end of the Second Temple period (first century BCE-first century CE). The associated coins included issues dating to the prefect Ambibulus (11/12 CE; IAA 101904), Agrippa I ( $41 / 42$ CE; IAA $76762,76776,76777$ ) and the procurator Festus ( 59 CE; IAA 101906). None was later than the second year of the Jewish War (67/68 CE; IAA 76774, 101903, 101905). The deposits sealing these remains and the thickness of the fills (up to 2 m ) attest to the scale of the destruction, as well as to the leveling activities of subsequent rebuilding at the site.

The Roman Period (second-third centuries CE; Fig. 3)
The fills covering the Early Roman remains were cut by the foundation trench of a wall (W402; exposed length 4.9 m , thickness 1.2 m , average height 0.6 m ) whose base rested on the masonry core of the staircase (W409). It indicates that W402, oriented north-south, was not erected before the end of the first century CE. Some of the stones in W402 were more than 1 m long, rendering it a monumental aspect. To the east of W402, three additional walls (W407, W408 and W414) were built at a later stage, forming a closed rectangular space. Wall 414 abutted the east face of W402. It was oriented east-west and its north face consisted of large, dry-laid blocks, dressed with flat bosses, made with a punch or point, which were surrounded by claw-chiseled margins. The technique is similar to Herodian dressing and we presumed that the stones were re-used, although the general unity of construction disagrees with this hypothesis. In any case, the north face of W414 turned out to be the outer face of a building that extended southward. The west face of the north-south oriented W408 abutted the north face of W414 and its foundations rested on the steps of the Early Roman staircase. A few slabs that adjoined W408 belonged to a pavement whose west part corresponded to the top of the masonry core of the Herodian staircase. Two slit windows (height 1 m , width $0.6-0.7 \mathrm{~m}$, depth 1 m ) were in the inner face of W 408 , which was entirely coated with a lime layer, indicating the thickness of the wall. Wall 408 seemed to continue northward but no additional segment was found. Only the southern face of W407 was exposed in the present excavation; it was oriented the east-west and built of small stones.
The debris sealing these walls contained Roman pottery, dating to the second and third centuries CE, together with numerous fragments of roof tiles (tegulae and imbrices). Some of the tiles bore the GXF stamp of the Tenth Roman Legion (Fretensis), which was based in Jerusalem at that time. Among the coins dating to the same period, some were minted in Aelia Capitolina, the latest of which by the emperor Elagabalus (218-220 CE; IAA 76767, 76778).

The Byzantine Period (fourth-seventh centuries CE; Fig. 4)
This period is mainly represented by a relatively large section of the secondary cardo (L1057, L2038) that was oriented north-south (exposed length c. 14 m , width $3.0-3.5 \mathrm{~m}$; Fig. 5). The flagstones of this pavement, some of impressive size (length 1.6 m , width 1 m ), were laid diagonally in relation to the axis of the street. Grooves on some of the flagstones were meant to hold the chariot wheels. Their various orientations were apparently the result of street repairs.
One flagstone of the cardo was temporarily lifted to probe the fills beneath, aiming to obtain material concerning the construction of the street. Most of the pottery dated to the time of the city's destruction in 70 CE and a few potsherds, found immediately beneath the pavement, were clearly dated to the Byzantine period. The coins discovered in this probe should aid in refining the
chronology.
The façade of a building was built at the east edge of the flagstone street (W211 and W212). The base of W212 rested on the cardo's flagstones; one of the base stones was the shaft of a smal column, which clearly indicates repair. The foundations of W211 penetrated into the underlying fills, attesting to the absence of flagstones at the time of its construction. The building's doorway opened onto the street and was intentionally blocked during the Early Islamic period. It is assumed that the building was erected between the end of the Byzantine period and the beginning of the Early Islamic period.
The Byzantine period in the south part of the excavation is represented by a drain (L4008). Its west side was built of limestone ashlars and its east side had cut a large Early Roman wall (W402). A new wall (W404) that abutted the inner face of an earlier wall (W408) and whose foundation trench had cut the fills of the Roman period was built. It was constructed in two, south and north parts, leaving an empty space for the drain, which suggests that W404 and the drain, were contemporary. The drain flowed from east to west, toward the contemporaneous Ha-Gāy (El-Wad) Street, in the opposite direction of the site's natural topography.

The Early Islamic Period (eighth-eleventh centuries CE; Fig. 6)
A plaster floor (L1070) is attributed to this period, as well as a small wall (W209) that was built directly on the cardo flagstones and abutted the blocked doorway of the building (W214). Pottery fragments found in the fills between W209 and W211 (L2010) show that the building erected on the street was no longer in use during this period. However, the Byzantine street continued, albeit damaged and reduced in size.

The Crusader Period (twelfth-thirteenth centuries CE; Fig. 7)
During this period, a new building was erected over the east edge of the cardo, its north wall abutting the south corner of the Byzantine-period building. The façade of this building consisted of two walls (W134, W135), flanking a doorway that opened onto the street. The foundation trench of W135 had cut the plaster floor of the Early Islamic period. An east-west partition wall (W131) formed the south limit of a room. Its north face was coated with a lime layer and abutted, on the west side, a short wall (W132), which enclosed a small plastered structure (L1065), most likely a pool, whose walls were coated with two layers of plaster. The bottom plaster layer contained potsherds and the upper layer consisted of lime mixed with crushed potsherds, which rendered it a pink-orange hue. Since this technique clearly indicates that the coating was meant to be waterproof, the structure, undoubtedly, contained liquids. This building served, most likely, as a shop or a workshop. Documents dating to the Crusader period show that this street was called Tanners'/Curriers' Street and Furriers' Street, attesting to the presence of craftsmen who produced or sold leather and fur goods.
The date of the building is provided by the pottery found below and above its floor (L1062), attributed to the Crusader period (twelfth-thirteenth centuries CE). This dating is corroborated by an Ayyubid coin (al-'Adil I, 1198-1218 CE; IAA 76714). At a later date, when the doorway was still in use, a stone wall (W130) was erected against the outer face of the building, on the cardo flagstones. This small wall looks like a podium and may be part of a staircase masonry core. Some time later, but not after the fourteenth century CE, the doorway of the building was intentionally blocked (W136).
Farther south, part of the north doorjamb of an entrance (W410) was uncovered on the same axis and at the same elevation as the store/workshop building. This doorway, which was found blocked opened onto a room whose floor had been preserved. In the threshold area (L4025), the floor was made of small stones but in the rest of the room, it consisted of much worn flagstones (L4028). The debris found on this floor contained pottery dating to the Crusader period, indicating that, like the other building, the room ceased to be used at that time.
A new pavement (L4011), composed of large flagstones, was laid above Floor 4028, at a date ranging between the thirteenth century CE-when the other building was abandoned-and the beginning of the fourteenth century CE-the beginning of the public bath's construction (see below). Slabs and shafts of columns in secondary use, which were found farther east, seem to belong to Pavement 4011 that must have covered, originally, a large area. As this pavement was not connected with any architectural features, it is difficult to interpret, yet it may have been part of a Crusader-period street.

The Mamluk Period (fourteenth-fifteenth centuries CE; Fig. 8)
This period is represented by a public bath (hammam) that extended across the entire site. Despite some destruction in the central area, due to the construction of a water reservoir in the Ottoman period, and some limitations because of existing buildings, the excavation revealed the nearly complete plan of this hammam, including its west façade (W100, W200). The changing room (Fig. 9) was preserved in its entirety. A cross-ribbed vault covered a monumental door, which was flanked by benches on either side and was blocked at the end of the Mamluk period (end of fifteenth century CE). A drainage system (L1028) for emptying the latrines was preserved in the warm- dry rooms that led to the furnaces. The octagonal room was flanked by small rooms, one on the east and the other on the west. A similar plan existed for the warm-dry room located in the central part of the bath. During the 2005 season, part of an adjacent eastern room in a good state of preservation was uncovered. It had the base of a dome, with a few brick courses above W139, which was its easternmost border, whose interior décor was of stucco.
The pools (Loci 2055, 3025, 3026) that had plastered floors were built above the furnaces and produced steam while a double system of channels carried hot air. The first, leading from the furnaces, consisted of a network of closed channels built under the floors of the octagonal room and the two small rooms (L2040, L3027). The second, leading from the floors of the pools, ensured the circulation of hot air through pottery pipes to the warm-dry rooms. All the channels converged at the south end of the façade wall (W100), where the air was drawn up into a chimney (L1079). The material associated with the floors of these baths and their levels of abandonment can be attributed to the early fourteenth-late fifteenth centuries CE. A Carbon 14 analysis of mortar samples from the construction phase of the changing room and of samples of plaster that coated its walls after its conversion into a water reservoir, confirmed this dating. Although slightly smaller, the plan of this
bath is identical with that of Hammam al-Ayn, located immediately to the north of the excavated site. An archival text from the year 1531 allows us to identify the hammam on the site of Ohel Yizhaq with the Mamluk Hammam, known as Mustahamm Daraj al-Ayn.

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1. Early Roman Period, plan.

2. Early Roman Period, monumental staircase, looking south

3. Roman Period, plan.


4. The Byzantine secondary Cardo, looking southwest.



5. Mamluk public bath (Hammam), plan.

6. Mamluk public bath, the changing room, looking east.

## Jerusalem, 'Issawiya



1. Caves $A$ and $B$, plan and sections.

2. Cave A, Kokh 2, looking south.

3. Cave A, Kokhim 6, 7 and the stone that closed the entrance to Cave B, looking west.

4. Caves A and B,
looking southeast. The in situ stone on the left is placed where the quarrymen damaged the wall of Cave A.

Amit Re'em and Rafeh Abu Raya
11/3/2007
During August 2000 a burial cave was documented in the 'Issawiya neighborhood, near Jerusalem, (map ref. NIG 22347/63416; OIG 17347/13416) in the wake of its discovery during development work. The documentation was performed by A. Re'em and R. Abu Raya, with the assistance of L. Di Segni (inscription reading).

The eastern side of the cave was breached by a bulldozer. Local residents said that the cave was discovered and plundered in 1963. The ossuaries removed from the cave had eventually found their way to the Rockefeller Museum, but we could not trace them. The cave was indeed devoid of finds.

The cave (A; Fig. 1) was hewn in soft chalk bedrock and consisted of an almost square burial chamber ( $2.3 \times 2.5 \mathrm{~m}$ ) whose walls were plastered, owing to the poor condition of the bedrock. Ground potsherds, gravel and lime were mixed with the light gray plaster (c. 4 mm thick), which was applied to the ceiling of the cave only where bedrock crumbled.
The entrance (width 0.5 m , thickness 0.4 , height 0.65 m ) was in the southern wall and had a vaulted top. Rock-hewn steps, which were not preserved, descended from the entrance to the burial chamber. A hole borne in the ceiling of the burial chamber next to the entrance was probably part of a closing mechanism; a pivoted door had possibly shut the entrance.
Burial kokhim were hewn in all the walls of the chamber, save the western wall. Two kokhim (length 2.5 m , width 0.5 m , height 0.6 m ) were in the southern wall. The eastern one of these kokhim (Kokh 2) had two levels. The bottom level was trough-like and covered with stone slabs, two of which were preserved (width 0.7 m , length 0.5 m , average width 0.15 m ). Three kokhim (length 2 m , width 0.5 m , average height 0.6 m ) were in the eastern wall. Kokh 3 had two levels, similar to Kokh 2, and a single stone slab that covered the burial trough was found. Two kokhim (length 1.5 m , width 0.5 m , average height 0.6 m ) were in the northern wall.
The kokhim were sealed with stone slabs $(0.5 \times 0.5 \mathrm{~m})$ whose inside edges were carved to fit the size of the opening (Fig. 2). The space between the stone slab and the kokh's entry was plastered and plaster remains were noted around the entry to Kokh 7.
The entries to the 2 -leveled kokhim (Nos. 2, 3) were completely sealed and plastered over as part of the plaster that was applied to the cave. It was probably done in an attempt to camouflage them, since the heads of the family or other important people were interred there.
A four-line Greek inscription was engraved in cursive script on the plaster of the southern wall, above Kokh 2, ascribing the tomb to the Kyros family:

## Eugenia

and Atochnia
(daughters) of Kyros
of Kyro
The cave's eastern wall had probably been damaged in antiquity when another burial cave (B; Fig. 1) was quarried. The breach was sealed with ashlar stones located nearby, not in situ. Cave B apparently consisted of a rectangular chamber $(1.7 \times 2.4 \mathrm{~m})$ that was not preserved due to the bulldozer's damage. The entrance to the chamber was on the south and sealed with a stone, found in situ (Figs. 3, 4).

No datable finds were recovered; however, based on the method of burial that is known from burial caves nearby (HA-ESI 111:85-86), Cave A should be dated to the latter part of the Second Temple period.


1. Caves $A$ and $B$, plan and sections.

2. Cave A, Kokh 2, looking south.

3. Cave A, Kokhim 6, 7 and the stone that closed the entrance to Cave B, looking west.

4. Caves $A$ and $B$, looking southeast. The in situ stone on the left is placed where the quarrymen damaged the wall of Cave $A$.

## Jerusalem, 'Issawiya



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2. Cave A, Kokh 2, looking south.

3. Cave A, Kokhim 6, 7 and the stone that closed the entrance to Cave B, looking west.

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Amit Re'em and Rafeh Abu Raya
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The entrance (width 0.5 m , thickness 0.4 , height 0.65 m ) was in the southern wall and had a vaulted top. Rock-hewn steps, which were not preserved, descended from the entrance to the burial chamber. A hole borne in the ceiling of the burial chamber next to the entrance was probably part of a closing mechanism; a pivoted door had possibly shut the entrance.
Burial kokhim were hewn in all the walls of the chamber, save the western wall. Two kokhim (length 2.5 m , width 0.5 m , height 0.6 m ) were in the southern wall. The eastern one of these kokhim (Kokh 2) had two levels. The bottom level was trough-like and covered with stone slabs, two of which were preserved (width 0.7 m , length 0.5 m , average width 0.15 m ). Three kokhim (length 2 m , width 0.5 m , average height 0.6 m ) were in the eastern wall. Kokh 3 had two levels, similar to Kokh 2, and a single stone slab that covered the burial trough was found. Two kokhim (length 1.5 m , width 0.5 m , average height 0.6 m ) were in the northern wall.
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A four-line Greek inscription was engraved in cursive script on the plaster of the southern wall, above Kokh 2, ascribing the tomb to the Kyros family:

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The cave's eastern wall had probably been damaged in antiquity when another burial cave (B; Fig, 1) was quarried. The breach was sealed with ashlar stones located nearby, not in situ. Cave B apparently consisted of a rectangular chamber $(1.7 \times 2.4 \mathrm{~m})$ that was not preserved due to the bulldozer's damage. The entrance to the chamber was on the south and sealed with a stone, found in situ (Figs. 3, 4).

No datable finds were recovered; however, based on the method of burial that is known from burial caves nearby (HA-ESI 111:85-86), Cave A should be dated to the latter part of the Second Temple period.


1. Caves $A$ and $B$, plan and sections.

2. Cave A, Kokh 2, looking south.

3. Cave A, Kokhim 6, 7 and the stone that closed the entrance to Cave B, looking west.

4. Caves $A$ and $B$, looking southeast. The in situ stone on the left is placed where the quarrymen damaged the wall of Cave $A$.

## Jerusalem, Highway 9*


4. Coin.

During November 2001, a salvage excavation was conducted in 'Emeq Ha-Arazim northwest of the Mē Neftoah village (Permit No. A-3533*; map ref. NIG 21848-62/63453-62;
OIG $16848-62 / 13453-62$; Fig. 1), in the wake of damage to antiquities caused during the paving of Highway 9. The excavation, on behalf of the Antiquities Authority, was directed by R. Avner and A. EirikhRose, with the assistance of V. Essman and V. Pirsky (surveying), B. Zissu (field photography), Y. Bukengolts (pottery restoration), I. Lidsky (pottery drawing), D.T. Ariel (numismatics) and A. de-Groot (pottery reading and scientific assistance).

The site had been destroyed in the past, probably when the area was prepared for the plantation the pine forests. Its walls were ruined and their stones were pushed aside by heavy machinery prior to the salvage excavation. A cluster of potsherds discovered near the stones induced the salvage excavation.
A level (L4; Fig. 2) that was probably the remains of an earthen floor, overlaid with layers of potsherds from the Persian period, was uncovered. Two plastered pits, which contained fill and potsherds that dated to the same period, were exposed c .16 m southwest of the floor and c. 26 m to its south.

The Floor. Two squares were excavated where the pottery cluster and the stones occurred. The earthen floor was found only in the northeastern part of the northwestern square. Along the southwestern border of the floor small grains of crumbling charcoal were discerned in the soil amongst the potsherds and below them. The small and sparse amount of charcoal precluded Radiocarbon dating or its botanical identification. The soil with charcoal grains superposed a natural straight bedrock surface that was overlaid with potsherds, similar to those above the floor.

The Western Pit. A plastered bell-shaped pit (L3; width at bottom 5.2 m , preserved height 4.3 m ) was discovered c. 15 m southwest of the excavation squares. It was damaged and only its northern half was partially preserved. The walls of the pit were built of medium-sized, carelessly dressed stones, bound with gray-white plaster (c. 4 cm thick), which was also applied to its bottom.

The Southern Pit. The remains of another pit (L6; max. preserved height 1.6 m ) were discovered c. 26 m southeast of Pit 3 . The bottom of Pit 6 was a straight bedrock surface, plastered with a pale yellow chalky material ( 2 cm thick). Most of the pit was damaged and its walls were preserved only in the east and south. It was impossible to reconstruct its diameter; however, based on the incline of the walls it seems to have been also bell-shaped and built in a similar manner as Pit 3.

The Ceramic Finds. The pottery assemblages from the pits and the floor are homogenous. The vessels are produced of local marl clay from the Moza Formation, which has a pink-orange hue and is mixed with small and medium-sized white temper. The fragments include bowls (Fig. 3:1-6), mortaria (Fig. 3:8, 9), kraters (Fig. 3:7, 10, 11), cooking pots (Fig. 3:12, 13) and jars (Fig. 3:1417). The assemblage is similar to that from the Holyland site ('Atiqot $40: 7-11$, Figs. 6-10; 17-19, Figs. 15,16 ) and it dates to the sixth-fifth centuries BCE.

The Coins. A YHD coin dated to the years 270-247 BCE (IAA No. 95639; Fig. 4; 'Atiqot 41, II:288, Table 3) was found with jar body fragments on Floor 4.
The site should be dated to the sixth-fifth centuries BCE based on the homogenous pottery assemblage. The beginning of the site was apparently in the Persian period and it continued into the beginning of the Hellenistic period, as indicated by the YHD coin.


1. Location map.

2. Plan of the site.


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3. Pottery.


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(Reg. No. 1018, IAA 95639).
Yehud, c. 270-246 BCE.
Obv. Diademed head of Ptolemy I r.
Rev. [yhod]
§े, $\uparrow, 16 \mathrm{~mm}, 0.19 \mathrm{gm}$.
Y. Meshorer A Treasury of Jewish Coins from the Fersian Period to Bar Kochba.

Jerusalem and Nyack. 2001. P. 200, No. 32. This coinfind has been discussed in
'Atiqu' 41 (2002): 287-290.
4. Coin.

## Jerusalem, Highway 9*


4. Coin.

During November 2001, a salvage excavation was conducted in 'Emeq Ha-Arazim northwest of the Mē Neftoah village (Permit No. A-3533*; map ref. NIG 21848-62/63453-62;
OIG $16848-62 / 13453-62$; Fig. 1), in the wake of damage to antiquities caused during the paving of Highway 9. The excavation, on behalf of the Antiquities Authority, was directed by R. Avner and A. EirikhRose, with the assistance of V. Essman and V. Pirsky (surveying), B. Zissu (field photography), Y. Bukengolts (pottery restoration), I. Lidsky (pottery drawing), D.T. Ariel (numismatics) and A. de-Groot (pottery reading and scientific assistance).

The site had been destroyed in the past, probably when the area was prepared for the plantation the pine forests. Its walls were ruined and their stones were pushed aside by heavy machinery prior to the salvage excavation. A cluster of potsherds discovered near the stones induced the salvage excavation.
A level (L4; Fig. 2) that was probably the remains of an earthen floor, overlaid with layers of potsherds from the Persian period, was uncovered. Two plastered pits, which contained fill and potsherds that dated to the same period, were exposed c .16 m southwest of the floor and c. 26 m to its south.

The Floor. Two squares were excavated where the pottery cluster and the stones occurred. The earthen floor was found only in the northeastern part of the northwestern square. Along the southwestern border of the floor small grains of crumbling charcoal were discerned in the soil amongst the potsherds and below them. The small and sparse amount of charcoal precluded Radiocarbon dating or its botanical identification. The soil with charcoal grains superposed a natural straight bedrock surface that was overlaid with potsherds, similar to those above the floor.

The Western Pit. A plastered bell-shaped pit (L3; width at bottom 5.2 m , preserved height 4.3 m ) was discovered c. 15 m southwest of the excavation squares. It was damaged and only its northern half was partially preserved. The walls of the pit were built of medium-sized, carelessly dressed stones, bound with gray-white plaster (c. 4 cm thick), which was also applied to its bottom.

The Southern Pit. The remains of another pit (L6; max. preserved height 1.6 m ) were discovered c. 26 m southeast of Pit 3 . The bottom of Pit 6 was a straight bedrock surface, plastered with a pale yellow chalky material ( 2 cm thick). Most of the pit was damaged and its walls were preserved only in the east and south. It was impossible to reconstruct its diameter; however, based on the incline of the walls it seems to have been also bell-shaped and built in a similar manner as Pit 3.

The Ceramic Finds. The pottery assemblages from the pits and the floor are homogenous. The vessels are produced of local marl clay from the Moza Formation, which has a pink-orange hue and is mixed with small and medium-sized white temper. The fragments include bowls (Fig. 3:1-6), mortaria (Fig. 3:8, 9), kraters (Fig. 3:7, 10, 11), cooking pots (Fig. 3:12, 13) and jars (Fig. 3:1417). The assemblage is similar to that from the Holyland site ('Atiqot $40: 7-11$, Figs. 6-10; 17-19, Figs. 15,16 ) and it dates to the sixth-fifth centuries BCE.

The Coins. A YHD coin dated to the years 270-247 BCE (IAA No. 95639; Fig. 4; 'Atiqot 41, II:288, Table 3) was found with jar body fragments on Floor 4.
The site should be dated to the sixth-fifth centuries BCE based on the homogenous pottery assemblage. The beginning of the site was apparently in the Persian period and it continued into the beginning of the Hellenistic period, as indicated by the YHD coin.


1. Location map.

2. Plan of the site.


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3. Pottery.


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(Reg. No. 1018, IAA 95639).
Yehud, c. 270-246 BCE.
Obv. Diademed head of Ptolemy I r.
Rev. [ybal]
§े, $\uparrow, 16 \mathrm{~mm}, 0.19 \mathrm{gm}$.
Y. Meshorer A Treasury of Jewish Coins from the Fersian Period to Bar Kochiba.

Jerusalem and Nyack. 2001. P. 200, No. 32. This coinfind has been discussed in
'Atiqu' 41 (2002): 287-290.
4. Coin.

## Jerusalem, Shikunē Nusseiba (B)*

Zubair 'Adawi
18/3/2007


1. Strata I-III, plan and sections.

2. Wall 31/33, overlaying Installation 320, looking east.

3. Pottery from the Byzantine period.

4. Installations 320 and 305, looking west.

5. Wall 43, looking north.

During August-September 2003 a salvage excavation was conducted in the Bet Hanina neighborhood (Permit No. A-3922*; map ref. NIG 22155/63712; OIG $17155 / 13712$ ). The excavation, on behalf of the Antiquities Authority and financed by the Bezeq Company, was directed by Z. 'Adawi, with the assistance of V. Essman and V. Pirsky (surveying), A. Pikovsky (pottery drawing), R. Bar-Nathan (pottery reading), R. Vinitzky (metallurgical laboratory), Y. Gorin-Rosen (glass) and G. Bijovsky (numismatics).

A square ( $4 \times 7 \mathrm{~m}$; Fig. 1) was opened at Kh. Hawanit (Survey of Jerusalem, the Northwestern Sector, 2003:46*), c. 500 m northwest of the Tell el-Ful peak. Three strata, dating from the Early Roman to the Byzantine periods were exposed. The finds included several walls and two installations, pottery, glass vessels and coins. The excavation, which did not reach bedrock, was preceded by a salvage excavation conducted by the author in 2000 (Permit No. A-3338) that revealed three rooms, two water cisterns and a section of a roadbed, dating from the Early Roman to the Byzantine periods.

Stratum I (Byzantine period; fourth-sixth centuries CE; Fig. 2)
Three walls (W30, W31, W33) built of various sized, roughly hewn stones, were discovered. Wall 30 ( $0.7-0.8 \mathrm{~m}$ wide) in the north was founded on a layer of fill that consisted of soil and small stones ( 0.3 m thick; Fig. 1: Section 4-4) and was preserved a single course high. The adjacent W31 and W33 ( 1 m wide) in the southern part of the square were probably two sides of the same wall whose connection to W30 is unclear. Wall $31 / 33$ filled and blocked an installation (L320; Figs. 3, 4) that was ascribed to Stratum II. The ceramic finds recovered from W31/33 foundations (Loci 317, 319; 0.3-0.5 m thick; Fig. 1: Section 3-3) included a pipe section fragment dating to the Late Roman period (Fig. 6:22) and a jar from the Byzantine period (Fig. 5:3). Wall 30 was dated to the Byzantine period, just as W31/33, based on its elevation, which was similar to the other wall, as well as the fact that it sealed Wall 34 below it, which belonged to Stratum II. The glass finds in the foundation fill of W34 (L312) was also dated to the Byzantine period.
Other ceramic artifacts that could be ascribed to Stratum I were discovered in the soil fill (L311) west of W31/33 and south of W30. They included two bowls (Fig. 5:1, 2), a jar (Fig. 5:4) and a lamp (Fig. 5:5), as well as vessels from the Late Roman period, namely two bowls (Fig. 6:9, 10) and four jars (Fig. 6:14, 16, 17, 19). Numerous fragments of glass vessels dating to the Byzantine and Late Byzantine periods, particularly the sixth-seventh centuries CE, were also found in the fill. These are known from many excavations in Jerusalem and its environs and include bowls with outfolded rims; bowls with rounded rims; bowls or beakers decorated with wound blue trails; wine glasses with rounded rims, decorated with thin, fused-in trails; wine glasses with hollowed ring bases and a fragment of a wine glass with a beaded stem; bottles with rounded rims, a cylindrical neck decorated with wound trails of darker hues than the vessel and concave bases. Also found were fragments of bowl-shaped oil lamps with three handles, bowl-shaped oil lamps with a wick tube in the center of base, oil lamp with hollow conical stem and several fragments of glass window panes.

Stratum II (Late Roman period; second-fourth centuries CE; Fig. 3)
Three walls (W34-W36) and two installations (Loci 305, 320; Fig. 7) were discovered. Wall 34 (0.8 m wide, preserved height 0.8 m ) was mostly built of large fieldstones below the foundation of W30 from Stratum I. Wall 34, which abutted W35 in the east (Fig. 1: Section 4-4), had a slight deviation to the north and was built on top of Wall 43, ascribed to Stratum III (Fig. 1: Section 1-1). It seems that W34 was connected to the two-installation complex and delimited it from the north. Wall 35 (width unknown, 1.25 m high; Fig. 1: Section 2-2) was built of small fieldstones and its exterior western side was incorporated in the construction of Installation 320. Wall 36 in the southeastern corner of the square was survived by two stones that formed a corner with W35.
Installation 320 was somewhat elliptical ( $1.8 \times 2.0 \mathrm{~m}$ ) and plastered. Its exterior wall (W39) was built of two rows of fieldstones and only one row of its northern wall (W37) was preserved. The two walls abutted W35 on the east (Fig. 1: Section 2-2). The floor of Installation 320 consisted of fieldstone slabs and several fired mud bricks. The foundations of Wall 31/33 from Stratum I superposed Installation 320. In a probe (L320A; Fig. 1: Section 4-4) excavated below the installation's floor, ceramic finds that included a cooking pot (Fig. 6:6) and a jug (Fig. 6:7) dating to the Early Roman period and two bowls (Fig. 6:8, 11), two casserole lids (Fig. 6:12, 13) and a jar (Fig. 6:15) from the Late Roman period were discovered.
Installation 305, adjacent to the western side of Installation 320 , was also elliptical ( $1.0 \times 1.2 \mathrm{~m}$ ) Its exterior wall (W41) was built of a single row of fieldstones and its western part was not excavated. It is unclear whether the several fieldstones discerned at the top level of Installation 305 's blocked it or were used as pavement. The installation yielded ceramic finds dating to the Early Roman period, including two bowls (Fig. 6:1, 2) and two cooking pots (Fig. 6:4,5), as well as a jar from the Late Roman period (Fig. 6:18). Some glass vessel fragments dating to the Late Roman period could be attributed to this stratum, including a vessel with a pad base and severa fragments of bowls with delicate, rounded rims that date to this period or even to an earlier phase in the Roman period.

Stratum III (Early Roman period, until 135 CE )
Wall 43 ( 0.9 m wide; Figs. 1: Sections 1-1, 3-3, 3), which lies below W34 and deviates slightly in its orientation (Fig. 8), should apparently be ascribed to this stratum. The wall was built of different sized fieldstones and only its upper course was exposed. It was severed by the foundation trench of W35 where a jar (Fig. 6:20) and a jug (Fig. 6:21) dating to the Late Roman period were discovered as well as pottery from the Early Roman period, including a cooking pot (Fig. 6:3).

Three coins, not found in situ, were identified out of the fourteen coins recovered from the excavation. Two coins are from the Byzantine period; one from the time of Constantius II, dating to the fourth century CE (351-361 CE; IAA 80717) and the second, also dating to the fourth century CE (364-375 CE; IAA 80719). The third coin is dated to the reign of Alexander Jannaeus (80/79-76

BCE; IAA 80718).
Although a limited area was excavated, the uncovered remains show that the site was occupied from the Early Roman until the Byzantine periods, which is consistent with the findings from the previous excavations at the site.


1. Strata I-III, plan and sections.



## שכבה II

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4. Wall 31/33, overlaying Installation 320, looking east.


6. Pottery from the early and late Roman period.

7. Installations 320 and 305, looking west.

8. Wall 43, looking north.

## Jerusalem, the Old City - the Jewish Quarter



1. The complete arch in the western corner of the Hurva Synagogue area, looking west.

Hillel Geva and Oren Gutfeld
8/5/2007
During 2005-2006 several short excavations were conducted in the area of the Hurva Synagogue and in the square to its east, in the Old City of Jerusalem. The excavations, on behalf of the Institute of Archaeology of the Hebrew University of Jerusalem, with the aid of the Israel Exploration Society and the funding by the Corporation for the Renovation and Development of the Jewish Quarter in the Old City of Jerusalem, Ltd. were directed by H. Geva and O. Gutfeld, with the assistance of R. Nenner-Soriano and B. Arubas (surveying).

The Hurva Square (Area N-2)
An excavation was conducted in October 2005 prior to placing a crane on the western side of the Hurva Square, next to the eastern wall of the synagogue (License No. B-301/2005). The excavated area was an extension to the west of Area $\mathrm{N}-2$ that was excavated in the 1970 s by N. Avigad within the framework of the archaeological expedition to the Jewish Quarter.

The area ( $4 \times 5 \mathrm{~m}$ ) was excavated to bedrock (depth 2 m ), revealing part of a room, whose northern and southern walls and a section of the floor survived. The walls, founded on bedrock and oriented east-west, were built of fieldstones and partly of dressed stones. An ashlar-built doorjamb was in the northern wall. Two small sections of the white mosaic floor in the room were preserved next to the northern and southern walls. The mosaic was set atop a bedding of small stones and light colored cement. Below the bedding was a soil fill ( 0.4 m thick) that contained a few potsherds from the time of the First and Second Temples, as well as several potsherds from the Byzantine and Early Islamic periods (?).

The building remains were part of a room from the Early Islamic period, associated with the built complex that was exposed east of Area $\mathrm{N}-2$ in the 1970 s. The remains may also be related to a room whose western part was discovered on the eastern side of the Hurva Synagogue (below).

The Hurva Synagogue (Area X-9, East)
During January 2006 an excavation was conducted on the north-eastern side of the Hurva Synagogue (License No. G-7/2006), aiming to complete the excavations undertaken in 2003.

The area ( $3.5 \times 4.0 \mathrm{~m}$ ) was excavated to bedrock (depth 2 m ). The western part of a room, a small section of which had been uncovered during the previous excavation, was exposed. The southern corner of the room was hewn in bedrock. Its white mosaic floor was laid atop a bedding layer of small stones and crushed chalk. The southern section of the mosaic bedding was set atop bedrock, leveled for this purpose; the northern section was atop a layer of soil fill, deposited on bedrock that descended northward. A small section of the mosaic itself was preserved close to the corner, while in the rest of the room only the bedding survived. The room's western wall ( 0.3 m thick), oriented north-south, was built of small irregular stones with gray material between them and coated with a thick layer of light plaster. Its western side was adjacent to a wide wall built of large fieldstones, which had mostly been exposed in the previous excavation. A gap at the northern end of this wall may attest to an entry or niche that originally existed here. Thin walls were built in a later phase, forming a square installation ( 0.6 ' 0.9 m ) that was coated with light plaster. A complete ceramic jar, dating to the Early Islamic period (ninth-tenth centuries CE), was found in the soil fill below the installation.

This was probably the western part of the room whose remains were discovered east of Area N-2 in 2005 (above). Fragments of pottery vessels, dating to the Mamluk period, were found in the soil fill that blocked the room.

The Hurva Synagogue (Area X-9, Southwest)
An excavation was conducted in November 2006 in the southwestern corner of the Hurva Synagogue (License No. G-7/2006).

The area ( $3.5 \times 4.0 \mathrm{~m}$ ) was excavated to bedrock (depth 2 m ), revealing the western continuation of the Byzantine-period street (exposed length 4 m ) whose remains were discovered along the southern side of the synagogue structure in 2003. Only several small sections of the flagstone pavement were preserved along the northern and southern edges of the street. Most of the pavement was destroyed during the installation of a later water channel (Mamluk?). The street was flanked on either side by walls, some were bedrock hewn and some were built of roughly hewn stones. The corner of a room or an installation, which had a white mosaic floor and predated the street, was discovered in the southwestern corner of the area.

A fully preserved arch (Fig.1) was discovered at the western end of the area. Its western side had previously been known and is visible today in the rear wall of a shop on the Street of the Jews. The arch, exposed now to its full height on the eastern side, is built of a row of large well-dressed stones ( 1.3 m long). Its foundations rested on bedrock, on either side of the street, which extended westward below the arch. The exposed side street branched off from the Cardo--the main road of Byzantine Jerusalem, whose remains were excavated west of the Hurva Synagogue by N. Avigad in the 1970s.

A complete vault built of large well-dressed stones was discovered in a water cistern slightly north of the arch, below the anteroom to the Hurva Synagogue (at the entrance from the Street of the Jews). The vault was the roof of a shop in a row of shops whose extension northward had been exposed in the past, along the eastern side of the Cardo.


1. The complete arch in the western corner of the Hurva Synagogue area, looking west.

## Jerusalem, the Old City - the Jewish Quarter



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Hillel Geva and Oren Gutfeld
8/5/2007
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The area ( $4 \times 5 \mathrm{~m}$ ) was excavated to bedrock (depth 2 m ), revealing part of a room, whose northern and southern walls and a section of the floor survived. The walls, founded on bedrock and oriented east-west, were built of fieldstones and partly of dressed stones. An ashlar-built doorjamb was in the northern wall. Two small sections of the white mosaic floor in the room were preserved next to the northern and southern walls. The mosaic was set atop a bedding of small stones and light colored cement. Below the bedding was a soil fill ( 0.4 m thick) that contained a few potsherds from the time of the First and Second Temples, as well as several potsherds from the Byzantine and Early Islamic periods (?).

The building remains were part of a room from the Early Islamic period, associated with the built complex that was exposed east of Area $\mathrm{N}-2$ in the 1970 s. The remains may also be related to a room whose western part was discovered on the eastern side of the Hurva Synagogue (below).

The Hurva Synagogue (Area X-9, East)
During January 2006 an excavation was conducted on the north-eastern side of the Hurva Synagogue (License No. G-7/2006), aiming to complete the excavations undertaken in 2003.

The area ( $3.5 \times 4.0 \mathrm{~m}$ ) was excavated to bedrock (depth 2 m ). The western part of a room, a small section of which had been uncovered during the previous excavation, was exposed. The southern corner of the room was hewn in bedrock. Its white mosaic floor was laid atop a bedding layer of small stones and crushed chalk. The southern section of the mosaic bedding was set atop bedrock, leveled for this purpose; the northern section was atop a layer of soil fill, deposited on bedrock that descended northward. A small section of the mosaic itself was preserved close to the corner, while in the rest of the room only the bedding survived. The room's western wall ( 0.3 m thick), oriented north-south, was built of small irregular stones with gray material between them and coated with a thick layer of light plaster. Its western side was adjacent to a wide wall built of large fieldstones, which had mostly been exposed in the previous excavation. A gap at the northern end of this wall may attest to an entry or niche that originally existed here. Thin walls were built in a later phase, forming a square installation ( 0.6 ' 0.9 m ) that was coated with light plaster. A complete ceramic jar, dating to the Early Islamic period (ninth-tenth centuries CE), was found in the soil fill below the installation.

This was probably the western part of the room whose remains were discovered east of Area N-2 in 2005 (above). Fragments of pottery vessels, dating to the Mamluk period, were found in the soil fill that blocked the room.

The Hurva Synagogue (Area X-9, Southwest)
An excavation was conducted in November 2006 in the southwestern corner of the Hurva Synagogue (License No. G-7/2006).

The area ( $3.5 \times 4.0 \mathrm{~m}$ ) was excavated to bedrock (depth 2 m ), revealing the western continuation of the Byzantine-period street (exposed length 4 m ) whose remains were discovered along the southern side of the synagogue structure in 2003. Only several small sections of the flagstone pavement were preserved along the northern and southern edges of the street. Most of the pavement was destroyed during the installation of a later water channel (Mamluk?). The street was flanked on either side by walls, some were bedrock hewn and some were built of roughly hewn stones. The corner of a room or an installation, which had a white mosaic floor and predated the street, was discovered in the southwestern corner of the area.

A fully preserved arch (Fig.1) was discovered at the western end of the area. Its western side had previously been known and is visible today in the rear wall of a shop on the Street of the Jews. The arch, exposed now to its full height on the eastern side, is built of a row of large well-dressed stones ( 1.3 m long). Its foundations rested on bedrock, on either side of the street, which extended westward below the arch. The exposed side street branched off from the Cardo--the main road of Byzantine Jerusalem, whose remains were excavated west of the Hurva Synagogue by N. Avigad in the 1970s.

A complete vault built of large well-dressed stones was discovered in a water cistern slightly north of the arch, below the anteroom to the Hurva Synagogue (at the entrance from the Street of the Jews). The vault was the roof of a shop in a row of shops whose extension northward had been exposed in the past, along the eastern side of the Cardo.


1. The complete arch in the western corner of the Hurva Synagogue area, looking west.

## Jerusalem, 'En Ya'el*



1. Plan.

2. Area A, plan and section.

Rina Avner and Shirli Shuval
7/6/2007
During 2002-2003 short excavations were conducted at 'En Ya'el (Permit No. A-3654*; map ref. NIG $21714-26 / 62762-80$; OIG 16714-26/12762-80). The excavations, on behalf of the Antiquities Authority and the 'En Ya'el Living Museum and within the framework of an education project, were directed by R. Avner and S. Shuval ('En Ya'el supervisor), with the assistance of A. Hajian (surveying), G. Edelstein (scientific assistance and guidance), N. Ha-Me'iri (activating volunteers) and E. Belashov (drafting). Also participating were 'En Ya'el campers, young volunteers from the Boyer and Himmelfarb Schools and from the Mesila, al-Rad and Shu'fat shelters for protected youth.

The excavation was conducted c. 15 m west of the villa and mosaics excavated by G . Edelstein (ESI 5:30-33; 7-8:54-57; Qadmoniot 26 1994:114-119 [Hebrew]).

Four squares ( $10 \times 10 \mathrm{~m}$ ) were opened; three were excavated and two (Areas A, B) yielded architectural remains. Two walls were exposed; one in Area A, in the southeast (W1000) and the second (W1001) in Area B, in the northwest (Figs. 1, 2). The foundation course of W1000 was built of medium-sized fieldstones, surmounted by two additional courses of large, carefully dressed ashlars ( 3.8 m long, 2.02 m wide, preserved height 1.9 m ). Each course consisted of two rows of dressed stones placed on either side of a thick core that comprised roughly hewn stones. The stones were bonded with gray-white plaster and a fill of medium and large fieldstones was inserted between the courses. An impressive doorway ( 1.02 m wide) whose threshold and doorjamb stones were meticulously dressed was exposed. The doorjambs protruded from the wall, 18 cm on the southern side and 48 cm on the northern side. The threshold ( 1.5 m long, 0.9 m wide) consisted of two large stones that abutted the wall on the west. A door socket (diam. 13 cm , depth 12 cm ) was located in the southeastern corner of the threshold. The scraping of the door across the threshold stones created a groove ( 55 cm long, max. 7 cm deep near the doorway) that became shallower toward the north. A recess for a bolt (diam. 9 cm , depth 3 cm ) was in the northeastern corner of the threshold, to whose west was a collapse (L104), c. 40 cm lower than the wall, which was not excavated. A fill of grayish brown soil that contained fragments of molded plaster (L105) was excavated east of $W 1000$; it is not clear if the plaster originated in the room east of $W 1000$ or in the villa, whose plaster fragments were discarded here. Stones were found next to the doorway and the southern doorjamb of W1000, indicating a later blockage that was not excavated and the cancellation of the doorway in the wall.
The construction method, the use of large and meticulously dressed ashlar stones in the doorway and the type of bonding material are identical to those of the mosaic-decorated villa and the orientation of W1000 also corresponds to the walls of the villa.

The upper course of W1001 ( 8.3 m long, 1.24 m wide) was exposed in Area B and two courses ( 0.8 m high) at its western end were discovered on surface. The wall formed a corner to the west with another wall (W1002) that was visible on surface ( 10 m long, 2.15 m wide). Each course of W1001 and W1002 was similarly built of two rows of haphazardly dressed stones with a core of small and medium-sized fieldstones and soil.

The three walls, W1000, W1001 and W1002, either belonged to or preserved the routes of more ancient walls from the Roman period. They probably related to the villa on the east. It should be noted that the villa at 'En Ya'el was spread across an extensive area and included several structures that fulfilled various functions, as was customary in Roman villa rustica.


1. Plan.

2. Area A, plan and section.

## Jerusalem, 'En Ya'el*



1. Plan.

2. Area A, plan and section.

Rina Avner and Shirli Shuval
7/6/2007
During 2002-2003 short excavations were conducted at 'En Ya'el (Permit No. A-3654*; map ref. NIG $21714-26 / 62762-80$; OIG 16714-26/12762-80). The excavations, on behalf of the Antiquities Authority and the 'En Ya'el Living Museum and within the framework of an education project, were directed by R. Avner and S. Shuval ('En Ya'el supervisor), with the assistance of A. Hajian (surveying), G. Edelstein (scientific assistance and guidance), N. Ha-Me'iri (activating volunteers) and E. Belashov (drafting). Also participating were 'En Ya'el campers, young volunteers from the Boyer and Himmelfarb Schools and from the Mesila, al-Rad and Shu'fat shelters for protected youth.

The excavation was conducted c. 15 m west of the villa and mosaics excavated by G . Edelstein (ESI 5:30-33; 7-8:54-57; Qadmoniot 26 1994:114-119 [Hebrew]).

Four squares ( $10 \times 10 \mathrm{~m}$ ) were opened; three were excavated and two (Areas A, B) yielded architectural remains. Two walls were exposed; one in Area A, in the southeast (W1000) and the second (W1001) in Area B, in the northwest (Figs. 1, 2). The foundation course of W1000 was built of medium-sized fieldstones, surmounted by two additional courses of large, carefully dressed ashlars ( 3.8 m long, 2.02 m wide, preserved height 1.9 m ). Each course consisted of two rows of dressed stones placed on either side of a thick core that comprised roughly hewn stones. The stones were bonded with gray-white plaster and a fill of medium and large fieldstones was inserted between the courses. An impressive doorway ( 1.02 m wide) whose threshold and doorjamb stones were meticulously dressed was exposed. The doorjambs protruded from the wall, 18 cm on the southern side and 48 cm on the northern side. The threshold ( 1.5 m long, 0.9 m wide) consisted of two large stones that abutted the wall on the west. A door socket (diam. 13 cm , depth 12 cm ) was located in the southeastern corner of the threshold. The scraping of the door across the threshold stones created a groove ( 55 cm long, max. 7 cm deep near the doorway) that became shallower toward the north. A recess for a bolt (diam. 9 cm , depth 3 cm ) was in the northeastern corner of the threshold, to whose west was a collapse (L104), c. 40 cm lower than the wall, which was not excavated. A fill of grayish brown soil that contained fragments of molded plaster (L105) was excavated east of $W 1000$; it is not clear if the plaster originated in the room east of $W 1000$ or in the villa, whose plaster fragments were discarded here. Stones were found next to the doorway and the southern doorjamb of W1000, indicating a later blockage that was not excavated and the cancellation of the doorway in the wall.
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The upper course of W1001 ( 8.3 m long, 1.24 m wide) was exposed in Area B and two courses ( 0.8 m high) at its western end were discovered on surface. The wall formed a corner to the west with another wall (W1002) that was visible on surface ( 10 m long, 2.15 m wide). Each course of W1001 and W1002 was similarly built of two rows of haphazardly dressed stones with a core of small and medium-sized fieldstones and soil.

The three walls, W1000, W1001 and W1002, either belonged to or preserved the routes of more ancient walls from the Roman period. They probably related to the villa on the east. It should be noted that the villa at 'En Ya'el was spread across an extensive area and included several structures that fulfilled various functions, as was customary in Roman villa rustica.


1. Plan.

2. Area A, plan and section.

## Jerusalem, Tell el-Ful*



1. Plan and section.

2. Pottery.

Rina Avner
10/6/2007
During July-August 2003 a salvage excavation was conducted on the southern slope of Tell el-Ful (Giv'at Sha'ul, Permit No. A-3964*; map ref. NIG 22202-5/63654-6; OIG $17202-5 / 13654-6$ ) in the wake of damage caused to antiquities during the building of a school. The excavation, on behalf of the Antiquities Authority and funded by the Jerusalem Municipality, was directed by R. Avner, assisted by V. Pirsky (surveying and drafting), L. Barda (GPS) and A. Pikovski (pottery drawing).

A rectangular excavation area ( $5 \times 16 \mathrm{~m}$ ) was opened. A wall (terrace? 14 m long, 0.5 m wide; Fig. 1) built of soft qirton stones without bonding material and preserved a single course high ( 0.4 m ) was discovered. Fragments of jars from Middle Bronze Age IIB (Fig. 2:1-5), as well as from the Iron Age, including a bowl (Fig. 2:8), a krater (Fig. 2:9) and cooking pots (Fig. 2:10, 11), were found. After dismantling the wall, more fragments of bowls from the Iron Age (Fig. 2:6, 7) were discovered in the fill beneath it, enabling to date the wall to this period.



## Jerusalem, Nahal Soreq*

Anna Eirikh-Rose
13/6/2007
During November 2002 a salvage excavation was conducted on the northwestern slope of Har Hozvim, along the bank of Nahal Soreq (Permit No. A-3782*; map ref. NIG 2194/6348; OIG 1694/1348; Fig. 1), in the wake of expanding Highway 4. The excavation, on behalf of the Antiquities Authority and funded by Z . Barashi, was directed by A. Eirikh-Rose (surveying), assisted by I. Berin (drafting).

A rock-hewn winepress (Fig. 2), consisting of a treading floor, a settling pit and a collecting vat, was exposed. The rectangular treading floor $(2.2 \times 2.5 \mathrm{~m})$ was paved with small stones and plastered. It was hewn to slope gently toward the settling pit and collecting vat. Next to the southern corner of the treading floor was a hewn elliptical settling pit (diam. c. 0.8 m , depth c. 0.5 m ), in whose floor was a small sump (diam. 0.15 m , depth 0.6 cm ) for draining the waste and the remains of the must. A rock-cut channel connected between the settling pit and the circular collecting vat to its west (diam. c. 1.1 m , depth c. 1.6 m ), which was entirely coated with a thick layer of plaster (c. 4 cm ).

No datable finds were discovered.
2. Plan and sections.


1. Location map.

2. Plan and sections.

## Jerusalem, Qasr el-Bustân*



1. Plan and section.

Anna Eirikh-Rose
13/6/2007
During January 2003 a salvage excavation was conducted along Highway 9, at the foot of the Qasr elBustân site (Permit No.
*A-3813; map ref. NIG 21800/63445; OIG 16800/13445), after a water cistern was discovered during the course of an antiquities inspection. The excavation, on behalf of the Antiquities Authority and funded by the Moriya Company, was directed by A. Eirikh-Rose, assisted by T. Kornfeld (surveying and drafting).
A water cistern and nearby meager building remains were exposed (Fig. 1). The bell-shaped cistern (diam. 5.5 m , depth c. 4.4 m to level of partial collapse of cistern's ceiling), which had a circular, rather small opening (diam. c. 0.7 m ), was hewn in soft chalk bedrock and coated with a thick layer of hydraulic plaster ( 4 cm ) mixed with organic material that was preserved on the opening and the ceiling. To the northeast of the cistern, a plastered, rock-hewn channel and a natural fissure to its south conveyed surface runoff to the cistern. On either side of the smoothly quarried bedrock surface (in the west and east), two courses of a fieldstone-built wall were found. No datable finds were discovered.


1. Plan and section.

## Jerusalem , the Jewish Quarter in the Old City - 'The Herodian Quarter'

## Hillel Geva

14/6/2007


1. The early mosaic.

During September 2004 an excavation was conducted at the 'Herodian Quarter' site in the Old City of Jerusalem (License No. B-286/2004). The excavation, on behalf of the Institute of Archaeology of the Hebrew University in Jerusalem and the Israel Exploration Society, was carried out by the Jewish Quarter Archaeological Expedition, directed by H. Geva, with the assistance of O. Gutfeld, R. Nenner-Soriyano (surveying) and G. Laron (photography of mosaic).

The excavation was undertaken, following the removal of the 'Meandering Mosaic', which is dated to the time of the Second Temple and was exposed in the 1970s excavation of Avigad (Area F, L931; for a photograph of the mosaic, see N. Avigad, The Upper City of Jerusalem, Jerusalem 1980, Fig. 165 [Hebrew]). The mosaic, which adorned a large room in a Second Temple-period dwelling in the Upper City of Jerusalem, is on display in the main part of the 'Herodian Quarter' site (the Vahl Museum) in the Jewish Quarter. It was temporarily removed for renovation, funded by the Corporation for the Renovation and Development of the Jewish Quarter in the Old City of Jerusalem, Ltd.

An earlier decorated mosaic (exposed area c. $3 \times 3 \mathrm{~m}$; Fig. 1) was discovered 0.3 m below the removed mosaic. It was destroyed on the western side by the wall of the room that contained the later, removed mosaic and on its eastern and southern sides by later disturbances. The northern end of the early mosaic was not exposed. The geometric pattern decorating the center of the mosaic section is composed of an outer red-painted square frame and an inner red-painted square frame, which contains three black concentric circles, whose segmented division is marked by black lines. A row of red semicircles is marked on the perimeter, inside the outer circle. The southern part of the concentric circles' pattern was destroyed and repaired with a small patch of white tesserae and with gray plaster further south, while the mosaic was still in use.

The fill between the two mosaic layers was compact and consisted of light brown soil that contained a large quantity of small fresco plaster pieces and a few potsherds from the first century CE on the early mosaic floor. A worn coin that may probably date to the year 30 CE was found above the floor. It is noteworthy that this is the first time in the excavations of the Jewish Quarter that two mosaic floors from the Second Temple period are discovered one above the other.

During September 2005, the early mosaic was removed for conservation. The mosaic's bedding consisted of a crushed, tamped-chalk layer. A small probe ( $1.2 \times 1.2 \mathrm{~m}$ ) excavated in the bedding exposed in its southern side a fieldstone-built wall, oriented east-west. Bedrock, descending to the east, was discovered c. 1.2 m below the mosaic. The soil fill in the probe contained potsherds, dating mostly to the end of the first century $B C E$, as well as a few fragments from Iron II. It can therefore be assumed that the early mosaic was installed at the end of Herod's reign or at the very beginning of the first century CE.


1. The early mosaic.

## Jerusalem, Gillo Neighborhood*



1. The excavation areas, plan.

2. Area A, burial cave and winepress, plans and sections.

3. Area A, the burial cave, looking northwest.

4. Area $A$, finds from the burial cave.

5. Area $B$, the winepress, looking northwest.

Irina Zilberbod
11/7/2007
During November 2002 a salvage excavation was conducted along the southern slope of the Refa'im spur, south of the Gillo neighborhood and the Tunnel Road in Jerusalem (Permit No. A-3376*; map ref. NIG 21840/62562; OIG 16840/12562), prior to the construction of the separation fence. The excavation, on behalf of the Antiquities Authority and funded by the Ministry of Defense, was directed by I. Zilberbod, with the assistance of A. Hajian (surveying), T. Sagiv (photography), I. Pikovski (drawing) and N. Zak (drafting).

Five areas with ancient remains were excavated (Fig. 1): a burial cave (Area A), a winepress (Area B), a cave (Area C), two caves that were not excavated (Area D) and a hewn cavity (Area E).

Area A (Figs. 2, 3)
A burial cave with kokhim was exposed on the eastern slope of the spur. It included a square courtyard (L25; $2.5 \times 2.5 \mathrm{~m}$ ) whose floor had collapsed into a natural void that opened beneath. The cave was accessed by way of a square entrance (L28; $0.5 \times 0.6 \mathrm{~m}$ ), hewn in the middle of the eastern wall, toward the slope. The cave consisted of a trapezoid-shaped central chamber (L1; 2.5$4.0 \times 3.0 \mathrm{~m}$ ), in whose center was a rectangular depression ( $\mathrm{L} 2 ; 1.0 \times 1.8 \mathrm{~m}$, depth 0.4 m ). Three kokhim of similar dimensions (L3-8, L10-12; average size $0.5 \times 2.0 \mathrm{~m}$, height 1 m ) were hewn in each of the chamber's southern, western and northern walls. Another smaller burial kokh (L9; $0.8 \times$ 0.9 m , height 0.6 m ) was hewn in the northern corner of the chamber. The cave's ceiling appears to have been originally arched, judging by its small surviving section. A tiny fragment of hard limestone was found in Kokh 6. It is decorated with three finely carved leafs in relief (Fig. 4:3), which can be reconstructed to form a rosette of 16 petals (diam. 25.5 cm ) that probably decorated a stone ossuary. Fragments of two storage jars from the Early Roman period (Fig. 4:1, 2) were found on the floor in the eastern corner of the courtyard.

Area B (Figs. 2, 5)
A winepress was exposed c. 5 m east of the burial cave. It was bedrock-hewn, utilizing natural depressions in the rock and including a shallow oval treading floor (L15; diam. 2 m ). A narrow rockhewn channel ( L 21 ; length 0.2 m , depth 0.1 m ) in the southern side of the treading floor led to a settling pit, installed in a natural cavity (L17; diam. 0.35 m , depth 0.2 m ). The must flowed from a small narrow hewn channel (L22) in the middle of its southern wall to a circular collecting vat that was also set in a natural depression (L18; diam. 1.1 m , depth 0.5 m ). No datable artifacts were found. Two rock-hewn rectangular vats (Loci 16,$19 ; 0.50 \times 0.75 \mathrm{~m}$; depth 0.4 m ) were discovered to the north and northwest of the treading floor. Vat 16 was connected to the treading floor by way of a narrow bedrock-hewn channel (L20).

Area C (Fig. 6)
An elliptical rock-hewn cave ( $L 23 ; 3 \times 4 \mathrm{~m}$; height 2 m ) was uncovered c .10 m north of Area A. A round aperture (L31; diam. 0.6 m , height 0.75 m ) was hewn in the center of its ceiling. A natura karstic depression (depth 0.4 m ) was in the floor of the cave. Plaster remains were not traced on the floor and walls of the cave and therefore, it apparently did not serve as a water cistern, but rather and most likely, it was used for storage or as a temporary dwelling. No datable finds were discovered.
A terrace wall, built of a single row of various size fieldstones, was revealed for a distance of 18 m between Areas A and C.

Area E (Fig. 7)
A circular rock-hewn cavity ( L 30 ; diam. c. 1 m , height 1 m ) was exposed c. 30 m northeast of Area A. It was possibly used to store agricultural produce and was devoid of datable artifacts.


1. The excavation areas, plan.

2. Area A, burial cave and winepress, plans and sections.

3. Area A, the burial cave, looking northwest.

4. Area $A$, finds from the burial cave.

5. Area $B$, the winepress, looking northwest.

6. Area $C$, the cave, plan and sections.

7. Area $E$, the cavity, plan and section.

## Jerusalem, 'En Ya'el



1. Stratum II, the mosaic floor in the Roman villa; Stratum III, the building remains

2. Platters

3. Jar lids.

During January-February and September-October 2000 two seasons of salvage excavations were conducted along the northern bank of Nahal Refa'im (Permit No. A-3187; map ref. NIG 21665-700/62790-900; OIG 16665-700/12790-900), in the wake of damage to antiquities caused while improving the drainage in the channel. The excavation, on behalf of the Antiquities Authority and funded by the Gihon Water Company, was directed by S. Wexler-Bdolah, with the assistance of laborers from Kafr Yatta in the first season, which was suspended due to inclement of the weather, as well as the following participants in the second season: S. Cohen (area supervision), T. Kornfeld, A. Hajian and V. Pirsky (surveying), C. Amit (field photography), J. Negeur, R. Abu-Diab and N. Davidov (treatment of mosaic floor and its transfer to the Rockefeller Museum), E. Kamaisky (pottery restoration), C. Hersch (pottery drawing), E. Altmark (metallurgical laboratory) and D.T. Ariel (numismatics). The mosaic floor and the wall paintings that adorned the exposed Roman villa at the site were researched and will be published by R. Telgam and S. Rosenberg within the final report Thanks are also due to A. Va'aknin and the workers of the adjacent site of 'En Ya'el for their assistance.

Earthmoving works created a deep trench that extended to a distance of dozens of meters, c. 10 m north of the channel's bank. Four squares, excavated down to bedrock, were divided between two inside the trench and the other two, to its north. Three main strata were identified in the excavation. The earliest and lowest (Stratum III) revealed a building or installation from the Hellenistic/Early Roman period; the middle layer (Stratum II) comprised part of a room with a mosaic floor that belonged to a villa, dating to the Late Roman period and the latest and upper layer (Stratum I) consisted of a potter's kiln from the Late Roman/early Byzantine period, preserved in its entirety and a nearby heap of debris that yielded numerous fragments of vessels.

Stratum III. Part of a building or installation was exposed. Sections of two walls that formed a corner and stood a single course high were preserved (Fig. 1). The dry construction walls were founded directly on bedrock and consisted of two rows of medium-sized fieldstones. The floor of the building did not survive. The soil fill above bedrock contained fragments of vessels, the latest of which dated to the Hellenistic or Early Roman periods. Four Hellenistic coins (IAA Nos. 96277 $96278,96279,96285$ ) are attributed to this stratum, three of them were minted during the reign of Alexander Jannaeus.

Stratum II. A room paved with a mosaic floor that belongs to a Late Roman villa was exposed (presumed interior dimensions $3.2 \times 3.2 \mathrm{~m}$ ). The eastern part of the room was damaged twice, in antiquity, when the potter's kiln (Stratum I, below) was installed, as well as during the current heavy machinery activities.
The room was entered from the south by way of a wide doorway (width c. 1.4 m ). Three steps in the northwestern corner of the room led northward. The white mosaic pavement in the room had two carpets, richly adorned with patterns and colors. The first carpet was large and situated next to the main entrance; the second carpet was smaller, to the north of the large one and in front of the steps (see Fig.1).
A rectangular panel (width 0.55 m ) is discerned in the large carpet (length 1.5 m , presumed width 2.5 m ) It is adorned with a possible clam, having two shells, or perhaps a metal bowl; above it is a pair of fruit (?) that appear to be pinecones or artichokes and to their east maybe the head of a fish (?). The main pattern is enclosed within a red frame (width 0.45 m ) that is surrounded by a frame with a running coil pattern (width 0.2 m ), which is repeated at the margin of the carpet. The wider band between the two running coil frames contains a meander pattern, which is tri-dimensional and painted in gray, yellow, red and white colors, unlike the red color of the running coil frames.
The top of the coils in the interior and the exterior frames of the running coil face the meander pattern and their base forms a continuous line. The northern carpet is square ( $0.6 \times 0.6 \mathrm{~m}$ ) and enclosed within a thin black frame. It is decorated with a geometric pattern, made by a compass, whereby four-petal rosettes are intertwined to form circles. A small flower-like decoration occupies the center of each circle. The background of the carpet is red and the pattern is depicted in white.
The northern, western and southern walls of the room were decorated with colored secco that was partially preserved, surviving one to three courses high above the floor.
Based on the style of the mosaic, the colored wall decorations and a few potsherds in assemblages associated with this villa, it is possible to date the structure to the Late Roman period, probably the third century CE.

Stratum I. An elliptical potter's kiln was exposed (length 3.3 m , max. width 1 m , preserved height c. 2 m ). Its southern part was damaged by heavy machinery prior to the excavation. It was built on a cleaned and smoothed bedrock surface, in which a pit was hewn for the bottom part of the kiln that consisted of the firebox. The upper part was the chamber where the vessels were placed. The kiln was surrounded by a wall (width 1.5 m ), built of medium-sized fieldstones, whose bonding material was not preserved. Built around the interior circumference of the kiln were alternating square pilasters that protruded into the kiln's space. The hot air from the firebox probably rose to the chamber by way of the narrow passages between the square pilasters. Several complete broken vessels, mainly platters with a wide flat base (Fig. 2) and jar lids (Fig. 3), as well as fragments of other ceramic types, were found on the floor of the chamber and in the red-soil fill that accumulated inside. The chamber was sealed with a layer of red mud bricks and stones that were originally part of the collapsed kiln's ceiling. Surrounding the kiln was a layer (thickness 0.3 cm ) rich in pottery fragments and wasters.
The assemblage of pottery vessels in the kiln and the wasters, as well as the five coins that are dated to the years $335-408 \mathrm{CE}$, enable us to suggest that the kiln operated during the second half of the second century CE, or latest, at the early third century CE.


1. Stratum II, the mosaic floor in the Roman villa; Stratum III, the building remains

2. Platters.


## Jerusalem, Mount of Olives



1. General view, looking west

2. Area A, the cave looking east.

3. Area A, plan.

4. Circular installation, looking north.

Nurit Feig
6/9/2007
During December 2002, January and March-April 2003 a salvage excavation was conducted on the southern ridge of the Mount of Olives (Permit No. A-3792; map ref. NIG 22370-78/63122-30; OIG 17370-78/13122-30). The excavation, on behalf of the Antiquities Authority and financed by the Jerusalem municipality, was directed by N. Feig, with the assistance of T. De'adle and B. Tori, A. Hajian (surveying), C. Amit and M. Salzberger (photography).

The remains of rock cuttings and caves, one of which was probably used for burial and the other had a building within it, were discovered (Fig. 1). The remains were dated to the Iron Age based on the finds.

Area B. A rectangular rock cutting ( $2 \times 11 \mathrm{~m}$ ), as well as other nearby rock cuttings and hewn recesses, was exposed in the southern part of the site. It was probably a quarry. Close by was a hewn cave, consisting of a square chamber $(3 \times 3 \mathrm{~m})$ that had neither kokhim nor arcosolia and perhaps served for burial. It was devoid of any finds that might indicate its date. Fronting the cave was a rock-hewn courtyard $(2.00 \times 2.75 \mathrm{~m})$ that probably served for internments, concomitant with the cave dwelling behind.

Area A. A natural cave whose ceiling collapsed and its eastern wall survived was found (Fig. 2). A building ( $7.25 \times 7.50 \mathrm{~m}$; Fig. 3) whose walls were preserved c. $1.0-1.2 \mathrm{~m}$ high was erected inside it. The building's entrance was in the northeastern corner and benches were built and hewn along the interior of the walls. A circular installation (diam. 1.8 m ; Fig. 4) whose use is unclear was next to its western corner. Following the partial collapse of the cave's ceiling the northwestern corner of the building was covered with fill and above the northwestern part of Wall 3, curved retaining walls (W1, W2) were built to support the ceiling of the cave and its walls. Several steps descended to a fieldstone-paved alcove that was leaning on the northern wall (W4) of the building. The western wall of the alcove (W5) was built above W4. The location of the entrance and the high bedrock leve indicate that the entrance to the cave was in the north.

The artifacts recovered from the building included jars, cooking pots, kraters, a variety of bowls and lamps. These indicate that the building was used as a dwelling, dating to the Iron Age, namely the eighth century BCE.



4. Circular installation, looking north.

## Jerusalem, Holyland Park

Ianir Milevski and Keren Ben-Or
11/9/2007


1. Plan.

During December 2002 a salvage excavation was conducted at the Holyland Park site (Permit No. A-3785; map ref. NIG $2180-1 / 6295-6$; OIG $1680-1 / 1295-6$ ), in the wake of construction work. The excavation, on behalf of the Antiquities Authority and financed by the Holyland Park Company Ltd., was directed by I. Milevski, with the assistance of K. Ben-Or, R. Abu-Halaf (administration), V. Essman, V. Pirsky and T Kornfeld (surveying and drafting), Y. Nagar (physical anthropology), L.K. Horowitz (archaeozoology), and J. Seligman and G. Solimany.

The excavation was a continuation of fieldwork that had begun with O. Negbi (HA 10:12-13 [Hebrew]) and S. Ben-Arieh ('Atiqot 40:1-24). The excavation of Cave 2, which had begun by Ben-Arieh, was completed and ten other caves and shaft tombs were excavated (Fig. 1).

Cave 2. The plan of the cave's eastern side ( $9 \times 10 \mathrm{~m}$ ) was completed. Following the removal of the collapsed ceiling, a layer of terra rosa soil that overlaid a gray soil layer on bedrock, was discovered. Bedrock served as the floor of the cave and two hearths were found above it. The ceramic assemblage dated to Iron II and the Persian period, similar to the artifacts from BenArieh's excavation. Animal bones were also found.

Cave 7. This cave ( $3.0 \times 3.5 \mathrm{~m}$, height 1.8 m ) was located southeast of Cave 2 and c. 5 m below it, at the end of a bedrock terrace. The cave had collapsed in the past and was covered with a chalk layer from the ceiling that superposed a light brown soil layer on the floor of the cave. The main finds consisted of potsherds from Middle Bronze II, several animal bones and a few flint implements.

Cave 8. This cave ( $4 \times 5 \mathrm{~m}$, height 1.9 m ) was located 20 m south of Cave 7, at the same end of the bedrock terrace. A shaft (diam. 1.3 m , depth 2 m ) at the northern side of the cave accessed its entrance. As in Cave 7, this cave had also collapsed in the past and was covered with a chalk layer that covered a light brown and yellowish brown layer above the floor of the cave. The ceramic assemblage is dated to Middle Bronze II and the discovery of human bones, as well as animal bones, indicates the cave was used for interment.

Cave 10. This cave ( $2.5 \times 6.5 \mathrm{~m}$, height 2 m ), c. 25 m northeast of Cave 2 and on a lower bedrock terrace, had been cut by mechanical equipment and therefore, it was impossible to determine its exact width. The cave was covered with terra rosa soil overlaying friable limestone and grayish brown soil layers above the floor. A hearth was in the center of the cave and other finds included potsherds, mostly jars, from Middle Bronze II, flint implements and animal bones.

Shaft 11. A natural shaft (diam. 1.2 m , depth 1.6 m ) 10 m east of Cave 2. Potsherds from Iron I and II were found inside and around the shaft, as well as on surface.

Shaft Tomb (?) 12. This shaft tomb, located c. 17 m east of Cave 2, on the bedrock terrace of Caves 7 and 8, consisted of a shaft that collapsed and an oval burial chamber ( $2 \times 4 \mathrm{~m}$ ), which was filled with debris of modern refuse. The excavation was not completed.

Cave 13. This cave, c. 10 m north of Cave 7, had collapsed in the past and only its southern end survived. Potsherds from Middle Bronze II and human bones were found. The excavation was not completed.

Shaft Tomb (?) 14. This tomb was located c. 2 m northeast of Cave 7. Only the elliptical burial chamber $(1.5 \times 2.0 \mathrm{~m}$, height up to 0.6 m$)$, covered with grayish brown soil, was preserved. The sole artifact from the tomb was a clay lamp, dating to Early Bronze IV.

Cave 15. The excavation in this cave ( $4.5 \times 7.0 \mathrm{~m}$, height 1.2 m ), located between Caves 7 and 13 , did not reach the floor and was not completed. A dark brown soil layer in the cave overlaid a chalk layer above the floor, which yielded most of the potsherds that dated to Middle Bronze II, as well as human and animal bones.

Cave 16. This plundered cave, to the north of Cave 13 and south of Cave 12, was tunnel-like (length 6 m , width 1 m ) and devoid of artifacts or potsherds, other than a few animal bones.

Shaft Tomb (?) 17. This tomb, c. 20 m west of Cave 2, was exposed by mechanical equipment after the conclusion of the excavation. It included an entrance shaft, blocked with stones, descending into a chamber that accessed another chamber, which had been cut by mechanical equipment and was excavated, but was devoid of finds.


1. Plan.

## Jerusalem, Holyland Park

Ianir Milevski and Keren Ben-Or
11/9/2007


1. Plan.

During December 2002 a salvage excavation was conducted at the Holyland Park site (Permit No. A-3785; map ref. NIG 2180-1/6295-6; OIG 1680-1/1295-6), in the wake of construction work. The excavation, on behalf of the Antiquities Authority and financed by the Holyland Park Company Ltd., was directed by I. Milevski, with the assistance of K. Ben-Or, R. Abu-Halaf (administration), V. Essman, V. Pirsky and T Kornfeld (surveying and drafting), Y. Nagar (physical anthropology), L.K. Horowitz (archaeozoology), and J. Seligman and G. Solimany.

The excavation was a continuation of fieldwork that had begun with O. Negbi (HA 10:12-13 [Hebrew]) and S. Ben-Arieh ('Atiqot 40:1-24). The excavation of Cave 2, which had begun by Ben-Arieh, was completed and ten other caves and shaft tombs were excavated (Fig. 1).

Cave 2. The plan of the cave's eastern side ( $9 \times 10 \mathrm{~m}$ ) was completed. Following the removal of the collapsed ceiling, a layer of terra rosa soil that overlaid a gray soil layer on bedrock, was discovered. Bedrock served as the floor of the cave and two hearths were found above it. The ceramic assemblage dated to Iron II and the Persian period, similar to the artifacts from BenArieh's excavation. Animal bones were also found.

Cave 7. This cave ( $3.0 \times 3.5 \mathrm{~m}$, height 1.8 m ) was located southeast of Cave 2 and c. 5 m below it, at the end of a bedrock terrace. The cave had collapsed in the past and was covered with a chalk layer from the ceiling that superposed a light brown soil layer on the floor of the cave. The main finds consisted of potsherds from Middle Bronze II, several animal bones and a few flint implements.

Cave 8. This cave ( $4 \times 5 \mathrm{~m}$, height 1.9 m ) was located 20 m south of Cave 7, at the same end of the bedrock terrace. A shaft (diam. 1.3 m , depth 2 m ) at the northern side of the cave accessed its entrance. As in Cave 7, this cave had also collapsed in the past and was covered with a chalk layer that covered a light brown and yellowish brown layer above the floor of the cave. The ceramic assemblage is dated to Middle Bronze II and the discovery of human bones, as well as animal bones, indicates the cave was used for interment.

Cave 10. This cave ( $2.5 \times 6.5 \mathrm{~m}$, height 2 m ), c. 25 m northeast of Cave 2 and on a lower bedrock terrace, had been cut by mechanical equipment and therefore, it was impossible to determine its exact width. The cave was covered with terra rosa soil overlaying friable limestone and grayish brown soil layers above the floor. A hearth was in the center of the cave and other finds included potsherds, mostly jars, from Middle Bronze II, flint implements and animal bones.

Shaft 11. A natural shaft (diam. 1.2 m , depth 1.6 m ) 10 m east of Cave 2. Potsherds from Iron I and II were found inside and around the shaft, as well as on surface.

Shaft Tomb (?) 12. This shaft tomb, located c. 17 m east of Cave 2, on the bedrock terrace of Caves 7 and 8, consisted of a shaft that collapsed and an oval burial chamber ( $2 \times 4 \mathrm{~m}$ ), which was filled with debris of modern refuse. The excavation was not completed.

Cave 13. This cave, c. 10 m north of Cave 7, had collapsed in the past and only its southern end survived. Potsherds from Middle Bronze II and human bones were found. The excavation was not completed.

Shaft Tomb (?) 14. This tomb was located c. 2 m northeast of Cave 7. Only the elliptical burial chamber $(1.5 \times 2.0 \mathrm{~m}$, height up to 0.6 m$)$, covered with grayish brown soil, was preserved. The sole artifact from the tomb was a clay lamp, dating to Early Bronze IV.

Cave 15. The excavation in this cave ( $4.5 \times 7.0 \mathrm{~m}$, height 1.2 m ), located between Caves 7 and 13 , did not reach the floor and was not completed. A dark brown soil layer in the cave overlaid a chalk layer above the floor, which yielded most of the potsherds that dated to Middle Bronze II, as well as human and animal bones.

Cave 16. This plundered cave, to the north of Cave 13 and south of Cave 12, was tunnel-like (length 6 m , width 1 m ) and devoid of artifacts or potsherds, other than a few animal bones.

Shaft Tomb (?) 17. This tomb, c. 20 m west of Cave 2, was exposed by mechanical equipment after the conclusion of the excavation. It included an entrance shaft, blocked with stones, descending into a chamber that accessed another chamber, which had been cut by mechanical equipment and was excavated, but was devoid of finds.


1. Plan.

## Jerusalem, French Hill*



1. Map of excavation areas.

2. Area $A$, the winepress, plan and section.

3. Areas $B, C$, the
quarries, plan.

4. Pottery.

During January 2003, a salvage excavation was conducted on the French Hill in Jerusalem (Permit No. A3802*; map ref. NIG 22260/63470; OIG 17260/13470), following the exposure of antiquities prior to construction. The excavation, on behalf of the Antiquities Authority and financed by the Samud Company, was directed by D. Weiss, with the assistance of V. Pirsky and T. Kornfeld (surveying), R. Abu Halaf (administration), C. Amit (photography) and I. Lidsky (pottery drawing).
Three areas were opened: Area A in the north and Areas B and C, c. 50 m to the southwest, which eventually were consolidated into one area (Fig. 1).

Area A. Two of the three opened squares were devoid of any finds and a winepress hewn in chalk bedrock (Fig. 2) was uncovered in the third square. The winepress included a treading floor ( $1.75 \times$ 2.20 m ) paved with a white mosaic (size of tesserae c. 2.5 sq cm ). Plaster remains (height 15 cm ) were discerned on the surface of the hewn bedrock along the southern side of the treading floor. Two collecting vats were on the southern side of the floor. The western vat (L1018; $1.24 \times 1.76 \mathrm{~m}$ ) was coated with gray plaster and a staircase descended on its western side to the mosaic-paved floor of the vat. A semicircular recess (diam. 0.4 m ) was cut in the southeastern corner of the vat. Although the rim of the vat was worn, the mosaic pavement of the treading floor appeared to extend up to it. The eastern vat (L1019; $0.9 \times 1.5 \mathrm{~m}$ ) was coated with gray plaster that was poorly preserved.
The ceramic finds in the vats included bowls (Fig. 4:1, 2), cooking pots (Fig. 4:3, 4) and jars (Fig. $4: 5,6)$, dating to the Early Roman period.
The northwestern corner of the winepress was damaged during the earthmoving works conducted prior to the excavation.
Areas B and C (Fig. 3). Remains of a quarry and other rock-cuttings, whose nature is unclear, were exposed in these areas. Fragments of pottery vessels, dating to the Early Roman period, and a stone cup (Fig. 4:7) that is characteristic of the period, were found.


1. Map of excavation areas.

2. Area $A$, the winepress, plan and section.


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## Jerusalem, Nisan Beck Street*



1. Plan and sections.

2. The quarry, looking
south.

3. The quarry and the opening to the tomb,
looking north.

4. The corridor, looking west.

Yonathan Mizrachi
8/11/2007
During January-February 2005 a salvage excavation was conducted on Nisan Beck Street in the Mahanayim neighborhood of Jerusalem (Permit No. A-4346*; map ref. NIG 22082-5/63372-80; OIG 17082-5/1337280), in the wake of discovering quarrying marks. The excavation, on behalf of the Antiquties Authority, was directed by Y. Mizrachi, with the assistance of T. Kornfeld (surveying and drafting), M. Salzberger (photography), O. Shor (pottery restoration) and C. Hersch (pottery drawing).
A quarry and a corridor, which probably led to a burial cave, were exposed in the area ( $7.0 \times 14.5$ m ; Fig. 1). North of the excavation area was a bedrock surface with a hewn step in front of it (length c. 6.5 m , depth c. 2.5 m ). Rock-hewn steps and evidence of extracted stones were found mostly in the southern and central parts of the area (Figs. 2, 3). Bedrock in these parts was overlaid with a layer of white sediment and scattered stones; the lack of ceramic finds evinces the quarrying and stone cutting that were carried out at the spot. The marks of stone chiseling and the severance channels indicate that the extracted stones possibly measured $0.35 \times 0.35 \times 0.65 \mathrm{~m}$. A shelf ( $2.5 \times 4.0 \mathrm{~m}$; Fig. 4) in the northern part of the excavation, along its northern and western walls, was exposed. A corridor that led westward became apparent in the western wall. Parallel to the shelf was a channel (L105), wider than the standard severance channel ( 0.2 m ), which was hewn slightly crooked. This channel was probably used for drainage and its beginning could be located west of the excavation area.
Ceramic finds, mostly dating to the Second Temple period, were discovered in the northern part of the area. However, they are not characteristic of quarries: a krater (Fig. 5:1), a cooking pot from the first century BCE-first century CE (Fig. 5:2), jars (Fig. 5:3-7), a jug (Fig. 5:8) and a juglet from the second century BCE-first century CE (Fig. 5:9). A small number of potsherds were dated to other periods, including bowls from the Late Roman-Byzantine periods until the Early Islamic period (Fig. $5: 10-12$ ). The hewn northern wall, the shelf along the western side at the foot of the opening and the ceramic finds from the Second Temple period reinforce the supposition that these were parts of a burial cave whose entrance was located to the west of the excavated area. It is possible that the cave was hewn in the remains of the quarry.


1. Plan and sections.

2. The quarry, looking south.

3. The quarry and the opening to the tomb, looking north.

4. The corridor, looking west


## Jerusalem, Talpiyot*



1. Location map.

2. Plan and section.

3. The structure, looking east.

4. The structure, looking northwest.

Gideon Solimany
8/11/2007
During May 2005 a salvage excavation was conducted on Kefar 'Ezyon Street in the Arnona neighborhood of Jerusalem (Permit No. *A-4516; map ref. NIG 2212/6282; OIG 1712/1282; Fig. 1), at the construction site of the American consulate. The excavation, on behalf of the Antiquities Authority and financed by the United States government, was directed by G. Solimany, with the assistance of R. Abu-Halaf (administration), A. Hajian (surveying), T. Sagiv (photography), I. Lidsky-Reznikov (pottery drawing) and G. Bijovsky (numismatics).
After the removal of a modern fill layer from the excavation area ( $5 \times 10 \mathrm{~m}$; thickness 0.8 m ), the general outline of a bedrock-hewn rectangular structure that was filled with stone collapse (0.9-1.2 $\times 1.6-2.8 \mathrm{~m}$; depth $0.9-1.2 \mathrm{~m}$; Fig. 2), was noted. The collapse (Loci 100-102) in the structure turned out to be intentional. The tamped fill served as a blockage, composed of dressed limestone, small and medium-sized pieces of flint, large quantities of potsherds and fragments of stone vessels. A wall (W2000), built of medium-sized roughly hewn fieldstones, extended across the structure and apparently served as a low partition (Figs. 3, 4). The floor of the structure was the soft limestone bedrock and no walls or remains of plaster were discerned on it. A hewn opening ( 0.8 m wide; L 105 ) in the structure's western wall led to a rock-cut cell ( $1.2 \times 1.2 \mathrm{~m}$; L106). To the west of the opening was the beginning of another unit that had been destroyed during earlier development work and remained beyond the limits of the excavation. The remains indicate that the structure was partly rock-cut and partly built. Among the stones in the collapse were dressed cornerstones, probably used for the joint between the wall and the ceiling. No occupation layer was discerned on the floor and the blockage attests to the intentional cessation of activities in the building. The ceramic assemblage included bowls (Fig. 5:1, 2), cooking pots (Fig. 5:3-6), jars (Fig. $5: 7-14$ ), jugs (Fig. 5:15-18), juglets (Fig. 5:19-26), flasks (Fig. 5:27-29) and a lamp (Fig. 5:30). The stone vessels included bowls (Fig. 6:1, 2) and cups (Fig. 6:3-6). The assemblage is dated to the Early Roman period (first century BCE-second century CE). A prefect coin from the time of Augustus (6-12 CE; IAA 99433) was found. The dating of the finds is identical to that of the previous excavations at the site (Permit No. A-4325), which documented burial caves from the Early Roman period and cave dwellings of the Hellenistic period. It seems that the structure was part of Horbat Zawaha, located at the end of the spur, above and adjacent to the aqueduct, where building remains, burial caves and numerous potsherds of the Early Roman period were documented.


1. Location map.

2. Plan and section

3. The structure, looking east.

4. The structure, looking northwest.

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5. Pottery.


## Jerusalem, Golda Meir Way



1. Rock-cutting 1, plan.

2. Rock-cutting 1,
looking west.

3. Rock-cutting 2,
looking west.

4. Rock-cutting 3, plan.

Anna Eirikh-Rose
12/12/2007
During February 2005 a salvage excavation was conducted along the western slopes of Golda Meir Way (Permit No. A-4373*; map ref. NIG 220500/613415; OIG 170500/113415). The excavation, on behalf of the Antiquities Authority and financed by the Moriya Company, was directed by A. Eirikh-Rose (photography), assisted by T. Kornfeld (surveying and drafting).

Three rock-cuttings were exposed.
Rock-cutting 1. A rectangular surface that was hewn in the upper part of the slope (Figs. 1, 2; 1.4 $\times 4.0 \mathrm{~m}$ ) and a hewn step below it $(0.5 \times 1.5 \mathrm{~m})$. Diagonal rows of quarrying marks (length c. 0.5 m ) in different directions were discerned.

Rock-cutting 2. A rectangular surface (Figs. 3, 4; $1.1 \times 1.7 \mathrm{~m}$ ) was preserved c. 30 m north of Rock-cutting 1 at a lower level. The diagonal rock-cutting marks were distinct and extended in several directions.

Rock-cutting 3. A rectangular surface (Figs. 5,$6 ; 0.8 \times 1.3 \mathrm{~m}$ ) was hewn c. 8 m north of Rockcutting 2 at the same level. A hewn corner was preserved in its northern side (height 0.3 m ). The clear quarrying marks had uniform directions.

Diagnostic artifacts were not discovered. The rock-cutting marks, which were part of earlier quarries in the region and attributed to the Second Temple period, were destroyed over time.



1. Rock-cutting 1, plan.

2. Rock-cutting 1, looking west.


3. Rock-cutting 2, looking west.

4. Rock-cutting 3, plan.

5. Rock-cutting 3, looking west.

## Jerusalem, Armon Ha-Naziv



1. Location map

Annette Nagar
16/12/2007
During May 2005 a salvage excavation was conducted in Nof Zion, at the foot of the Armon Ha-Naziv neighborhood in Jerusalem (Permit No. A-4470*; map ref. NIG 2232/6129; OIG 1732/1129; Fig. 1), prior to the construction of a new habitation quarter. The excavation, on behalf of the Antiquities Authority, was directed by A. Nagar, with the assistance of R. Abu-Halaf (administration), T. Sagiv (photography), A Hajian (surveying), E. Belashov (drafting), C. Hersch (pottery drawing), L. Kupershmidt (metallurgical laboratory) and R. Kool (numismatics).

The excavation area (c. 150 sq m ) was located on the slope of a spur, descending from south to north (Fig. 2); two winepresses and a stone quarry were exposed (Fig. 3).

## The Large Winepress

The treading floor ( $6.8 \times 7.4 \mathrm{~m}$ ) was delimited by four rock-hewn walls (Fig. 4). Four hewn depressions ( $A, B, C, H$; diam. $0.07-0.12 \mathrm{~m}$, depth 0.12 m ) in the northern side were probably intended for wooden posts. Severance channels around a few rectangular stone blocks (c. $1.25 \times$ $1.80-1.00 \times 1.95 \mathrm{~m}$ ) were noted in the center of the floor and along its northwestern side. The must flowed from the treading floor into a square settling vat (L103; $1.25 \times 1.25 \mathrm{~m}$, depth 1.65 m ; Fig. 5) by way of a hewn perforation (diam. 0.15 m , length 0.35 m : Fig. 6). A circular settling pit $(0.30 \times 0.35 \mathrm{~m}$, depth 0.08 m$)$ was exposed in the northeastern corner of the vat's floor. Another perforation (length 0.3 m , width 0.1 m , height 0.23 m ) led to a square collecting vat (L113; $1.7 \times$ 1.7 m , depth 3 m ). A severance channel (width 0.15 m , height 0.6 m ) was between two bedrock steps in the upper part of the vat's eastern side. The collecting vat was coated with a single layer of plaster, preserved in its entirety on the floor and partially on the walls. The corners of the floor were slanted, allowing the must to drain toward the center of the vat (Fig. 7).
A hewn pit (L112; 1.55-1.65 $\times 2.00$, depth 1.55 m ), c. 7 m north of the treading floor, had a slanted floor and three cut steps on its north wall. The quarrying in the southern part of the pit was incomplete; a roughly hewn stone block ( $0.80 \times 1.75 \mathrm{~m}$ ), surrounded by severance channels and clefts intended for removing it (Fig. 8), remained in place. It seems the pit was meant to be used as a collecting vat, but its quarrying was never finished. Three rock-hewn depressions (L, J, M), two circular (diam. 7 cm , depth $5-9 \mathrm{~cm}$ ) and the third rectangular ( $0.07 \times 0.12 \mathrm{~m}$, depth 0.11 m ) surrounded the pit and were probably intended for the insertion of wooden posts.
More severance channels around a stone block (L110; $0.20 \times 1.25 \mathrm{~m}$; Fig. 9) were discerned c. 0.25 m west of the pit. Its dimensions indicate it could have been used as a settling vat but its quarrying was incomplete

## The Small Winepress

A smaller rock-hewn winepress was c. 4.2 m from the northwestern corner of the treading floor in the large winepress. This installation included a treading floor that was not completely quarried (Fig. 10), a collecting vat (L115; $0.85 \times 0.90 \mathrm{~m}$, depth 1.15 m ) and a settling/filtration vat (L116; $0.55 \times 0.55 \mathrm{~m}$, depth 0.2 m ). Another treading floor ( $\mathrm{N} ; 0.7 \times 1.4 \mathrm{~m}$ ) was 0.3 m west of the collecting vat.

## Stone Quarry

High walls and a bedrock terrace, which had a rounded cross-section and rose above the southern wall of the large winepress (Fig. 11), typified the quarry.

All the ceramic finds, recovered from the vats and pits, included an Iron III bowl (Fig. 12:1); jars from the Hellenistic period (Fig. 12:2, 3); cooking pots (Fig. 12:4, 5), a jar (Fig. 12:6), jugs (Fig $12: 7,8$ ) and goblets (Fig. 12:9-15) from the Early Roman period; a krater (Fig. 12:16) and decorated fragments (Fig. 12:17-19) from the Byzantine period and glazed fragments (Fig. 12:20, 21) from the Mamluk period. Two coins were found on surface; one was from the time of Alexander Jannaeus (IAA 108910) and the other, from the last decade of Herod's reign (IAA 108911).

1. Location map.

2. The excavation area, looking south.

3. Plan and sections.

4. Treading floor.

5. Settling vat (L103) and collecting vat (L113) behind it.

6. Perforation connecting treading floor to settling vat.

7. Corners of collecting vat's (113) floor and plastered walls.

8. Pit 112, sloped floor and severance channels

9. A stone block and severance channels

10. Small winepress, looking west.

11. Bedrock terrace.


## Jerusalem, 'Zedekiah's Cave'



1. Plan.

During August 2000 and September 2002 two seasons of excavation were conducted in 'Zedekiah's Cave', located beneath the Old City of Jerusalem (Permit Nos. A-3274, A-3732; map ref. NIG 22198-215/6321020; OIG 17198-215/13210-20). The excavations, on behalf of the Antiquities Authority and financed by the Biblical Archaeological Foundation of Texas, USA (the first season) and the Heath Archaeological Foundation of Australia (the second season), were directed by Y. Zelinger, with the assistance of D. Weiss (area supervision), V. Essman, V. Pirsky and A. Hajian (surveying and drafting), S. al-Amlah (metallurgical survey), A. Ganon (administration), T. Sagiv (photography), A. Berman (numismatics), R. Vinitsky (metallurgical laboratory) and volunteers on behalf of the two foundations.
'Zedekiah's Cave' is a rock-hewn cavern used by past builders of Jerusalem for quarrying masonry stones. Its opening is found at the base of bedrock that served as the foundation for the Old City walls from the Ottoman period and it extends across an area of c. 9,000 sq m , beneath most of the Muslim quarter. The purpose of the excavations--the first ever conducted in the cave--was to attempt dating the periods of its use. Moreover, the cave was measured for the first time using modern surveying equipment and a comprehensive metallurgical survey was performed with the aid of metal detectors. Five areas, mainly situated in the vicinity of the cave's opening, were opened (Fig. 1).

Area $\mathbf{A}(2.0 \times 5.3 \mathrm{~m})$. The base of a wall, built of large well-dressed stones $(0.5 \times 0.6 \mathrm{~m})$, was exposed. The wall (length 16.5 m , height c. 10 m ) was found covered almost entirely with later debris. Its visible upper part consisted of smaller stones. The pottery vessels at the base of the wall were mostly from the Mamluk period (thirteenth century CE) and it seems that the wall was constructed in this period to block the entrance to the cave's void. It is known from historical sources that the cave's opening was blocked during the Ottoman period in fear of an enemy infiltrating the Temple Mount by way of the cave. It appears that the date of the wall's construction should be set earlier, based on the finds.

Area B ( $4 \times 4$; depth 2.5 m ) was opened next to the western wall of the cave, in a place where the shallow rock-cutting offered the possibility to inspect the quarrying methods along the lower sections of the walls. Large stones were vertically cut here and detached from the entire height of the wall.

Area C ( $4 \times 4 \mathrm{~m}$, depth 1.5 m ) was also opened next to the western wall of the cave. It was farther away from the opening and practically not disturbed by the debris that spilled into the cave. Thus, the ceramic finds at its bottom were the earliest recovered from the excavation, including mainly potsherds from the Roman and Byzantine periods and a few fragments from the Iron Age.

Area $\mathbf{D}(5 \times 5 \mathrm{~m})$ was opened in a hall that extended east of the cave's opening, next to the spot where the winged cherub relief, which Clermont-Ganneau published in the nineteenth century CE, was found. The excavation in this area aimed to examine Clermont-Ganneau's contention that the work in the quarry had begun in the Iron Age. The large quantities of debris that had penetrated the cave through its opening contained pottery vessels that mostly dated to the Mamluk period. On the bottom of the cave, at a depth of 4 m , were a few potsherds from the Byzantine period and a single bowl fragment from the Iron Age.

Area E (max. dimensions $4 \times 9 \mathrm{~m}$ ) was opened in a hall that extended west, near the cave's opening. Despite its proximity to the opening's disturbed area, a stone-slab floor ( $3 \times 5 \mathrm{~m}$ ) laid next to a bedrock outcrop was exposed. Several perforated holes were hewn through the upper part of the outcrop. The most ancient ceramic artifacts from this area were found in a probe below the floor, dating to the beginning of the first century BCE. Based on the finds, this was probably the area where the quarried stones were loaded and brought outside the cave, after lifting them with ropes that passed through the perforated holes.

The metallurgical survey exposed 57 coins, of which only 49 could be identified. Most of the coins dated to the Early Islamic period, several coins dated to the Byzantine period and a single coin dated to Year 2 of the revolt (67/68 CE; IAA 95674).

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1. Plan.

## Jerusalem, Beit Safafa (West)*

Vered Barzel
18/12/2007


1. Plan and sections.

During May 2003 a salvage excavation was conducted along the northeastern slope of a hill, north of the Sarafat neighborhood in Beit Safafa (Permit No. A-3907*; map ref. NIG 21790/62830; OIG 16790/12830), in the wake of constructing a railroad station. The excavation, on behalf of the Antiquities Authority and financed by the Railroad Authority, was directed by V. Barzel, with the assistance of R. Abu-Halaf (administration), A. Hajian (surveying and drafting), L. Barda (GPS system), G. Solimany and Z. Greenhut.
Remains of a farming pen were visible on surface, including a long wall (W4, W5), oriented eastwest and a series of terrace walls to the north and south (W1-W3), built perpendicular to it (Fig. 1). Wall 4 (length 14 m , width 0.8 m ) was built of small and medium fieldstones. At its western end was Wall 3, built of large stones, whose eastern face (length 4 m , width 0.6 m ) formed a corner with W4. The continuation of the of the enclosure wall (W5; length 9 m , width c. 2 m ) was built in a later phase, utilizing small and medium-sized fieldstones. Set on the corner of W4, it formed a corner with the western face of W3 (length c. 3 m , width c. 0.5 m ), which was also built of small and medium-sized fieldstones. To the south, were two farming terraces perpendicular to W5. Wall 1 (length 10 m , width 0.5 m ) and Wall 2 (length 7.5 m , width 0.8 m ) had a well-built eastern face and their western face was supported by soil fill (L104).
East of W1, a square (L103), excavated down to bedrock level, contained brown soil fill mixed with small and medium stones and a few potsherds that dated from the Iron Age to the Byzantine period.
To the east of W2 (L105) and in the corner of W3 and W4 (L101), two squares that contained brown soil mixed with small and medium-sized stones and a few non-diagnostic potsherds, were excavated down to bedrock.
The long enclosure wall (W4, W5) was built at the angle of the slope, whereas the terrace walls perpendicular to it, were farming terraces. It was impossible to date the complex.


1. Plan and sections.

## Jerusalem, Beit Safafa*



1. Plan and section.

2. Miqwe, looking
southeast.

3. Pottery.

4. Pruning sickle.

Irina Zilberbod
20/12/2007
During November 2004, a salvage excavation was conducted in the Beit Safafa neighborhood of Jerusalem (Permit No. A-4282*; map ref. NIG 2193/6283; OIG 1693/1283), in the wake of installing a water line. The excavation, on behalf of the Antiquities Authority and funded by the Gihon Company, was directed by I. Zilberbod, with the assistance of A. Hajian (surveying), T. Sagiv (photography), C. Hersch (find drawing), C. Amit (studio photography) and T. Kornfeld (drafting).

Mechanical equipment that worked in the area exposed the walls of an installation, which turned out to be a miqwe (Figs. 1, 2).
The mique ( $2 \times 5 \mathrm{~m}$, max. depth 2 m ), aligned north-south, was quarried in bedrock on a slope that descends northward to Nahal Refa'im. The longitudinal walls and the upper half of the southern lateral wall were vertical, whereas the bottom half of the southern wall was vaulted. The entrance to the miqwe was apparently located in the northern part that was severely damaged. The staircase descending into the miqwe was survived by the three bottom steps that were hewn the entire width of the installation (max. width 2.2 m ). The upper two steps were relatively low (Loci 12, 13, 14; height of step 0.2 m ), whereas the bottom step, which served as the side of the immersion pool, was higher (L15; height 0.4 m ).
The remains of a built partition (W3; length 0.6 m , width 0.25 m ) on the upper step divided the staircase between those ascending and descending the steps, as was customary in numerous ritual baths from the Second Temple period in Jerusalem and its environs.
Only the southern corner of the miqwe's western wall was exposed. The eastern wall (W1; preserved length 3.5 m ) was partially preserved and the southern wall (W2; length 2 m ) was preserved in its entirety. The immersion pool (L16; length 2.1 m , width 1.5 m , height 0.4 m ) was rectangular. Hydraulic plaster was applied to the miqwe's walls and floor.
The collapse above the miqwe's floor consisted of dressed masonry stones, flagstones and numerous pottery vessels from the Early Roman period (the first century CE), including bowls (Fig. $3: 1-4$ ), cooking pots (Fig. 3:5-12), jars (Fig. 3:13-19), a flask (Fig. 3:20), jugs (Fig. 3:21-25), a strainer jug (Fig. 3: 26) and the base of an amphora (Fig. 3:27). Among the special finds were an iron pruning sickle (Fig. 4) and a decorated fragment of a small, soft limestone column (Fig. 5), which was probably the leg of a stone table, such as were found in villas from the Second Temple period.
Judging by the plan, the architectural features and the artifacts, it can be assumed that the miqwe was part of a residential compound in a farm estate of the type built in the agricultural hinterland of Jerusalem during the latter part of the Second Temple period.


2. Miqwe, looking southeast.

3. Pottery.


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4. Pruning sickle.


## Jisr es-Sidd*

## Howard Smithline

19/2/2007


1. Plan.

2. General view, looking east.

3. Exposed wall section in the thick brush

During November 2005 a small excavation was conducted near the ruined bridge of Jisr es-Sidd, c. 2 km south of Qevuzat Kinneret (Permit No. A-4623*; map ref. NIG 25295-310/73400-50; OIG 20295$310 / 23400-50$ ), in the wake of damage to an unknown subterranean wall. The excavation, on behalf of the Antiquities Authority and partially financed by the Meqorot National Water Company, was directed and photographed by H. Smithline, with the assistance of V. Essman and V. Pirsky (surveying), A. Shapiro (GPS), N. Zak (drafting) and D.T. Ariel (numismatics). Z. Vinogradov of Qibbuz Bet Zera' contributed from his extensive knowledge of the region.

The flat excavation area ( 35 sq m ) was in the fertile agricultural fields of the central Jordan Valley, c. 100 m west of the river and immediately east of an abrupt 2 m rise in the surface. Running adjacent to the river is an unpaved road, separated from the fields to the west by a low embankment that is possibly a ruined and concealed aqueduct. Remains of construction on the eastern bank are possibly part of the ruined bridge Jisr es-Sidd that at one time traversed the Jordan River. The steep and thickly overgrown west bank precludes the finding of any construction remains. The active Alumot Dam is c. 500 m to the north and Khirbat Umm Juna is less than 1 km to the southeast. The confluence of the Jordan River with the Yavne'el stream, descending from the west, is a short distance to the south. This section of the Jordan River has been traversed by a number of bridges and dams with little evidence of their remains. These were catalogued by $Z$. Vinogradov, who also collated references to Jisr es-Sidd on various nineteenth and twentieth century maps, such as the Jacotin map, where it was incorrectly named and the map of the British Survey. Vinogradov claims that the bridge is named after a local Bedouin tribe. In addition, the name Jisr es-Sidd suggests that it served as a dam, as well as a bridge.

The upper excavation layer comprised c. 0.3 m of fertile soil that covered a layer of leveled small stones, spreading southward (L105; Fig. 1). Adjoining the stones to the west was apparently a round installation built of larger fieldstones. This poorly built feature was barely defined as it jutted out from the southern edge of the square. The stone layer and installation were separated from the remainder of the area by the intrusive Meqorot channel.
Two parallel walls were found to the north of the channel, oriented northwest-southeast (Fig. 2). The southern wall (W112) was partially damaged by the intrusive channel. Its southern face was constructed from large basalt hammer-dressed stones, while the northern face consisted of smaller and rounder stones. The two faces formed a single unit that left a narrow space for a core of smal stones. Wall 112 incorporated a very large, in situ, basalt boulder (length c. 1 m ; Fig. 3). A very hard mortar surface abutted the southern face of W112 and was also applied to its face. The surface was cut by the intrusive channel but it continued to the southeast where it abutted the extension of W112 in an identical manner. Wall 112 and the mortar surface are probably the remains of a water carrier, either a built channel or an aqueduct. It appears that after the carrier went out of use its channel was filled with archaeologically sterile silt and alluvium (depth c. 0.5 m ), upon which the topsoil and stone level accumulated (Fig. 4). The construction technique is commonly known in colloquial Arabic as daqa (دكة), whereby a finely ground mortar is applied to walls and surfaces, creating a very hard cement-like material that is water resistant (Fig. 5).
The parallel Wall 114 was buried beneath a tumble of stones that descended from south to north. This poorly built wall was constructed from carelessly set basalt boulders on its northern face and smaller basalt stones on the southern face, with no binding material (Fig. 6). The narrow space (L113; width 0.6 m ) between the two walls attained the in situ boulder that was then incorporated into W112. Perhaps W114 served as support for the aqueduct or built channel of W112.

A small number of potsherds, mostly small and extremely worn fragments that did not enable accurate dating of the construction, were recovered from the excavation. Potsherds dating to the early Chalcolithic, Hellenistic, Roman, Byzantine, Mamluk and Ottoman periods were identified. A small group of twelfth-thirteenth centuries CE fragments were uncovered in the space between the walls (L113) and Rashaya el-Fukhar fragments were common in surface loci.
Two coins were discovered as well. One came from surface and is dated to the fourth century CE (IAA 102367) and the second is an Omayyad fals, retrieved from the stone fill (L110; IAA 102368).

The large quantity of water and the fertile soil in the Jordan Valley necessitated the construction of water carriers to facilitate irrigation. It also led to the establishment of large mills, such as at Umm Juna and el 'Ubeidiya. Our excavation exposed one of these water utilization conduits: a stone-built channel or an aqueduct that transported water into the fields and presumably, to one of the milling installations. However, its continuation and relationship to Jisr es-Sidd and the Jordan River, as well as to other units, remain buried. The exact plan of the structure is unclear due to poor preservation and the limited excavation. The 2 m abrupt rise to the west of the excavation area may conceal a better preserved section of the construction, whose accurate dating is impossible.

Twenty-five meters to the northeast and 40 m to the north of the excavation, in the thick and nearly impenetrable brush, two large sections of an aqueduct or a mill were found and partially cleared, but not excavated. One of the sections is preserved over 2 m high (Fig 7). Likewise, hidden in the thick brush, 150 m to the southeast, is a still extant bridge/aqueduct of unknown date, traversing the Yavne'el Stream.


3. Walls 112 and 114 with basalt boulder between them, looking west.

4. South balk, Stone Installation 105 on alluvial soil accumulation.


6. General view, looking south; W114 in foreground.

7. Exposed wall section in the thick brush.

## Kabul*

Hanaa Abu 'Uqsa
24/7/2007


1. Installation, plan.

2. Installation, looking
south.

3. Pottery.

4. Fragments of colored plaster.

During July 2003 a salvage excavation was conducted in the village of Kabul (Permit No. A-3938*; map ref. NIG 22045/752365; OIG 17045/252365) after quarrying marks were exposed when trial trenches were dug along the route of a sewer pipe. The excavation, on behalf of the Antiquities Authority and financed by the Kabul Local Council, was directed by H. Abu-‘Uqsa, with the assistance of Y. Lerer (probe trenches), A. Shapiro (surveying), H. Smithline (photography) and H. Tahan (drawing).
Five burial caves had been discovered at the site in the past. Four of the caves were equipped with burial niches and one cave had two chambers without niches. Clay coffins were found in each of the caves and ossuaries were discovered in two of the caves. The caves were dated to the first-fourth centuries CE (HA 40:3; 48-49:33; ESI 16:137; 20 : 129*; Eretz Tsafon 2002:141-145). Another excavation conducted in 1999 revealed the remains of a building that dated to the Mamluk period (HA-ESI 114:110*).

A soft qirton-hewn installation that included a funnel-shaped pit (diam. c. 0.24 m , depth 0.3 m ; Figs. 1, 2) was exposed. A shallow channel linked it to a collecting vat ( $0.60 \times 0.62 \mathrm{~m}$, depth 0.33 m ) that had a settling pit (diam. 0.18 m , depth c .0 .1 m ) in its southeastern corner. A north-south oriented wall, built of qirton on top of bedrock, enclosed the west side of the installation that was probably used in the pressing and production of liquids.

The ceramic finds included cooking pots (Fig. 3:1, 2), jars (Fig. 3:3-5) and a lamp (Fig. 3:6) that dated to the end of the Hellenistic-Early Roman periods.
The potsherds gathered elsewhere along the route of the sewage pipe dated to the Roman, Byzantine and Mamluk periods. Fragments of colored plaster in shades of lustrous red, grayish-red, yellow, green and white were also collected (Fig. 4). Some of the fragments exhibited floral and geometric patterns and others were coated with two plaster layers of different colors.


2. Installation, looking south.

3. Pottery.

4. Fragments of colored plaster.

## Kafr Qari＇

## Khaled Mahamid

16／10／2007


1．Pottery and stone artifacts．


[^1]During January 2001，artifacts were discovered during an antiquities inspection of infrastructure work in the ancient core of Kafr Qari＇（map ref．NIG 205423－59／712280－44；OIG 155423－59／212280－44）．The finds were collected by H．Mahamid，assisted by P．Gendelman（dating）and M．Shuiskaya－Arnov（pottery drawing）．

The finds were found at a depth of 1 m ，in a layer of fill that contained a multitude of potsherds， including a cooking pot（Fig．1：1），the rim of an amphoriskos from the Late Byzantine period（Fig． $1: 2$ ）and a fragment of a basalt crushing vessel（Fig．1：3），as well as eight lamps（Fig．2：1－5）that dated to the sixth and the beginning of the seventh century CE．The lamps are decorated with floral patterns and have a base ring，a wing－like handle and a channel，extending the length of the nozzle （＇Atiqot 39：56）．These lamps were common in Samaria and along the central coastal plain from the fourth century CE until the seventh century CE（＇Atiqot 38：55－63）．Especially noteworthy is a trapezoid lamp with five wick－holes，decorated with geometric and floral patterns（Fig．3；Qedem ［8］1978：115，Fig．471）．
Although the potsherds were found in fill that probably derived from the core of the modern village when it was established some 180 years ago atop an ancient site，the finds can be correlated to those from other excavations that had previously been conducted along the western and northern fringes of the ancient village＇s core（ESI 19：31＊－32＊；HA－ESI 114：37＊－38＊；HA－ESI 117）．


3．A lamp with five wick－
holes．


1．Pottery and stone artifacts．

3. A lamp with five wick-holes.

## Kerem Maharal*

## Kareem Sa'id

9/5/2007


1. Plan.

2. Pottery.

During June 2002 a salvage excavation was conducted at Moshav Kerem Maharal (Permit No. A-3648*; map ref. NIG
19925-30/72778-81; OIG 14925-30/22778-81). The excavation, on behalf of the Antiquities Authority and funded by S. Amar, was directed by K. Sa'id, with the assistance of Y. Dangor (administration), V. Essman (surveying), M. Shuiskaya-Arnov (drawing) and M. Avissar (ceramic reading).

The excavation was conducted on a hill where the ruins of the Arab village of Ijzim, abandoned in 1948, are located. Two squares were opened, revealing six strata (max. depth 2 m ): one stratum from the Ottoman period, four strata from the Mamluk period and one stratum from the Byzantine period (Fig. 1).

Stratum I. Two stone walls (W18, W19) that were part of a building from the Arab village of Ijzim were discovered. The walls, founded on ancient walls, consisted of dressed stones, some of which were ancient and in secondary use.
Stratum II. A wall, built of small fieldstones (W15; 1.6 m long) and preserved three courses high, was uncovered. A stone pavement (L106), abutting W15 on the north, was overlaid with a fill that contained bowls (Fig. 2:6,7) dating to the Mamluk period. The remains were founded atop those of Stratum III, postdating them.
Stratum III. Two walls were excavated. Wall 13 ( 2.3 m long), oriented east-west and built of small fieldstones, formed a corner with Wall 14 ( 2 m long) that was also built of a small fieldstones Fragments of pottery vessels, including a bowl (Fig. $2: 3$ ) that dated to the Mamluk period, were found in the fill around the walls, but no distinct floor was discerned. Wall 13 severed Wall 16 of Stratum IV and thus, postdated it.
Stratum IV. Three walls (W10-12), enclosing a stone-paved courtyard (L104; min. dimensions 3.6 $\times 4.3 \mathrm{~m}$ ) were discovered. The walls, founded on bedrock, were built of dressed fieldstones. The fill below the stone pavement contained bowls (Fig. $2: 4,8-10$ ) that dated to the Mamluk period. Wall 16 , oriented north-south and perpendicular to W11, was built of medium-sized fieldstones. The northern part of the wall was cut by the later W13 of Stratum III.
Stratum V. A wall (W17; 2.5 m long), built of medium-sized fieldstones and preserved two courses high, was discovered; it extended beneath W14 of Stratum III. Fragments of bowls (Fig. 2:1, 2, 5) from the Mamluk period were found between its stones.
Stratum VI. This stratum, which was exposed only in L108, west of W17 of Stratum V, consisted of a thick fill that contained numerous fragments of Byzantine jars (Fig. 2:11-13), but no architectural remains.


1. Plan.

2. Pottery.

## Khirbat Beit 'Awwa



1. Location map

2. Point F3, plan and section.

3. Point F4a, plan and section.

4. Point F5, plan and sections.

5. Point F6, plan and section.

Nir-Shimshon Paran and Emil Aladjem
12/12/2007
During September-October 2004 a salvage excavation was conducted along the route of the separation fence west of the Beit 'Awwa village, c. 10 km southeast of Bet Guvrin (Permit No. A-4265*; map ref. NIG 19470/60180; OIG 14470/10180). The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Defense, was directed by N.S. Paran and E. Alajem, with the assistance of H. Lav (administration), I. Peretz (inspection) and A. Hajian and T. Kornfeld (surveying and drafting).

A preliminary survey along the route of the separation fence, conducted by Y . Lender and E . Alajem, revealed twenty three installations and rock-cuttings in an area on a hilltop (c. $30 \times 140$ $\mathrm{m})$, c. 100 m west of the Khirbat Beit `Awwa village (Fig. 1). Ten points were excavated and ten others were inspected; those where antiquities were found are described below.

Point F3. A cave ( $2.5 \times 2.5 \mathrm{~m}$; height 1.8 m ; Fig. 2) was entirely excavated. A wall (W31; length 2.2 m , width c .0 .2 m , height 1.5 m ) built next to the northern side of the cave, probably to straighten it, was discovered. It seems that the floor of the cave and its other sides were crudely straightened, rendering it the shape of a square. A few worn potsherds, including fragments of a Middle Bronze I vessel and a Late Roman C bowl, were found.

Point F4. A bedrock terrace and a smoothed, broad bedrock surface ( $2.5 \times 10.0 \mathrm{~m}$; Fig. 3) with five cupmarks randomly hewn on top of it. No artifacts were discovered.

Point F4a. A winepress hewn in the middle of a bedrock surface consisted of a shallow treading floor ( $0.7 \times 1.0 \mathrm{~m}$; depth 0.1 m ; Fig. 4) and a rock-hewn channel ( $0.1-0.3 \times 0.8 \mathrm{~m} ; 0.10 \times 0.25$ $m$ deep) that extended from it to the southeast and terminated in a circular collecting vat ( $1.0 \times$ 1.4 m ; depth 0.45 m ). A small hewn cupmark (diam. 0.15 m ; depth 0.1 m ), probably a sump, was hewn at the southern side bottom of the collecting vat.

Point F5. A rock-cut industrial winepress, exposed prior to the excavation. It consisted of a square treading floor (L501; $2.8 \times 3.1 \mathrm{~m}$; Fig. 5) whose eastern side was bedrock hewn. A third of its western part was paved with small and medium fieldstones, which were probably coated with hydraulic plaster that did not survive. The southwestern side of the pavement ended in a straight line where a delimiting wall apparently stood once but did not survive. Two perforations led from the northwestern wall of the treading floor to two settling pits. The eastern rectangular settling pit (L502; 0.4-0.5 $\times 1.0 \mathrm{~m}$; depth 0.35 m ) had a small cupmark (diam. 0.15 m ; depth 0.05 m ) in its northern side. The western settling pit (L503; $0.6 \times 0.8 \mathrm{~m}$; depth 0.5 m ), which was also rectangular, had a semicircular depression (diam. 0.15 m ; depth 0.15 m ) next to the center of its eastern wall, below the perforation that connected it to the collecting vat.
The collecting vat (L504; $2.0 \times 2.5 \mathrm{~m}$; depth 1.8 m ) was located between the settling pits. It was fed by the two perforations, one from each settling pit (the eastern hole did not survive). A circular sump (diam. 0.25 m ; depth 0.1 m ), hewn near the southern corner of the collecting vat, was apparently used for the last remains of the must.
The winepress appears to have been altered during its period of use. A rock-hewn step in the northern part of the bedrock partition between the eastern settling pit and the collecting vat actually negated the settling pit. Another step was hewn at the top of the collecting vat's northern wall. A wall (W51; $0.5 \times 4.8 \mathrm{~m}$; height 0.6 m ) of large stones was built in the southwestern third of the treading floor and reduced its size, perhaps to prevent alluvium from being washed inside. Modern cement was applied to two thirds of the collecting vat's height. A few body fragments of jars and cooking pots from the Roman-Byzantine periods were recovered from the treading floor.

Point F6. A water cistern that was visible on surface prior to the excavation (Fig. 6). A channel that consisted of a low wall (W61; 0.3-0.5 $\times 12.0 \mathrm{~m}$; height 0.2 m ) diverted the runoff toward the cistern's opening, opposite which was a breech in W61 where another channel (W62, W63; $0.3 \times$ 3.3 m ; height 0.3 m ) that used to discharge the surplus water into the valley existed. The channe was built of two parallel walls c. 0.3 m apart and was covered with chalk slabs. The bottom of the channel was c. 5 cm above the bottom of the cistern's opening and was meant to prevent the destruction of the diverting channel. Between the overflow channels and the diverting channel was a depression that probably served as a settling pit for the cistern, whose opening was covered with a large capstone (diam. 1.4 m ) that had a square hole ( $0.4 \times 0.4 \mathrm{~m}$ ) in its center, sealed with a modern iron lid. Two stone troughs were discovered next to the cistern's capstone and a rectangular rock-cutting, c. 2.5 m west of the capstone, was probably also used as another trough Body fragments of jars from the Roman-Byzantine periods were found in the vicinity of the cistern.

Hundreds and even thousands of archaeological elements had previously been documented in the region of the excavation, attesting to the rural-agricultural character of the Judean Shephelah, which was densely populated over many years. Although the dating of the elements discovered in the excavation is unclear, they correlate well with the general picture of antiquities in the region.


1. Location map.


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3. Point F4, plan and section.

4. Point F4a, plan and section.

5. Point F5, plan and sections.

6. Point F6, plan and section.

## Khirbat Beit 'Awwa



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12/12/2007
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1. Location map.


2. Point F4, plan and section.

3. Point F4a, plan and section.

4. Point F5, plan and sections.

5. Point F6, plan and section.

## Khirbat Beit Kufa

Yehiel Zelinger and Gili Hillel
16/12/2007
During August-October 2002 a salvage excavation was conducted within the grounds of the Adam military base (Permit No. A-3701), prior to the construction of additional firing ranges. The excavation, on behalf of the Antiquities Authority, was directed by Y. Zelinger and G. Hillel, with the assistance of Y. Dangor (administration), A. Hajian, V. Essman and V. Pirsky (surveying and drafting), T. Sagiv (photography), Y Nagar (physical anthropology) and D.T. Ariel (numismatics). Additional assistance was provided by O Shmueli and E. Reuven.

The survey within the areas slated for development revealed remains of buildings and a variety of agricultural installations that are characteristic of rural settlements in the foothills and in Western Samaria. All the installations and buildings that were excavated in the two areas are presented hereafter.

## Area B

A complex that extends across 40 dunam at the northern bend of a hill that descends to a tributary of Nahal Natuf. The area is mostly rocky with small plots of terra rosa soil between the rocky surfaces.
(1) Winepress (map ref. NIG 197125/651958; OIG 147125/151958).

Two phases were discerned in the winepress. In the first phase, bedrock surface served as a basin for the collection of run-off that was conveyed via hewn channels to a large water cistern. In the second phase, one of the drainage channels was canceled and a simple winepress was hewn on bedrock surface. The winepress had a treading floor ( $2.9 \times 3.2 \mathrm{~m}$, height 0.3 m ) that sloped toward a settling vat ( $0.70 \times 0.75 \mathrm{~m}$, depth 0.7 m ) whose upper part was connected to a larger collecting vat ( $1.25 \times 1.35 \mathrm{~m}$, depth $1.15-1.25 \mathrm{~m})$. The bottom of the collecting vat was coated with white plaster that did not survive on the walls. A few non-diagnostic potsherds were found.
(2) Stone Clearance Heap (diam. 10.8 m , height 0.7 m ; map ref. NIG 197150/651930; OIG 147150/151930).
A probe trench was excavated down to bedrock level in the southwestern quarter of the heap, revealing potsherds, mostly Byzantine. However, at a depth of 0.5 m below surface eleven modern coins dating to the years 1970-1974 were found. It therefore seems that the stone clearance heap is not ancient, but rather piled by soldiers who trained in the area.
(3) Quarry (map ref. NIG 197134/651852; OIG 147134/151852).

Two trial squares were opened next to the quarrying marks visible on surface.
3A - A wall (length 6.7 m , width $0.5-0.7 \mathrm{~m}$, height $1.0-1.2 \mathrm{~m}$ ) that extended through the area of quarries was exposed at a depth of 0.2 m below surface. Two layers of earth mixed with stones and potsherds were visible south of the wall. The lower layer that overlaid bedrock contained potsherds dating solely to the Hellenistic period. The potsherds from the upper layer were only from the Byzantine period.
North of the wall was a level of flat stones above a fill that contained masonry stones, which had apparently been discarded at the time they were quarried, mixed with stone chips and other rockcutting debris.

3B - A quarry section ( $4 \times 4 \mathrm{~m}$ ). The method used to extract the stones and the severance channels hewn between them were clearly apparent. The quarry was not completely exposed.
(4) Water Cistern (map ref. NIG 197165/651840; OIG 147165/151840).

The upper part of a hewn water cistern (diam. 1 m , depth 1.5 m ) was discovered while digging a trial trench with a backhoe. A low wall $(0.30 \times 3.5 \mathrm{~m}$, height 0.3 m$)$ around the cistern's opening was meant to convey the run-off into the cistern, which was apparently located in the courtyard of a Byzantine building that was excavated 10 m away (No. 5).
(5) A Byzantine Building (map ref. NIG 197175/651841; OIG 147175/151841).

Three phases of the building were exposed in three adjacent squares ( $4 \times 4 \mathrm{~m}$ ).
Phase 3, the original structure. It was a courtyard building in which a central courtyard and a row of rooms to the east were exposed; two of the rooms were partially excavated. The walls were built of dressed stones set on bedrock surface and preserved a single course high. The floors were paved with small fieldstones. The main entrance to the central courtyard ( $4.0 \times 5.5 \mathrm{~m}$ ) was in the northern wall. A row of rooms probably existed on the western side of the courtyard but was severely damaged by later construction of the complex's second phase.

Phase 2, the later building. A room $(2.0 \times 4.5 \mathrm{~m})$ oriented north-south, was exposed. The walls were built of dressed stones, preserved two courses high. A tabun was set in a floor of crushed and tamped lime that abutted the walls. The entrance was set in the eastern wall whose northern side had a thick layer of plaster preserved to the level of the floor. A dressed-stone surface, exposed east of the room, was probably a floor.

Phase 1, modern refuse pit. This later disturbance in the southern part of the area contained rifle cartridges, cloth, and plastic.
The building, probably a farmhouse that belonged to the agricultural hinterland of nearby Horbat Hermeshit, had two distinct architectural phases, as well as material finds that attested to two periods. The potsherds collected above the floors of the two phases dated to the sixth-seventh centuries CE, whereas the coins mostly dated to the fourth century CE. The chronological gap between the ceramic artifacts and the numismatic finds can be explained in two ways: either the coins remained in circulation until the time of the pottery finds or the numismatic finds testify to the
existence of an earlier building that was not exposed.

## Area A

The complex extends across c. 160 dunams, rocky in the northern part and planted with eucalyptus trees in the south, beyond the northern bank of Nahal Natuf. Agricultural installations, mostly concentrated on the southern slope, were found.

Site 1 - Tomb (map ref. NIG 196938/652448; OIG 146938/152448).
It is hewn on a leveled bedrock surface. A low rectangular rock-cutting ( $1.1 \times 2.1 \mathrm{~m}$, height 0.03 $m$ ) surrounded the opening and served as a base for the covering slabs that closed the tomb. On either side of the standing pit ( $0.6 \times 1.7 \mathrm{~m}$, max. depth 1.6 m ) in the center of the tomb were hewn arcosolia (length 1.7 m , width 0.55 m , height 1.35 m ), in whose floors burial troughs (northern--depth 0.55 m ; southern--depth 0.6 m ) were cut. A 'pillow' (height 0.15 m ) for the deceased was carved on the western side, at the bottom of the northern trough. The tomb had been plundered in the past and no artifacts were discovered, save a few non-diagnostic potsherds and the remains of non-articulated human bones, which were turned over to a representative of the Ministry of Religious Affairs.

Site 10 - Tomb (map ref. NIG 196842/652336; OIG 146842/152336).
It is hewn on a straight bedrock surface. Its rectangular opening $(0.7 \times 1.6 \mathrm{~m}$, depth 1.1 m before excavation) was surrounded by a shallow hewn rectangular rock-cutting ( $1.2 \times 2.0 \mathrm{~m}$, height 0.03 m ) that served as a base for the covering slabs that sealed the tomb, which was not excavated due to objections of the Ministry of Religious Affairs.

Site 4 - Quarry (map ref. NIG 196889/652397; OIG 146889/152397).
Several square stones ( $1.15 \times 1.50 \mathrm{~m}$ ) were extracted from a bedrock outcrop. The method of quarrying was clearly apparent and the negatives of severance channels between the stones were visible. A cupmark (diam. 0.2 m, depth 0.15 m ) was excavated next to the quarried area.

Area 23 - Rock-cutting (map ref. NIG 196959/652564; OIG 146959/152564).
The beginning of hewn severance channels for the purpose of extracting a square stone (width 0.6 $\mathrm{m})$.

Site 6 - Water Cistern (map ref. NIG 196872/652355; OIG 146872/152355).
A cistern (diam. 0.9 m , depth before excavation 3.5 m ) in the middle of an exposed bedrock surface whose walls were coated with several layers of plaster. A rock-hewn trough ( $0.35 \times 0.60$ m ) to the west of the cistern, probably intended for watering sheep and goats, was cleaned.

Site 15 - Water Cistern (map ref. NIG 196695/652408; OIG 146695/152408).
This large cistern (diam. 1.65 m , depth 4.7 m ), coated with several layers of plaster, was not excavated.

Site 8 - Terrace (map ref. NIG 196866/652288; OIG 146866/152288).
A terrace wall (length 5 m , width 0.5 m ) built parallel to the slope.
Site 14 - Stone Clearance Heap and Wall (map ref. NIG 196691/652394; OIG 146691/152394)
A probe trench cut in the clearance heap revealed a well-built wall (length 15.9 m , width 0.6 m ) of dry construction, preserved two courses high. The bottom course comprised large stones ( $0.5 \times 0.7$ m ) and the upper consisted of medium-sized stones $(0.3 \times 0.4 \mathrm{~m})$. The ceramic finds indicate that the wall may be part of a structure dating to the Early Bronze Age.

Site 17 - Terrace (map ref. NIG 196834/ 652354; OIG 146834/152354).
A terrace wall (length 5.9 m , width 0.6 m ) built to a height of three courses, which was a remain for a wide terrace system that extended across the entire surface of the slope. The wall was documented without excavation.

Site 18 - Dam (map ref. NIG 196906/652313; OIG 146906/152313).
A stone wall (length 4.3 m , width 0.65 m ) build perpendicular to a small channel descending the hill. It was probably used to divert water for the cultivation plots dispersed throughout the area.

Site 5 - Stone Clearance Heap (diam. 11 m, height 0.7 m; map ref. NIG 196888/652371; OIG 146888/152371).
A trial trench excavated down to bedrock in the northwestern quarter of the heap revealed fragments of pottery vessels that dated mostly to the Byzantine period. The stone clearance was heaped on an exposed bedrock terrace to avoid wasting valuable farmland.

Site 7 - Stone Clearance Heap (diam. 9 m, height 0.8 m; map ref. NIG 196877/652305; OIG 146877/152305).
A probe section in the heap did not yield any datable finds.
Site 9 - Stone Clearance Heap (map ref. NIG 196862/652328; OIG 146862/152328).
Stone clearance (diam. 9.7 m ) was deposited on top of a bedrock surface that sloped to the south Non-diagnostic potsherds recovered from the probe trench are of no significance in dating the heap.

Site 20 - Stone Clearance Heap (map ref. NIG 196990/652560; OIG 146990/152560).
A trial trench excavated in this heap (diam. 7 m , height 0.8 m ) revealed five large stones $(0.5 \times$ 0.7 m ) that served as a retaining wall.

Site 21 - Stone Clearance Heap (map ref. NIG 197022/652558; OIG 147022/152558).
A trial trench cut in the clearance heap (diam. 8 m , height 0.8 m ) ascertained that the stones were deposited on an exposed bedrock surface so as not to occupy worthy farmland.

Site 25 - Stone Clearance Heap (map ref. NIG 196930/652502; OIG 146930/152502).
The trial trench cut into the clearance heap (diam. 8 m , height 0.6 m ) yielded no datable finds and revealed a low wall (height 0.3 m ) that delimited the heap.

Site 22 - Terrace (map ref. NIG 196958/652578; OIG 146958/152578).
A wall built of very large stones $(0.7 \times 1.2 \mathrm{~m})$, some are standing and others are lying on their side. Based on the difference in distance and the absence of a continuous line between the stones it seems that this was not a farming terrace, but rather a line that delimited two cultivation plots.

Site 26 - Terrace (map ref. NIG 196928/652539; OIG 146928/152539).
A wall built of standing stones with large spaces between them (length 5 m , width 0.4 m ), which probably separated between two cultivation plots.

Site 2 - Winepress (map ref. NIG 196843/652471; OIG 146843/152471).
An entire wine production complex, which consisted of an initial storage surface, a treading floor, a collecting vat and another extraction vat, was exposed. The main feature was a rectangular treading floor $(2.45 \times 3.10 \mathrm{~m})$ hewn in bedrock surface that sloped to the north. The liquid from the deep floor (depth 0.65 m ) would drain into a round, partially plastered, collecting vat (diam. 1.31 m , depth 1.85 m ). Two steps hewn in its western wall facilitated the descent into the vat. A settling pit (diam. 0.3 m , deep 0.2 m ) at the bottom of the vat drained the must that collected there. A shallow round depression (diam. 0.9 m , depth 0.2 m ) to the east of the collecting vat was probably used in a process of extracting additional juice from the pressed grapes. Some 4 m west of the treading floor was another rock-cutting ( $1.6 \times 1.9 \mathrm{~m}$, depth 0.4 m ) that apparently served for the preliminary storage of grapes prior to treading.

Site 11 - Cupmark (map ref. NIG 196825/652399; OIG 146825/152399).
The cupmark (diam. 0.5 m , depth 0.4 m ), hewn in the middle of a bedrock surface, was probably used in the process of winemaking.

Site 13 - Surface with Hewn Cupmarks (map ref. NIG 196888/652371; OIG 146888/152371).
The bedrock surface extended across three terraces on the southern slope of the hill. At least one large cupmark (diam. 0.5 m , depth 0.6 m ) was on each terrace, with several smaller cupmarks (diam. 0.2 m , depth 0.1 m ) around it, within a 2 m radius. This was probably an industrial installation used for extracting liquids.

Site 12 - Field Tower (map ref. NIG 196810/652412; OIG 146810/152412).
The field tower was covered with a stone clearance heap (diam. 9 m , height 1.2 m ) and enclosed within low stone walls on three sides. Its northeastern corner was excavated. The eastern wall, visible on surface for a distance of 8.4 m , was exposed to a height of 0.7 m and a width of 0.4 m . The northern wall could be seen for a distance of 2.3 m and was exposed to a height of 0.85 m and a width of 0.4 m . The fill visible in the section consisted of small stones, which were collected from a stone clearance heap in the adjacent farm plot.

## Khirbat Beit Kufa

Yehiel Zelinger and Gili Hillel
16/12/2007
During August-October 2002 a salvage excavation was conducted within the grounds of the Adam military base (Permit No. A-3701), prior to the construction of additional firing ranges. The excavation, on behalf of the Antiquities Authority, was directed by Y. Zelinger and G. Hillel, with the assistance of Y. Dangor (administration), A. Hajian, V. Essman and V. Pirsky (surveying and drafting), T. Sagiv (photography), Y Nagar (physical anthropology) and D.T. Ariel (numismatics). Additional assistance was provided by O Shmueli and E. Reuven.

The survey within the areas slated for development revealed remains of buildings and a variety of agricultural installations that are characteristic of rural settlements in the foothills and in Western Samaria. All the installations and buildings that were excavated in the two areas are presented hereafter.

## Area B

A complex that extends across 40 dunam at the northern bend of a hill that descends to a tributary of Nahal Natuf. The area is mostly rocky with small plots of terra rosa soil between the rocky surfaces.
(1) Winepress (map ref. NIG 197125/651958; OIG 147125/151958).

Two phases were discerned in the winepress. In the first phase, bedrock surface served as a basin for the collection of run-off that was conveyed via hewn channels to a large water cistern. In the second phase, one of the drainage channels was canceled and a simple winepress was hewn on bedrock surface. The winepress had a treading floor ( $2.9 \times 3.2 \mathrm{~m}$, height 0.3 m ) that sloped toward a settling vat ( $0.70 \times 0.75 \mathrm{~m}$, depth 0.7 m ) whose upper part was connected to a larger collecting vat ( $1.25 \times 1.35 \mathrm{~m}$, depth $1.15-1.25 \mathrm{~m})$. The bottom of the collecting vat was coated with white plaster that did not survive on the walls. A few non-diagnostic potsherds were found.
(2) Stone Clearance Heap (diam. 10.8 m , height 0.7 m ; map ref. NIG 197150/651930; OIG 147150/151930).
A probe trench was excavated down to bedrock level in the southwestern quarter of the heap, revealing potsherds, mostly Byzantine. However, at a depth of 0.5 m below surface eleven modern coins dating to the years 1970-1974 were found. It therefore seems that the stone clearance heap is not ancient, but rather piled by soldiers who trained in the area.
(3) Quarry (map ref. NIG 197134/651852; OIG 147134/151852).

Two trial squares were opened next to the quarrying marks visible on surface.
3A - A wall (length 6.7 m , width $0.5-0.7 \mathrm{~m}$, height $1.0-1.2 \mathrm{~m}$ ) that extended through the area of quarries was exposed at a depth of 0.2 m below surface. Two layers of earth mixed with stones and potsherds were visible south of the wall. The lower layer that overlaid bedrock contained potsherds dating solely to the Hellenistic period. The potsherds from the upper layer were only from the Byzantine period.
North of the wall was a level of flat stones above a fill that contained masonry stones, which had apparently been discarded at the time they were quarried, mixed with stone chips and other rockcutting debris.

3B - A quarry section ( $4 \times 4 \mathrm{~m}$ ). The method used to extract the stones and the severance channels hewn between them were clearly apparent. The quarry was not completely exposed.
(4) Water Cistern (map ref. NIG 197165/651840; OIG 147165/151840).

The upper part of a hewn water cistern (diam. 1 m , depth 1.5 m ) was discovered while digging a trial trench with a backhoe. A low wall $(0.30 \times 3.5 \mathrm{~m}$, height 0.3 m$)$ around the cistern's opening was meant to convey the run-off into the cistern, which was apparently located in the courtyard of a Byzantine building that was excavated 10 m away (No. 5).
(5) A Byzantine Building (map ref. NIG 197175/651841; OIG 147175/151841).

Three phases of the building were exposed in three adjacent squares ( $4 \times 4 \mathrm{~m}$ ).
Phase 3, the original structure. It was a courtyard building in which a central courtyard and a row of rooms to the east were exposed; two of the rooms were partially excavated. The walls were built of dressed stones set on bedrock surface and preserved a single course high. The floors were paved with small fieldstones. The main entrance to the central courtyard ( $4.0 \times 5.5 \mathrm{~m}$ ) was in the northern wall. A row of rooms probably existed on the western side of the courtyard but was severely damaged by later construction of the complex's second phase.

Phase 2, the later building. A room $(2.0 \times 4.5 \mathrm{~m})$ oriented north-south, was exposed. The walls were built of dressed stones, preserved two courses high. A tabun was set in a floor of crushed and tamped lime that abutted the walls. The entrance was set in the eastern wall whose northern side had a thick layer of plaster preserved to the level of the floor. A dressed-stone surface, exposed east of the room, was probably a floor.

Phase 1, modern refuse pit. This later disturbance in the southern part of the area contained rifle cartridges, cloth, and plastic.
The building, probably a farmhouse that belonged to the agricultural hinterland of nearby Horbat Hermeshit, had two distinct architectural phases, as well as material finds that attested to two periods. The potsherds collected above the floors of the two phases dated to the sixth-seventh centuries CE, whereas the coins mostly dated to the fourth century CE. The chronological gap between the ceramic artifacts and the numismatic finds can be explained in two ways: either the coins remained in circulation until the time of the pottery finds or the numismatic finds testify to the
existence of an earlier building that was not exposed.

## Area A

The complex extends across c. 160 dunams, rocky in the northern part and planted with eucalyptus trees in the south, beyond the northern bank of Nahal Natuf. Agricultural installations, mostly concentrated on the southern slope, were found.

Site 1 - Tomb (map ref. NIG 196938/652448; OIG 146938/152448).
It is hewn on a leveled bedrock surface. A low rectangular rock-cutting ( $1.1 \times 2.1 \mathrm{~m}$, height 0.03 $m$ ) surrounded the opening and served as a base for the covering slabs that closed the tomb. On either side of the standing pit ( $0.6 \times 1.7 \mathrm{~m}$, max. depth 1.6 m ) in the center of the tomb were hewn arcosolia (length 1.7 m , width 0.55 m , height 1.35 m ), in whose floors burial troughs (northern--depth 0.55 m ; southern--depth 0.6 m ) were cut. A 'pillow' (height 0.15 m ) for the deceased was carved on the western side, at the bottom of the northern trough. The tomb had been plundered in the past and no artifacts were discovered, save a few non-diagnostic potsherds and the remains of non-articulated human bones, which were turned over to a representative of the Ministry of Religious Affairs.

Site 10 - Tomb (map ref. NIG 196842/652336; OIG 146842/152336).
It is hewn on a straight bedrock surface. Its rectangular opening $(0.7 \times 1.6 \mathrm{~m}$, depth 1.1 m before excavation) was surrounded by a shallow hewn rectangular rock-cutting ( $1.2 \times 2.0 \mathrm{~m}$, height 0.03 m ) that served as a base for the covering slabs that sealed the tomb, which was not excavated due to objections of the Ministry of Religious Affairs.

Site 4 - Quarry (map ref. NIG 196889/652397; OIG 146889/152397).
Several square stones ( $1.15 \times 1.50 \mathrm{~m}$ ) were extracted from a bedrock outcrop. The method of quarrying was clearly apparent and the negatives of severance channels between the stones were visible. A cupmark (diam. 0.2 m, depth 0.15 m ) was excavated next to the quarried area.

Area 23 - Rock-cutting (map ref. NIG 196959/652564; OIG 146959/152564).
The beginning of hewn severance channels for the purpose of extracting a square stone (width 0.6 $\mathrm{m})$.

Site 6 - Water Cistern (map ref. NIG 196872/652355; OIG 146872/152355).
A cistern (diam. 0.9 m , depth before excavation 3.5 m ) in the middle of an exposed bedrock surface whose walls were coated with several layers of plaster. A rock-hewn trough ( $0.35 \times 0.60$ m ) to the west of the cistern, probably intended for watering sheep and goats, was cleaned.

Site 15 - Water Cistern (map ref. NIG 196695/652408; OIG 146695/152408).
This large cistern (diam. 1.65 m , depth 4.7 m ), coated with several layers of plaster, was not excavated.

Site 8 - Terrace (map ref. NIG 196866/652288; OIG 146866/152288).
A terrace wall (length 5 m , width 0.5 m ) built parallel to the slope.
Site 14 - Stone Clearance Heap and Wall (map ref. NIG 196691/652394; OIG 146691/152394)
A probe trench cut in the clearance heap revealed a well-built wall (length 15.9 m , width 0.6 m ) of dry construction, preserved two courses high. The bottom course comprised large stones ( $0.5 \times 0.7$ m ) and the upper consisted of medium-sized stones $(0.3 \times 0.4 \mathrm{~m})$. The ceramic finds indicate that the wall may be part of a structure dating to the Early Bronze Age.

Site 17 - Terrace (map ref. NIG 196834/ 652354; OIG 146834/152354).
A terrace wall (length 5.9 m , width 0.6 m ) built to a height of three courses, which was a remain for a wide terrace system that extended across the entire surface of the slope. The wall was documented without excavation.

Site 18 - Dam (map ref. NIG 196906/652313; OIG 146906/152313).
A stone wall (length 4.3 m , width 0.65 m ) build perpendicular to a small channel descending the hill. It was probably used to divert water for the cultivation plots dispersed throughout the area.

Site 5 - Stone Clearance Heap (diam. 11 m, height 0.7 m; map ref. NIG 196888/652371; OIG 146888/152371).
A trial trench excavated down to bedrock in the northwestern quarter of the heap revealed fragments of pottery vessels that dated mostly to the Byzantine period. The stone clearance was heaped on an exposed bedrock terrace to avoid wasting valuable farmland.

Site 7 - Stone Clearance Heap (diam. 9 m, height 0.8 m; map ref. NIG 196877/652305; OIG 146877/152305).
A probe section in the heap did not yield any datable finds.
Site 9 - Stone Clearance Heap (map ref. NIG 196862/652328; OIG 146862/152328).
Stone clearance (diam. 9.7 m ) was deposited on top of a bedrock surface that sloped to the south Non-diagnostic potsherds recovered from the probe trench are of no significance in dating the heap.

Site 20 - Stone Clearance Heap (map ref. NIG 196990/652560; OIG 146990/152560).
A trial trench excavated in this heap (diam. 7 m , height 0.8 m ) revealed five large stones $(0.5 \times$ 0.7 m ) that served as a retaining wall.

Site 21 - Stone Clearance Heap (map ref. NIG 197022/652558; OIG 147022/152558).
A trial trench cut in the clearance heap (diam. 8 m , height 0.8 m ) ascertained that the stones were deposited on an exposed bedrock surface so as not to occupy worthy farmland.

Site 25 - Stone Clearance Heap (map ref. NIG 196930/652502; OIG 146930/152502).
The trial trench cut into the clearance heap (diam. 8 m , height 0.6 m ) yielded no datable finds and revealed a low wall (height 0.3 m ) that delimited the heap.

Site 22 - Terrace (map ref. NIG 196958/652578; OIG 146958/152578).
A wall built of very large stones $(0.7 \times 1.2 \mathrm{~m})$, some are standing and others are lying on their side. Based on the difference in distance and the absence of a continuous line between the stones it seems that this was not a farming terrace, but rather a line that delimited two cultivation plots.

Site 26 - Terrace (map ref. NIG 196928/652539; OIG 146928/152539).
A wall built of standing stones with large spaces between them (length 5 m , width 0.4 m ), which probably separated between two cultivation plots.

Site 2 - Winepress (map ref. NIG 196843/652471; OIG 146843/152471).
An entire wine production complex, which consisted of an initial storage surface, a treading floor, a collecting vat and another extraction vat, was exposed. The main feature was a rectangular treading floor $(2.45 \times 3.10 \mathrm{~m})$ hewn in bedrock surface that sloped to the north. The liquid from the deep floor (depth 0.65 m ) would drain into a round, partially plastered, collecting vat (diam. 1.31 m , depth 1.85 m ). Two steps hewn in its western wall facilitated the descent into the vat. A settling pit (diam. 0.3 m , deep 0.2 m ) at the bottom of the vat drained the must that collected there. A shallow round depression (diam. 0.9 m , depth 0.2 m ) to the east of the collecting vat was probably used in a process of extracting additional juice from the pressed grapes. Some 4 m west of the treading floor was another rock-cutting ( $1.6 \times 1.9 \mathrm{~m}$, depth 0.4 m ) that apparently served for the preliminary storage of grapes prior to treading.

Site 11 - Cupmark (map ref. NIG 196825/652399; OIG 146825/152399).
The cupmark (diam. 0.5 m , depth 0.4 m ), hewn in the middle of a bedrock surface, was probably used in the process of winemaking.

Site 13 - Surface with Hewn Cupmarks (map ref. NIG 196888/652371; OIG 146888/152371).
The bedrock surface extended across three terraces on the southern slope of the hill. At least one large cupmark (diam. 0.5 m , depth 0.6 m ) was on each terrace, with several smaller cupmarks (diam. 0.2 m , depth 0.1 m ) around it, within a 2 m radius. This was probably an industrial installation used for extracting liquids.

Site 12 - Field Tower (map ref. NIG 196810/652412; OIG 146810/152412).
The field tower was covered with a stone clearance heap (diam. 9 m , height 1.2 m ) and enclosed within low stone walls on three sides. Its northeastern corner was excavated. The eastern wall, visible on surface for a distance of 8.4 m , was exposed to a height of 0.7 m and a width of 0.4 m . The northern wall could be seen for a distance of 2.3 m and was exposed to a height of 0.85 m and a width of 0.4 m . The fill visible in the section consisted of small stones, which were collected from a stone clearance heap in the adjacent farm plot.

## Khirbat Birkat Umm el-‘Idham*



1. Area A, plan.

2. Locus 104 and Walls 10 and 13 , looking south.

3. Pottery from the Byzantine period.

4. Square III, plan and section.

5. Installation 202, looking north.

Aviva Buchennino
13/3/2007
During January 2003 a salvage excavation was conducted at Khirbat Birqat Umm al-'Idham (Permit No. A3806*; map ref. NIG 1946/6918; OIG 1446/1918) after ancient remains were discovered while overseeing work on Highway 57. The excavation, on behalf of the Antiquities Authority and financed by the Department of Public Works, was directed by A. Buchennino, with the assistance of S. Ya'aqov-Jam (administration), A. Hajian and T. Kornfeld (surveying), T. Sagiv (photography) and M. Shuiskaya-Arnov (drawing).

Two areas (A, B) were opened c. 1 km apart and three half squares (I, II and III) were excavated.

Area A (Figs. 1, 2)
The excavation of Square I exposed a few pottery fragments with no architectural remains. A surface (L108; $1.0 \times 1.1 \mathrm{~m}$ ) of small stones was uncovered at the western end of the square. Its continuation (L104; $1.1 \times 1.2 \mathrm{~m}$, height 0.6 cm ) was noted in the balk between Squares I and II. The western end of the surface was bound by a very thin layer of plaster that was apparently applied to a wall. Several wall sections (W10-W13) built of kurkar fieldstones were exposed south of L104.

The ceramic finds included bowls (Fig. 3:1), kraters (Fig. 3:2-4), lids (Fig. 3:5), cooking pots (Fig. 3:6-11), jars (Fig. 3: 12-15) and a lamp fragment (Fig. 3:16), dating to the Byzantine period (fifth-sixth centuries CE).
It was impossible to determine the purpose of the stone surface and the walls due to the meager remains.

Area B (Figs. 4, 5)
Part of an installation (L202; diam. 1.07 m , wall thickness 0.27 m , height 0.75 m ) was exposed in Square III. It was built of various-sized kurkar fieldstones within hamra fill. The installation was coated with two layers of plaster; the upper layer contained ribbed jars fragments from the Byzantine period, which were also recovered from the square itself.


1. Area A, plan.

2. Locus 104 and Walls 10 and 13, looking south.

3. Pottery from the Byzantine period.


## Khirbat Burnat*

Uzi 'Ad
11/7/2007


During May-June 2003 a salvage excavation was conducted along the eastern Road No. 1 of the Heve Modi'in industrial zone (Permit No. A-3914*; map ref. NIG 19650/65735; OIG 14650/15735), following trial excavations that uncovered ancient remains. The excavation, on behalf of the Antiquities Authority, was directed by U. 'Ad, with the assistance of V. Essman and V. Pirsky (surveying and drafting), inspectors from the IAA Central District and the Hevel Modi'in Economic Development Company.

The excavation was carried out on the eastern fringes of Khirbat Burnat (HA-ESI 114:46*-47*) where a cave and a wall were exposed (Fig. 1)
Three squares were opened in the cave $(12 \times 14 \mathrm{~m})$ and three layers of fill were discerned. The upper layer (thickness 20 cm ) contained finds from the Ottoman period (Loci 102, 108). It overlaid, at a depth of 50 cm , a layer of black ash (Loci 103,109) that was probably the remains of a hearth or a burnt layer from the Byzantine period. The fill below the burnt layer contained worn potsherds, dating from the Persian to the Byzantine periods. A few potsherds, apparently from the Chalcolithic period and Early Bronze Age I were found in the western square, 20 cm below the ash layer. The floor of the cave was exposed at a depth of $1.1-2.0 \mathrm{~m}$. A square opening (L106; $40 \times 80 \mathrm{~cm}$ ), blocked by a stone, was discovered in the ceiling of the cave, whose western part had collapsed. A wall, extending for a distance of 20 m , surrounded the cave on the south and southwest. The wall was built of large fieldstones (length up to 1 m ), placed on bedrock. A few potsherds that mostly dated to the Byzantine period were found in two trial squares (Loci 104, 105), opened on either side of the wall.

It seems that the cave was used for shelter or as a dwelling for short periods, from the Chalcolithic period until the Ottoman period. The wall probably delimited the area of the cave or served as a fence.


1. Plan.

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## Khirbat el Mas'ud*



1. Trenches 1, 2, plan.

2. The rock-hewn installation, looking south.

3. Pottery from EB IV and Intermediate Bronze Age.

4. LMLK jar handle.

Alla Nagorsky
11/2/2007
During September 2003 a salvage excavation was conducted along the northern foot of Horevot Sokho, on the southwestern shoulder of Highway 375 (Permit No. A-3984*; map ref. NIG 1970-3/6215-6; OIG 1470$3 / 1215-6$ ), following the digging of a drainage channel. The excavation, on behalf of the Antiquities Authority and financed by the Department of Public Works, was directed by A. Nagorsky, with the assistance of A. Hajian (surveying), E. Bachar (administration), I. Lidski (pottery drawing) and C. Amit (studio photography).

The excavation area had been damaged in the past when a channel was dug.
Two probe trenches, aligned southeast-northwest (TR1-1 m wide, 60 m long; TR2-1 m wide, 10 m long), were excavated in the southwestern part of the area (Fig. 1). The excavation was suspended after underground cables were discerned. Eight probe trenches were excavated in the northeastern part of the excavation area

TR1
The trench extended from surface down to bedrock or to the exposed cables. Some four meters from the southeastern end of the trench, a rock-hewn installation (L16; Figs. 2, 3), which consisted of a straightened bedrock surface that had a $30^{\circ}$ slant from north to south and two hewn steps further along (L19), was discovered. Two bedrock-hewn oval vats had their southern wall preserved in its entirety and the northern wall severed when the steps were cut. The hewing of the steps connected the base of the eastern vat (upper diam. 0.48 m , depth 0.62 m ) to the level of the upper step (width 0.7 m , length 1.9 m ), which was hewn on an incline sloping to the north and was cut by the cable trench. The western vat (upper diam. 0.62 m , depth 0.81 m ) was completely preserved. A cupmark (diam. 0.18 m , depth 0.28 m ) above the eastern vat and another cupmark (diam. 0.12 m , depth 0.16 m ) above the western vat were hewn.

A small stone layer (L18) that abutted bedrock (Fig. 4) was exposed south of the rock-hewn installation. A similar layer was discerned at the northwestern end of TR1 (L25), yet the connection between them is broken and unclear. Numerous potsherds from the Early and Intermediate Bronze Ages were found between the stones.

TR2 (Loci 20, 24)
The excavation of this trench was suspended when the cables were exposed at an elevation of 288.14 m.

The soil fill in the two trenches contained numerous fragments of pottery vessels that dated to Early Bronze Age IV, including bowls (Fig. 5:1-5), a krater (Fig. 5:6), a jug (Fig. 5:7) and jars (Fig. 5:810) and the Intermediate Bronze Age, including bowls (Fig. 5:11-13), cooking pots (Fig. 5:14, 15), a holemouth jar (Fig. 5:16) and jars (Fig. 5:17, 18). Potsherds from Iron Age II included bowls (Fig. 6:1, 2), a holemouth jar (Fig. 6:3), jars (Fig. 6:4,5) and a zoomorphic figurine (Fig. 6:6). A noteworthy find was the handle of a jar bearing a Sokho type LMLK stamped impression (Fig. 7). The impression is oval-shaped and appears on the upper part of the handle. The inscription, on both sides of the 2 -winged symbol, is incomplete. The last two letters of the LMLK inscription and the place name Sokho have survived.

Eight backhoe trenches, aligned north-south, were dug to the northeast of the excavation area. Remains of walls, floors and numerous potsherds from the Early and Intermediate Bronze Ages were discovered. The remains were covered over and not documented.


1. Trenches 1, 2, plan.

2. Rock-hewn installation in TR1, plan and section.

3. The rock-hewn installation, looking south.

4. Pottery from EB IV and Intermediate Bronze Age.

5. Pottery from Iron Age II.

6. LMLK jar handle.

## Khirbat el-Fatuna

## Kamil Sari

16/12/2007


1. Plan.

2. Pottery.

3. Glass.

During July 1999 a trial excavation was conducted at Khirbat el-Fatuna (Permit No. A-3076*; map ref. NIG 1761-5/6380-6; OIG 1261-5/1380-6), in the wake of digging a trench prior to the installation of an oil pipeline. The excavation, on behalf of the Antiquities Authority, was directed by K. Sari, with the assistance of A. Hajian (surveying), Y. Nagar (physical anthropology), M. Shuiskaya-Arnov (pottery drawing), R Jackson-Tal (glass vessels) and A. Pikovski (drawing of glass vessels).
Ten squares were excavated in an attempt to evaluate the nature of the ancient remains that were damaged by modern development work. Nine of the squares contained no architectural remains and three of them were devoid of any material finds. Several of the squares contained pottery and glass vessels that apparently originated in refuse pits.
The excavation in all the squares reached a depth of 1 m , until a layer of sand that was completely barren of any archaeological finds.

Mostly ruinous walls (W120, W121; Fig. 1) and a section of a pavement whose relation to the walls could not be ascertained were exposed in one of the squares. Poorly preserved human bones within a layer of sand, which was void of any other artifacts, were found lying in an east-west direction near W121. The examination of the bones indicated they belonged to possibly three individuals, two adults, one probably a male, and a child.

The ceramic finds, dating to the Late Byzantine and Early Islamic periods, included bowls (Fig. 2:13), cooking pots (Fig. 2:4,5), jars (Fig. 2:6,7), a jug (Fig. 2:8), as well as three intact lamps.

The refuse pits and the human bones indicate that the excavation area was possibly located along the fringes of the site, west of the settlement itself. This is evidenced as well by the glass and pottery debris that may attest to production activities nearby.

## The Glass Vessels

Ruth A. Jackson-Tal
Approximately 1,000 glass fragments were found, mostly small non-diagnostic ones and industrial remains from the production of vessels. The assemblage consists of a wide range of vessel types, including bowls, bottles, a jug, a kohl bottle and jar, which are well-known from habitation and funerary contexts in the region. The vessels, made of pale blue, green, yellow and colorless glass with tinges, are covered with lime incrustation, silvery weathering and shining iridescence. All are free-blown and date to the Late Roman and the beginning of the Byzantine period. One fragment, dating to the Islamic period, is not illustrated because of its minute size. The importance of the assemblage lies in its great similarity to vessels at other sites in the region, particularly at Khirbat Ni'ana. A production center probably operated at the site, contemporary with the workshop at Khirbat Ni'ana and both manufactured similar vessels. The geographic and quantitative distribution of the vessel types supports the proposal that sees numerous operating workshops in the Land of Israel during the latter part of the Roman period and the beginning of the Byzantine period.

Bowls. Various bowl types were found.
Fig. $3: 1$ is a bowl with a curved rim and a horizontal ridge below it (fourth century CE).
Fig. $3: 2,3$ are two bowls with curved rims that are slightly everted and walls curving inward. The first is undecorated and the second is adorned with glass trails (fourth-fifth centuries CE).
Fig. 3:4 is a bowl that has a rim folded out along the entire length of the wall and curves in (fourth century CE).
Fig. 3:5 is a bowl with a broadly folded hollow rim (fourth-fifth centuries CE).
Fig. $3: 6$ is the base of a bowl that is made of glass trails intertwined around a thickened bottom (fourth-fifth centuries CE).

## Bottles

Fig. 3:7 is a bottle with a funnel mouth that is folded in, an elongated neck and a sloping shoulder (fourth-fifth centuries CE).
Fig. $3: 8$ is a bottle that has a curved funnel-shaped mouth with horizontal trails added below the rim (fourth-fifth century CE).

## Jug/Kohl bottle

Fig. 3:9 is a vessel that has a folded in funnel-shaped mouth, a narrow cylindrical neck and the remains of a handle (fourth-fifth centuries CE). It may be either a jug or a kohl bottle.

## Double kohl bottle

Fig. 3:10 is a vessel that has a folded in upright rim, the remains of a loop handle on the side and a basket handle (fourth-fifth centuries CE).

## Lump of industrial glass

Fig. 3:11 is a lump of raw glass that was used for melting during the industrial production of glass vessels that probably operated at the site. Similar remains were found in other baskets.


2. Pottery.


## Khirbat el-Kalbi*

## Hagit Torge

16/8/2007


1. Bowls and kraters.

2. Cooking pots, jars and other finds.

During November 2003 a salvage excavation was conducted at Kh. el-Kalbi (Permit No. A-4021*; map ref. NIG 2050-3/7148-50; OIG 1550-3/2148-50), in the wake of installing a water pipe by the Meqorot Water Company. The excavation, on behalf of the Antiquities Authority, was directed by H. Torge, with the assistance of S. Ya'aqov-Jam and Y. Dangor (administration), H. Khalaily (flint implements), E. Yannai (pottery consultation) and M. Shuiskaya-Arnov (find drawing).
The excavated area is located along the northern fringes of Nahal Hotmit, northeast of Qibbuz Regavim. Two salvage excavations had previously been conducted by A. Gorzalczany (HA-ESI 117; 'Atiqot 55:83-107 [Hebrew]), 10 m to the north, revealing ancient remains from Iron I and the Persian and Hellenistic periods.
Three soil strata were identified in four squares that were opened in an area where a light gray soil layer was discerned at the side of the trench.

The upper layer was a dark farming soil mixed with numerous small and medium-sized stones, which contained a bowl from the Persian period (Fig. 1:1) and many fragments of pottery vessels from Iron I, including bowls (Fig. 1:4, 10, 15, 19), jars (Fig. 2:5, 6), a cooking pot (Fig. 2:4) and a cult stand (Fig. 2:12). A few potsherds (not drawn) from the Byzantine period were also discovered. The lithic finds consisted of four implements characteristic of the Late Pottery Neolithic period (not drawn), including three bifacial tools, two axes and an awl, and a sickle blade.

The middle layer was a light gray soil (thickness 0.3 m ), c. 0.4 m below surface. The layer was leveled and uniform, indicating it was not alluvium, but rather an ancient settlement. Many fragments of pottery vessels were found, among them halves of vessels dating to the beginning of Iron I (twelfth century BCE), including bowls (Fig. 1:2, 3, 5, 6, 8, 9, 11-14, 16-18), kraters (Fig $1: 21-23$ ), jars (Fig. $2: 7-11$ ), cooking pots (Fig. $2: 1-3$ ) and handles with reed impressions (Fig. $2: 13-15)$. The finds are identical to the pottery vessels discovered in the previous excavations ('Atiqot 55: Fig. 14). Numerous flint implements from the Iron Age included six sickle blades, three retouched blades and two retouched flakes (not drawn). Many cattle and a few sheep bones were also retrieved.
It can be concluded that the site was used for growing grain and raising sheep, goat and cattle, as was customary along the fringes of the eastern mountains, where dense natural forest did not need to be eliminated for agricultural purposes. This phenomenon was noted in the past by the surveyors of the Menashe hills and the Efrayim and Judah counties. The thickness of the level and the diversity of pottery vessels indicate that the area was part of a residential site or adjacent to it.

The third layer, c. 0.7-0.8 m below surface and c. 0.5 m above bedrock, was dark soil mixed with numerous small and medium stones. The slant of the layer shows it is natural alluvium. The layer contained a few potsherds from Iron I, including bowls (Fig. 1:7, 20), as well as several potsherds from Early Bronze IA (not drawn) that were not found in the previous excavations and indicate that the tell was inhabited during this period. The tell may have been occupied during the Chalcolithic period, judging by a retrieved flint adze (not drawn).



## Khirbat el-Khamis*

## Irina Zilberbod

18/10/2007
During the end of June and beginning of July 2004 a salvage excavation was conducted at Khirbat elKhamis northwest of Bethlehem (Permit No. A-4154*; map ref. NIG 218/626; OIG 168/126), prior to the construction of the separation fence. The excavation, on behalf of the Antiquities Authority and funded by the Ministry of Defense, was directed by I. Zilberbod, with the assistance of E. Asulin and I. Ohana (security) and R. Abu-Khalaf (administration).
Two squares were excavated down to bedrock. The soil fill contained numerous masonry stones, some of which were dressed, a few pieces of mosaic and many fragments of pottery vessels from the Byzantine period. A coin dating to the end of the fourth century CE (383-395 CE) was discovered right above bedrock. The excavation is located within the site of Khirbat el-Khamis (A. Kloner, The Survey of Jerusalem, the Southern Sector, 2000:57*-58*, Site 152).

## Khirbat el-Khaneizireh*

Amani Abu Hamid
16/8/2007
During August 2001 a salvage excavation was conducted on Giv'at 'Eden in Zikhron Ya'aqov (Permit No. A3481*; map ref. NIG 19550/721325; OIG 14550/221325), in the wake of construction work. The excavation, on behalf of the Antiquities Authority and financed by R. Heller, was directed by A. Abu Hamid, with the assistance of V. Pirsky (surveying and drafting), E. Yannai and S. Golan.

The area ( $60 \times 85 \mathrm{~m}$ ) is located in the southeastern part of Giv'at 'Eden, southwest of Route 70 . Five complexes, built atop the nari bedrock (Fig. 1) and include stone clearance heaps (1, 2, 3, 4), were examined. The walls (W102, W201, W501, W505) consisted of a single course of mediumsized fieldstones $(0.20 \times 0.28 \times 0.30 \mathrm{~m})$. Some of the walls were covered with stone clearance heaps that comprised stones of various sizes $(0.07 \times 0.10 \times 0.12 \mathrm{~m})$.

The remains uncovered in the excavation indicate that the top of the hill was utilized for cultivation and the walls were apparently farming terraces. No ceramic finds were recovered and the only finds were numerous pieces of flint debitage, difficult to date. Similar stone clearance heaps were discovered in the area of Neve Remez in Zikhron Ya'aqov (HA-ESI 111:30*) and in the vicinity of Ramat Ha-Nadiv, excavated by R. Greenberg (IEJ 42:129-152).


1. Plan.

## Khirbat el-Mizrath

Michael Cohen and Leea Porat
14/6/2007


1. Wall remains of the building, looking west.

During November-December 2001 a salvage excavation was conducted at Kh. el Mizrath, east of Qibbuz Hanita (Permit No.
A-3378; map ref. NIG 21780-5/77650-5; OIG 16780-5/27650-5), in the wake of work carried out along the northern ceasefire-line border. The excavation, on behalf of the Antiquities Authority, was directed by M Cohen (photography) and L. Porat, with the assistance of V. Essman and V. Pirsky (surveying and drafting) Y. Ya'aqobi (administration) and laborers from Qiryat Shemona.

The site, on a hill east of Giv'at Eder (c. 394 m above sea level), was recorded in the Archaeological Survey of Israel (Map of Hanita [2], Site 39.2).

At the top of the hill, part of a building that covered an area of c. $1,600 \mathrm{sq} \mathrm{m}(36 \times 45 \mathrm{~m})$ was exposed. It was surrounded by walls built of headers and stretchers (width 1.2-1.4 m). Walls of indigenous limestone founded on chalk bedrock were discovered inside the building, whose plan was that of a covered courtyard enclosed by rooms along the outer walls. The ceramic finds dated to the Hellenistic and Early Roman periods.

The character of the building and its strategic location suggest it was a fortress that was established very early in the Hellenistic period and continued in use during the Early Roman period. Another possibility is that the structure was a fortified farmhouse.


1. Wall remains of the building, looking west.

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14/6/2007


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1. Wall remains of the building, looking west.

## Khirbat en-Nabi Bulus

Irina Zilberbod
12/12/2007
During August 2005 a trial excavation was conducted next to the site of Khirbat en-Nabi Bulus in Ramat Bet Shemesh (Permit No. A-4560*; map ref. NIG 198390/612478; OIG 148390/112478), following the construction of a new neighborhood. The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Construction and Housing, was directed by I. Zilberbod, assisted by I. Ohayon (administration).
The excavation area was near the sheikh's tomb at Khirbat en-Nabi Bulus, c. 100 m south of an area that had been excavated in 1999 (HA-ESI 117). Ten squares ( $2.5 \times 5.0 \mathrm{~m}$ ) were excavated down to bedrock at a depth of $0.5-1.5 \mathrm{~m}$. The soil fill contained some collapsed stones and numerous fragments of pottery vessels, including a lamp, whose date ranged from the Byzantine until the Ottoman periods. The potsherds and stones were apparently swept from the site, which is located on the adjacent hill.

## Horbat Harmas

## Yossi Elisha

5/2/2007


1. Plan.

During June-July 1998, salvage excavations were conducted at Horbat Harmas (Permit No. A-2874; map ref. OIG
180520-624/644691-820; NIG 130520-624/144691-820). The excavation, on behalf of the Antiquities Authority and financed by the Gindi Construction Company and Avshalom Chuman, was directed by Y Elisha, with the assistance of L. Zak, E. Sa'ar, M. Kodesh-Eshed, H. Eliaz and H. Mor (area supervision), T. Sagiv and S. Mandrea (photography), D. Porotski, A. Hajian and V. Essman (surveying), Y. Gorin-Rosen (glass), Y. Nagar (anthropology), G. Bijovsky (numismatics), R. Vinitsky (metallurgical laboratory), M. BenGal (pottery restoration) and M. Shuiskaya-Arnov (drawing).

The site, which had previously been surveyed by E. Ayalon, is located in Rehovot between the Tenuva factory and Horbat Duran, in an area that was planted with an orchard. Khirbat el-Bad (currently located within the Weizmann Institute of Science) is to the east of the site. The area was partly damaged by earthmoving equipment that created two levels, one meter apart in elevation. Three areas were opened.

Area A (Fig. 1)
Sections of buildings without distinct floors and walls, potter's kilns and several installations were exposed. Some of the installations postdated the walls; however, the relationship between them was not always clear.

Potter's Kilns. Five potter's kilns, two of them circular (L102, L109; diam. 2.7 m and 3.5 m ), were excavated. A column (diam. 1 m ), supporting the firing chamber where the vessels were placed was found in the middle of Kiln 102; on its walls were traces of soot that resulted from firing. Two mud-brick walls supported the firing chamber in another kiln (L199). Another poorly preserved kiln (L190) was probably also circular; it had apparently a central arch that supported the firing chamber. The oval fourth kiln (L176; $2 \times 3 \mathrm{~m}$ ] had a wall of eight mud bricks (height 0.48 m ) in its center and contained vessels dating to the Persian period. The fifth kiln (L146) was oval and had an interior mud-brick wall in its southwestern side. The kilns are dated to the Roman and Byzantine periods.

Rectangular Installations. All the installations (Loci 165, 403, 170; 1.5-1.8 $\times 2.0 \mathrm{~m}$; depth $0.45-1.30 \mathrm{~m}$; wall thickness $0.25-0.30 \mathrm{~m}$ ), whose function is unclear, were built of fieldstones. Plaster remains were discerned inside Installation 170. Early Islamic pottery and animal bones were found in the installations and a bone spindle weight came from Installation 403.

Refuse Pit (L161; diam. 1.1 m ). It contained pottery from the Persian and Hellenistic periods.
Oval Installation (L146; $1.6 \times 2.6 \mathrm{~m}$ ). Built of mud bricks, it contained another installation also built of mud bricks ( $1.1 \times 2.1 \mathrm{~m}$ ). The installation was filled with ash and pottery dating to the Persian, Roman and Byzantine periods.

Silo (L186; diam. 2.6 m , height 1.23 m ). It was constructed from twelve courses of small fieldstones. A repair of four mud-brick courses, replacing the fieldstones, was discerned in the silo's northwestern corner. The entrance was built of ashlar stones ( 0.65 m wide) and set on the east side. The silo contained fragments of pottery vessels from the Hellenistic until the Early Islamic period, which were probably discarded inside after it became a refuse pit.

Walls. Sections of walls that do not form distinct rooms were found. The remains of mosaic floors (L412), dating to the Byzantine period, were ascribed to some of the walls (W408).

Area B (Fig. 2)
Public Building. The walls of the building ( $9.7 \times 10.3 \mathrm{~m}$ ) were preserved a single course high and built of stones with an exterior dressed face and a fill of small fieldstones. The entrance was set in the middle of the eastern wall. A bench (width $0.55-0.60 \mathrm{~m}$ ) extended along the eastern, southern and western walls (width 1.25 m ); the northern wall was wider ( 1.55 m ), without a bench. The building had a mosaic floor that abutted the walls. The main pattern (width c. 1 m ) of the mosaic was a frame that consisted of red and blue rhombuses. Remains of a cross were noted in the center of the mosaic. Judging by the finds, including the potsherds below the mosaic's bedding, the building can be dated to the Byzantine period.

Tombs. Three tombs were discovered c. 15 m north of the building. Two were single tombs built of ashlar stones and covered with stone slabs (Loci 229, 230). The deceased were placed in a supine position, their heads to the south. Small iron nails that probably belonged to shoes or sandals were found next to the lower limb bones in Tomb 229. The third tomb (L226; $2.24 \times 3.10 \mathrm{~m}$; height 1.3 m ) was built of ashlar stones and found filled with soil, its ceiling missing. The remains of seven skulls were discerned along the southern wall of the structure. A spatula, small bronze ring, glass bracelet and gilded glass beads from the Late Roman period were recovered from this tomb.

Kilns. Three circular pottery kilns (Loci 216, 250, 251; diam. 3.1-3.8 m) were found. All three had a central arch that supported the floor of the firing chamber. They can probably be ascribed to the Roman period.

Surfaces for drying vessels. Two surfaces, where vessels were placed to dry prior to firing, were exposed. Pottery vessels from the Byzantine period were found.

## Area C

A glass furnace, a potter's kiln and remains of buildings were discovered.

Glass Furnace. Remains of a glass furnace (L346), which contained raw glass, were found. Next to it was a large amount of waste, including deformed glass vessels, glass drops and glass leftovers from the blow pipes.

Potter's Kiln. The northern half of a potter's kiln (L315; diam. 3.8 m , depth 0.7 m ), which contained complete jars dating to the Byzantine period, was excavated. Its opening was apparently on the west side.

Walls. Four walls, cut by a tabun and a potter's kiln, were exposed; they probably also dated to the Byzantine period.

It seems that this part of the site, which was settled from the Persian until the Early Islamic periods, was a developed industrial zone where pottery and glass workshops operated.


1. Plan.

## Khirbat Murt es-Seil*



1. Location map and excavation areas.

2. Area A, plan.

3. Area B-1, plan.

4. Area B-3, plan.

During November 2001 an initiated excavation was conducted in the Shahariya Forest (the Forest of Angels), c. 5 km east of Qiryat Gat on Highway 35 (Permit No. A-3529*; map ref. NIG 1830/6110; OIG $1330 / 1110$ ). The excavation, on behalf of the Antiquities Authority, at the initiative of and financed by the Jewish National Fund, was directed by N.S. Paran, with the assistance of H. Lavi (administration) and V. Essman and V. Pirsky (surveying).
The excavation took place in three areas, located c. 1 km from each other (Fig. 1).
AREA A (map ref. NIG 184430/611661; OIG 134430/111661; Fig. 2).
This area ( $15 \times 20 \mathrm{~m}$ ) was situated at the top of a spur that descends gently to the southwest. Atop a bedrock outcrop, seven rock-hewn installations devoid of any finds were found.
A-1. An oval installation ( $1.2 \times 1.6 \mathrm{~m}$, depth $0.05-0.10 \mathrm{~m}$ ) that sloped to the southeast and was linked to an adjacent, somewhat rectangular-shaped vat ( $0.80 \times 1.25 \mathrm{~m}$, depth 0.8 m ).
A-2. An installation similar to A-1, but smaller and deeper ( $0.90 \times 1.25 \mathrm{~m}$, depth 0.4 m ), which sloped slightly southward and was connected to a rectangular vat ( $0.55-0.60 \times 1.10 \mathrm{~m}$, depth 0.8 m ) by way of a channel (width 0.45 m ).
A-3. A natural depression.
A-4. A smoothed-out bedrock surface ( $2.05 \times 3.40 \mathrm{~m}$ ) that sloped toward a square hewn cupmark (length per side c. 0.4 m , depth 0.3 m ) in its center. Another cupmark (diam. 0.2 m , depth 0.15 m ) was hewn c. 0.6 m southwest of the square cupmark. A hewn step (width and height $5-10 \mathrm{~cm}$ ) could partially be discerned along the edge of the surface, abutting it on the north and the west.
A-5. A cupmark (diam. 0.2 m, depth 0.25 m ).
A-6. A cupmark (diam. 0.45 m , depth 0.4 m ).
A-7. A cupmark (diam. 0.4 m , depth 0.2 m ).
AREA B (map ref. NIG 184299/612563; OIG 134299/112563).
This area, c. 1 km north of Area A, was located on a 200 m long slope that has a $20 \%$ gradient to the northeast and drains into a small channel. Three installations were found.
B-1. A crushing mill (yam; diam. 1.8 m ; Fig. 3) that belonged to an oil press situated midway up the slope. A perforation (diam. 0.2 m , depth 0.25 m ) was in the center of the yam and its upper edges were dressed (thickness 0.1 m ) and partially preserved. Five fragments of ribbed pottery vessels were found nearby.
B-2. A wall, standing a single course high ( $0.25-0.40 \mathrm{~m}$ ) and a single row wide ( 0.4 m ). It was located c. 10 m east of the yam and extended up the slope in a north-south direction for a distance of 4 m . The wall was probably built in the nineteenth-twentieth centuries CE and was part of an agricultural complex whose remains are visible throughout the forest.
B-3. A rock-hewn elliptical installation (1.0 $\times 1.2 \mathrm{~m}$, depth 3-6 cm; Fig. 4), 20 m northeast of the yam. It was lower down the slope and was probably used for the extraction of oil in an olive press. A short channel (length 5 cm ) extended from the lower part of the installation to a rectangular vat ( $0.20-0.40 \times 0.95 \mathrm{~m}$, depth 0.3 m ) and two shallow channels (width $3-5 \mathrm{~cm}$, depth $2-5 \mathrm{~cm}$ ) extended from two of the vat's corners. A perforation (diam. 5 cm , length 10 cm ) was discovered at the bottom of the vat's northern corner. It terminated 0.35 m above an open bedrock surface, which provided space for the placing of oil-collecting vessels. A stone cylinder (diam. 1.2 m ) with a hole in its center was discovered next to the installation, not in situ. This was probably the revolving stone wheel (memmel) that belonged to the crushing installation of an olive press.

Area C (map ref. NIG 183666/611990; OIG 133666/111990).
Eight large cupmarks (diam. 0.4-0.6 m, depth $0.15-0.60 \mathrm{~m}$ ) were found scattered atop a bedrock surface $(10 \times 10 \mathrm{~m})$, c. 1 km west of Area A and c. 800 m southwest of Area B, next to the Jewish National Fund picnic site. Around seven of the large cupmarks (the eighth was slightly off to the side) were some fifteen cupmarks (diam. $5-20 \mathrm{~cm}$, depth $3-20 \mathrm{~cm}$ ), randomly arranged. The cupmarks, devoid of any archaeological finds, were filled with modern ash.


1. Location map and excavation areas.

2. Area A, plan.

3. Area B-1, plan.


## Khirbat Murt es-Seil (East)



1. Plan and section.

2. Inner opening of ventilation tunnel, looking north.

Nir-Shimshon Paran
16/10/2007
During June 2001, a limekiln was excavated at Kh. Murt es-Seil in the Shahariya Forest, c. 5 km east of Qiryat Gat (Permit No. A-3461*; map ref. NIG 18424-37/61142-55; OIG 13424-37/11142-55). The excavation, on behalf of the Antiquities Authority and financed by the Jewish National Fund, was directed by N.S. Paran, with the assistance of H. Lavi (administration) and A. Hajian (surveying).

At the end of a spur that descends to the north, a circular kiln pit whose bottom part was bedrock hewn and upper part was built of fieldstones (upper diam. 5 m , depth $0.4-3.3 \mathrm{~m}$; Fig. 1), was discovered.
The floor of the kiln was leveled (diam. 2.7 m ) and around it was a rock-cut ledge (width c. 0.5 m , height $0.2-0.3 \mathrm{~m}$ ). A curved wall (W1) was set on bedrock and built of a single course of medium and large fieldstones (max. height 4.5 m ). Wall 1 probably terminated in a dome (see Y. Spanier and A. Sasson, Lime Kilns in Eretz Israel: Seminar in Memory of Shmuel Avitsur [Jerusalem] Ariel Publishing, 2001 [Hebrew]). The piled up earth around W1 was supported on the outside by another wall (W2) that consisted of a single course of medium-sized fieldstones.
An opening (width 0.7 m , height 0.95 m ) in the northern side of the kiln was exposed at the height of the ledge. At its top were two stones, resting against each other and forming a triangle, atop which was another rectangular opening (width 0.55 m , height 0.3 m ). The two openings led to a ventilation tunnel that was discovered c. 3.7 m down the slope of the spur. The tunnel whose outlet was also triangular was built at an angle that slanted outward.
The opening for stoking the kiln was discovered, c. 1 m above the ventilation openings and c. 2.7 m above the floor of the kiln, in the base of its walls (max. height 0.2 m ). The continuation of the corridor to the north was not preserved. However, based on the levels of ash and lime, its gradient (c. $15 \%$ ) and direction and can be reconstructed.

The type and thickness of the ash layers seem to indicate that the lime, produced at the fina operation of the kiln, was neither partially nor entirely collected. A dark grayish black layer of ash that rose from the floor to a height of 0.35 m was discovered. Above it was a thin layer (thickness c. 0.1 m ) of light brown earth and small stones, extending to a height of 0.4 m and overlaid with a layer of white lime, composed of powder and stones (thickness 0.9 m ). This layer was entirely covered with alluvium and stones (thickness $0.55-1.70 \mathrm{~m}$ ), which may indicate that the southwestern quarter of the kiln's side had collapsed. The date of the installation is unknown since the fill of the kiln and its immediate environs were devoid of any finds.


1. Plan and section.

2. Inner opening of ventilation tunnel, looking north.

## Khirbat Umm er-Rûs



1. The rock-hewn installations, plan and section.

2. The miqwe, looking south.

3. Reservoir 2, looking southeast.

Boaz Zissu and Amir Ganor
20/12/2007
During January 2006 a rock-hewn plastered ritual bath (miqwe) was documented at Khirbat Umm er-Rûs (map ref. NIG 202117/621894; OIG 152117/121894), following the apprehension of a group of antiquities thieves by inspectors of the Unit for the Prevention of Antiquties Robbery of the Antiquties Authority. The documentation, on behalf of the Antiquities Authority, was carried out by B. Zissu (photography) and A Ganor, with the assistance of A. Klein, S. Ganor, S. Bartora, Y. Alon and Y. and A. Zissu (surveying and drafting).

Khirbat Umm er-Rûs is located in the middle of a spur east of the Ella Valley. Situated at an elevation of 443 meters above sea level, it is delimited on the north and south by the deep channels of Nahal Sansan and Nahal 'Eziyyona, tributaries of Nahal Ha-Ella. The antiquities at the site consist of building remains, some of which are built of large ashlar stones, caves and rock-hewn installations. The site has been the target of antiquities robbers for many years.
The ritual bath (Figs. $1: 1 ; 2$ ) is hewn on a hilltop, in the middle of the ancient settlement. It can only be accessed today by way of a large underground water reservoir (Figs. $1: 2$; 3 ) that is connected to the miqwe via a breach, recently cut by robbers. It is unclear whether the two adjacent installations were joined in the past.
The original arched entrance to the miqwe in the southern wall (height c. 1.8 m , width c. 0.9 m ) is hewn at the end of a rectangular entrance corridor (width c. 1.4 m ), which is covered with the collapse of large masonry stones and soil that occurred in antiquity and negated the use of the installation. A small amount of stones and soil from the collapse penetrated into the installation and partially covered the steps and the immersion basin, so that most of the ritual bath's elements could be discerned and documented without an excavation.
The miqwe is meticulously hewn and has a trapezoidal outline (length of walls c. 3.1-3.6--3.6-4.1 $\mathrm{m})$. The corners are slightly rounded due to the nature of bedrock and the walls and ceiling are plastered. Three layers of hydraulic plaster were traced on the walls. The first and bottom layer was composed of gray plaster and small pebbles; the second and middle layer was gray plaster that included minute, finely ground grits. These two layers were carefully smoothed. The third and upper layer of plaster was thin and light in color. Horizontal stripes that marked the various levels of standing water were visible in several places. Four broad rock-hewn steps descended to the immersion basin, which was filled with collapse. It is assumed that an auxiliary step was installed inside.
A large underground trapezoidal chamber (reconstructed dimensions c. 7.0-8.5--8.5-9.5 m), which functioned as a large water reservoir, was hewn c. 2.4 m west of the miqwe. The reservoir was only partially preserved due to the collapsed qirton bedrock. Parts of it and the floor were covered with alluvium and debris. The chamber was apparently accessed from surface by way of a stepped (?) corridor that was installed in its western wall and whose exact location will only be determined by an excavation. Water was probably drawn from the reservoir via an opening hewn in its ceiling, adjacent to its southern corner, which is destroyed at present.

A smaller, elliptical water reservoir (c. $3.2 \times 5.0 \mathrm{~m}$; Fig. $1: 3$ ) was installed northwest of the large reservoir. It is currently covered with alluvium and collapse. Based on its location, it seems that both installations were reached by descending a common stepped corridor; however, as previously noted, an excavation is required to evaluate the nature of the installations and the connection between them. A square stone pipe section with a circular hole in its center, which was set at the top of a hewn shaft in the ceiling of the reservoir, attests to the fact that water was drawn from it.
It appears as though Installations 1 and 2 were not connected in the past and therefore, one can assume that they did not share a common through-hole, thereby upholding the rule mentioned in the Mishnah (Miqwa'ot 6, 1): 'Any [pool of water] that is mingled with [water from] an Immersion pool is deemed like to the Immersion-pool itself'.
The antiquities robbers did not leave any artifacts behind that can be used to date the installation, but an examination of the characteristic architecture and the plaster that coated the walls indicates it was hewn and used from the first century BCE-second century CE. The discovery of the ritual bath is clear architectural evidence that Jews who strictly maintained the laws of purity occupied the site in the Second Temple period. Similarly hewn ritual baths had previously been discovered at several sites on the hills surrounding the Ella Valley, such as Horevot Sokho, Tel 'Azeqa and Bet Natif.


1. The rock-hewn installations, plan and section.

2. The miqwe, looking south.

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## Khirbat Umm er-Rûs



1. The rock-hewn installations, plan and section.

2. The miqwe, looking south.

3. Reservoir 2, looking southeast.

Boaz Zissu and Amir Ganor
20/12/2007
During January 2006 a rock-hewn plastered ritual bath (miqwe) was documented at Khirbat Umm er-Rûs (map ref. NIG 202117/621894; OIG 152117/121894), following the apprehension of a group of antiquities thieves by inspectors of the Unit for the Prevention of Antiquties Robbery of the Antiquties Authority. The documentation, on behalf of the Antiquities Authority, was carried out by B. Zissu (photography) and A Ganor, with the assistance of A. Klein, S. Ganor, S. Bartora, Y. Alon and Y. and A. Zissu (surveying and drafting)

Khirbat Umm er-Rûs is located in the middle of a spur east of the Ella Valley. Situated at an elevation of 443 meters above sea level, it is delimited on the north and south by the deep channels of Nahal Sansan and Nahal 'Eziyyona, tributaries of Nahal Ha-Ella. The antiquities at the site consist of building remains, some of which are built of large ashlar stones, caves and rock-hewn installations. The site has been the target of antiquities robbers for many years.
The ritual bath (Figs. $1: 1 ; 2$ ) is hewn on a hilltop, in the middle of the ancient settlement. It can only be accessed today by way of a large underground water reservoir (Figs. $1: 2 ; 3$ ) that is connected to the miqwe via a breach, recently cut by robbers. It is unclear whether the two adjacent installations were joined in the past.
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1. The rock-hewn installations, plan and section.

2. The miqwe, looking south.

3. Reservoir 2, looking southeast.

## Kursi Beach*



1. The building, looking northwest.

2. The southwestern corner of the building.

Ehud Galili, Baruch Rosen, Elisabetta Boaretto and Sasha Tzatzkin
22/2/2007
During September-November 2000 an underwater survey was conducted along the shore of the Kursi beach on the Sea of Galilee (License No. G-118/2000*). The survey, on behalf of the Antiquities Authority, was directed by E. Galili and J. Sharvit, with the assistance of E. Boaretto (14C dating), S. Tzatzkin (plaster analysis) and I. Ben-Yosef (photography).

At an elevation of -213.5-214.1 m below sea level (map ref. NIG 2603/7485; OIG 2103/2485) the foundation remains ( $0.4-0.5 \mathrm{~m}$ wide) of a building ( $2.5 \times 2.5 \mathrm{~m}$ ) whose exterior face consisted of large ashlar stones ( $0.30-0.35 \times 0.35-0.40 \times 0.45-0.55 \mathrm{~m}$ ) and rubble bonded with mortar were exposed (Figs. 1, 2). Remains of carbonized wood and grain seeds found in the mortar were dated by Carbon 14 analysis. A sample (RT 4447) that was cleaned to remove the inorganic remains and humic acids was dated to $1480 \pm 40 \mathrm{BP}$ (a calibrated date of 530-660 CE).
The function of the building is unclear; the foundations could have been used as the base of an observation or guard tower. An analysis of the plaster revealed that it consisted of burnt lime and ash mixed with small basalt temper and crystallized and hardened in dry conditions on land. Since this kind of plaster cannot harden underwater it is apparent that when the building was erected (sixth-seventh centuries CE) the level of the Sea of Galilee dropped to an elevation below -214 m When the wind blows from the west, the eastern shore of the Sea of Galilee is stormy and the waves can reach a height in excess of 1.5 m . Thus, it is reasonable to assume that when the building was constructed the level of the lake was at least one meter lower than the building's foundations. Hence, we can conclude that at some time in the sixth-seventh centuries CE the level of the Sea of Galilee dropped to an elevation of -215 m or more, probably as a result of several years of drought. This is the lowest known level of the lake in historic periods


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## Maccabim, Development Survey*

Marwan Masarwa and Leticia Barda
7/11/2007
During October 2003 a development survey was conducted at Giv'at Broshim in Maccabim (Permit No. A3999*; map ref. NIG 2026-30/6433-8; OIG $1526-30 / 1433-8$ ), prior to expanding the settlement. The survey, on behalf of the Antiquities Authority, was directed by M. Masarwa and L. Barda.

The survey was carried out on a hill, west of the Maccabim settlement and south of the road that leads to it. A partially ruinous structure at the top of the hill is possibly a farm house, dating to the Ottoman period. The building has two vaulted rooms and a courtyard surrounded by massive walls built of two rows of medium-sized fieldstones and a core of small stones. Stone fences and walls that separated agricultural plots, which probably belonged to the building, were found. Rock-hewn installations in bedrock outcrops on the slopes of the hill included simple winepresses that consisted of a rock-cut treading floor and a single collecting vat, a bodeda for producing olive oil, as well as stone heaps, cupmarks and rock-hewn basins. Near the installations and the winepresses were potsherds from the Roman and Byzantine periods, dating the time of the agricultural activity in the region.

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## Ma'lul*



1. The excavation areas.

2. Area A, plan.

3. Pottery from the Hellenistic period.

4. Fibula.

5. Pottery.

Hendrik (Enno) Bron
10/9/2007
During November 2004 a salvage excavation was conducted at the site of Ma'lul (Permit No. A-4283*; map ref. NIG 2220-23/7330-34; OIG 1720-23/2330-34), in the wake of extensive damage to antiquities caused by the laying of a water pipe. The excavation, on behalf of the Antiquities Authority and financed by the Meqorot Water Company, was directed by H. Bron, with the assistance of Y. Laban (administration), A Hajian (surveying), H. Smithline (photography) and H. Tahan (ceramic drawing).
The site of Ma'lul, situated in the Jezre'el valley between the Nahalal junction and Nazareth, is on the western side of the modern town of Migdal Ha-‘Emeq. It lies on the eastern bank of a deep wadi, whose western slope is marked with numerous caves.
The site had previously been surveyed and excavated by G. Edelstein in 1973 (Permit No. A399) and by A. Raban in 1980 (Permit No. A-997). The surveys confirmed that the site was occupied during the Early and Middle Bronze Ages, the Iron Age and the Persian, Hellenistic, Roman and Byzantine periods; it was deserted in 1948.
Large amounts of potsherds and building stones were visible on surface. A large part of the site is nowadays occupied by a military base.
Three excavation areas (A-C; Fig. 1) were opened on the western fringes of the site, where archeological remains were visible during inspection of the trench. A rectangle ( $3 \times 6 \mathrm{~m}$ ) was excavated in Area A, two squares in Area B and a single square in Area C. The archeological remains were meager. Erosion was responsible for some damage, as can be seen by rocky outcrops on surface, yet a number of water pipes and electricity lines, which had been installed in the 1980s, destroyed most of this site.

Area A. Two parallel walls, c. 0.4 m below surface, were discovered (W105--1 m wide, W103--0.5 m wide; Fig. 2). Both walls have the same orientation and seem to be glued together. They are constructed from medium- and large-sized fieldstones and preserved several centimeters high on their lowest part to one meter high on their highest part. The walls were cut on their eastern side by a water-pipe trench, which also shaved off a number of courses. Adjacent to the walls, a complete oil lamp (Fig. 3:1) that was probably lying on a floor abutting the upper courses of the walls, which did not survive the destruction, was discovered. The oil lamp dates the walls to the Hellenistic period. Wall 105 was the earlier of the two and W103 was glued onto it shortly after W105 was built. Both walls were build on the same level and formed one architectural element that belonged to a large building which, if it was not destroyed, would be underneath the asphalt road. Judging by the construction method of the walls, they were located on the edge of the settlement.
The northern side of W103 was destroyed to its foundations by a pit, dug from surface and intended for the burial of a horse or a donkey. This is a modern intrusion that predates the earlier 1980 s water pipe installed across the site. During the cleaning and removal of W103's upper course a complete bronze fibula was recovered from within the stone layer (Fig. 4).
To the west, no floors that abutted the walls were encountered, indicating that the western side was outside the inhabited area of the site.
The ceramic evidence from the vicinity of the walls includes jars, dating to the Hellenistic period (Fig 3:2-5; third-second centuries BCE).

Area B. Segments of a long wall and sections of plaster floors, associated with Iron Age and Hellenistic pottery, were visible in the section of the new water pipe trench. Architectural remains were not discovered in the squares, probably due to the damage caused by the same pipe line that destroyed Area C.
Pottery from the upper layers in these squares belonged to the Hellenistic, Roman, Byzantine and Umayyad periods (bowl; Fig. 5:1). Bedrock was not reached because excavation was suspended after exposing sterile layers without pottery or stones (depth 2 m ).

Area C. The soil in the square was a light gray loose matrix that contained an abundance of potsherds. The 1980s water pipe trench on the western side of the square was dug down to bedrock and left no archeological traces, except for potsherds. Bedrock was exposed in a limited area of the square.

The areas excavated were, for the most part, severely damaged or completely destroyed due to modern infrastructures. However, the recovered potsherds belonged to a wide range of periods, pointing to a prolonged occupation of the site, which included the Chalcolithic period (handle; Fig. $5: 2$ ), the Early (jar; Fig. 5:3) and Middle Bronze Ages (jar; Fig. 5:4), as well as the Iron Age and the Persian and Hellenistic periods.

## Area B now



AreaA now



1. The excavation areas.

2. Area A, plan.

3. Fibula.

4. Pottery.

## Maresha, Subterranean Complex 90



1. Plan.

2. Altar.

3. Olive press, front view.

4. Pressing area, top view.

15/3/2007
During 2005, an archaeological excavation was conducted in Subterranean Complex 90, located 220 m southeast of Tel Maresha (Permit No. A-4361; map ref. NIG 190680/611086; OIG 140680/111086). The excavation, on behalf of the Antiquities Authority and financed by funds of the Archaeological Seminars, was directed by I. Stern, M. Osband, B. Alpert and N. Sagiv. Assisting in the excavation were S. Shaharit and L.Yaborsky (pottery restoration, registration and organization), S. Neuman (drafting and drawing), R. Barkay (numismatics), A. Ehrlich (figurines) and G. Finkielsztejn (amphora handles). Engaged in the excavation were participants of the Archaeological Seminars from all around the globe and youth-group volunteers, with the cooperation of Z. Tsuk and the staff of the Bet Guvrin National Park.

Subterranean Complex 90 was first discovered in 1991 during a survey, which entailed a few probes conducted by A. Kloner, N. Sagiv and Y. Zoran (License No. 46/91; Fig. 1) and briefly described here. The complex contained a total of 18 rooms, including a large oval cistern (L101) with a winding staircase that descended to a second cistern that was not excavated and two small filtration rooms (width c. 1 m ), off the staircase (L103). A large block of clay in Cistern 101 was partially removed from a rock-cut shelf, revealing an entrance into another room (L105). The most important area was the olive press (L107), where a small probe was cut under the cultic niche between the two pressing installations. A wellpreserved bronze statute of Hercules, holding a club in one hand and a lion's skin in the other, was discovered in the probe, as well as two pieces of a marble libation bowl and a hewn stone altar, carved into the corner of the olive press, which appears to have been deliberately defaced (Fig. 2). A carved qirton block in the shape of a lion's head, with a hole in its mouth, which presumably was a decorated fountain spout discarded into the subterranean complex in antiquity, was also found. A coin of Alexander II Zebinas, dated to 126 BCE, was discovered on surface, near the entrance to Cistern 101, as well as three Rhodian stamps, dated from 189-135 BCE. One of the stamps was endorsed by the fabricant Nysios with Caduceus, dated 169-135 BCE, the second one was endorsed by the fabricant Philainios, dated 189-184 BCE and the third had the eponym Philodamos, dated 183 BCE. A large quantity of complete bowls, many in perfect condition, was discovered on the surface of L101 and L103.
The current excavation in Subterranean Complex 90 focused primarily on the water cistern (L101), the small side rooms (L103), the intermediate room (L105) and the olive press (L107).

Cistern (L101). The rock-cut, oval-shaped cistern has a banister (diam. c. 6 m ). Remains of plaster in portions of the upper section are still visible. Excavating the staircase of the cistern revealed many qirton stones that were probably remains from structures that had once stood on surface. Most of the brownish soil in the cistern (c. 0.4 m deep) was probably washed in from surface.

Filtration Rooms (L103). The rooms (c. 1 m wide) off the staircase, filled with soil (up to 0.4 m deep), are typical to water cisterns throughout lower Maresha.

Intermediate Room (L105). This somewhat circular room ( $3 \times 4 \mathrm{~m}$ ) was excavated to provide easier access to L107, yet some of the remains shed light on its function. The entrance into this room was above the rock-cut shelf and below the water line remains of Cistern 101, indicating that it was quarried after the cistern went out of use. A tunnel (L109) with a gabled ceiling ascends from a small hole in the room toward an entrance corridor (L108) farther to the south. Room 105 was looted right before the excavation and the anthropogenic soil spilled by the looters into L107 was excavated separately (L105A2).

Olive Press (L107). The olive press is one of the best preserved in Maresha, if not the entire Shephelah (Figs. 3, 4). The quality of workmanship is excellent, done with a clear eye for aesthetics. Apparently, its fine state of preservation is due to the fact that it was either never used or put out of use almost immediately after it was quarried. This supposition is predicated upon the sharp edges along most of the openings and niches within the olive press, which usually become worn and rounded with relative ease after minimal usage and due to the softness of the stone, as well as the black lines made by the stonemasons to outline the quarrying, which are still visible.
The large number of boulders in the room (L106, L107D) forced our excavation to concentrate on the northern side of the olive press, which still had to be emptied of large quantities of qirton stones that were placed in L106. The room (length 18 m , width 6 m ) has two blocked openings on its eastern side that were not excavated and a third one that opens into a tunnel (L11), which seems to have been cut later. Two openings on the western side lead into the intermediate room (L105) and into the corridor (L108).

Different strata of soil levels, some possibly occupational levels were found.
A section cut across L107 revealed a white qirton level (L107A; depth 0.4-0.8 m) that sloped down toward the olive press and contained very few finds; a brownish soil level (L107F1-4) that near the altar, contained many finds, but may have been a backfill intended to level the floor. A crushed hard qirton level, between the white qirton and the brownish soil, exist throughout most of the area. This small probe was intended to determine the existence of a trench for weights, but it was not completed.

Near the top of Tunnel 11, part of a marble bowl was found and another part was right outside the tunnel. These parts complete the fragments of the libation bowl that had been found in 1991.

A tentative chronology for the olive press is hereby suggested.
Stage 1. The room was initially quarried out to be an olive press, but not completed, as evidenced by the form of the arches above the press where one part is indented and another part only
outlined. The press includes a space for weights and a crushed qirton floor. It is possible that the stone altar was partially destroyed at this stage.
Stage 2. The area by the press was filled in with blackish brown anthropogenic soil to even out the floor.
Stage 3. A tunnel (L11) was quarried, at which time many qirton stones and backfill from the tunnel were dumped into L107, which accounts for most of the fill in L107A


1. Plan.

2. Altar.

3. Olive press, front view.

4. Pressing area, top view.

## Maresha, Subterranean Complex 90



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2. Altar.

3. Olive press, front view.

4. Pressing area, top view.

15/3/2007
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The current excavation in Subterranean Complex 90 focused primarily on the water cistern (L101), the small side rooms (L103), the intermediate room (L105) and the olive press (L107).

Cistern (L101). The rock-cut, oval-shaped cistern has a banister (diam. c. 6 m ). Remains of plaster in portions of the upper section are still visible. Excavating the staircase of the cistern revealed many qirton stones that were probably remains from structures that had once stood on surface. Most of the brownish soil in the cistern (c. 0.4 m deep) was probably washed in from surface.

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1. Plan.

2. Altar.

3. Olive press, front view.

4. Pressing area, top view.

## Maresha, Subterranean Complex 57



1. Subterranean Complex 57, plan and section.

2. Entrance to Room 4, looking east.

Bernie Alpert and Ian Stern
15/3/2007
During the years 2000-2004 excavations were conducted in Subterranean Complex 57, located c. 100 m southeast of Maresha's upper city (License Nos. G-3/2000, G-52/2001; Permit Nos. A-3567, A-3941, A4099; map ref. NIG 190551/611000; OIG 140551/111000). The excavation, on behalf of the Antiquities Authority and funded by the Archaeological Seminars, was directed by B. Alpert and I. Stern, with the assistance of M. Osband (area supervision), S. Shaharit and L. Yaborsky (pottery restoration, registration and organization) and S. Neuman (photography, drafting and drawing). The staff of the Archaeological Seminars and their participants from around the globe took part in the excavation, which benefited from the cooperation of T. Tzuk and the staff of the Bet Guvrin National Park.

Subterranean Complex 57 is relatively small, comprising only four rooms (Fig. 1). The entrance, lying on a north-south alignment, leads to an open antechamber with three entries: on the west, into Room 3, on the north, into Room 2 and on the east, into Room 1. It appears that the northern and western entrances were quarried at the same time, sharing similar framed lintels and door jambs, unlike the entrance on the eastern side, which was plain and may have been a later addition. A fourth entrance, to the south of the main entrance into Room 1, was not excavated. The stairs that accessed these entrances are not yet exposed.

Room 1. The shape of this room, its two entrances and the outline remains of an earlier wall in its middle indicates that it was originally divided into two rooms. At a later stage, when the partition wall was destroyed, the two small rooms were combined into one larger room that eventually was connected to Room 2 on its north. During the final stage, a tunnel was quarried on the southern side of Room 1, but never completed. The refuse from hewing the tunnel was found in the form of qirton chips next to its entrance. The actual use of these relatively small rooms is unclear.

Room 2. Little work was done in Room 2, since it accessed the excavation of the other rooms and the debris on its northern side could not be removed for safety reasons. Visible immediately inside the entranceway are stairs and a small banister that curves curiously to the west, in the direction of the room's western wall. Room 2 does not appear to have been originally connected to either Rooms 1 or 3. The connection to Room 3 is a small robber's hole in the southwest corner and the opening into Room 1 may have been quarried away at another time, since the chisel marks are distinctly different in the two rooms.

Room 3. The large entrance (height 2.74 m ) to this room ( $3.5 \times 4.5 \mathrm{~m}$ ) was in its eastern wall. Initially, it was filled to within 1 m of the ceiling and had been subject to recent looting. A niche visible on the southern wall may indicate that this room was originally a corridor to Room 4 on its west and at a later stage, its floor was lowered.

Room 4. This room resembles a water cistern (diam. 6 m ; Fig. 2). Twenty-four stairs in good condition and a partially broken banister were cleaned down to bedrock floor. The room has neither a shaft in the ceiling nor a channel to bring water inside. If it was a cistern, the water would have been brought through Room 3; however, the floor of Room 3 is much lower than the threshold leading into Room 4, suggesting a different function.

The actual use of Room 4 is still questionable. While it appears to have been designed as a cistern, its walls are not plastered and no means for the entering of water is observed. This phenomenon, as well as the signs of quarrying noticed on the floor, exists in other subterranean systems around Maresha, which appear to have functioned as quarries for the insulae or dwellings above. In addition, the exceptional condition of the stairs would have shown signs of wear even with minima usage, due to the softness of the qirton. Hence, it appears as if Room 4 was hardly ever used.

The system contained some very exceptional finds. An impressive repertoire of ceramic vessels and a large variety of fragmentary and complete figurines from the Persian and Hellenistic periods was discovered. Room 1 yielded abundant epigraphic material, including 32 ostraca, two execration bowls with Aramaic text, a small domestic qirton altar with a cursive inscription in Greek and three different broken inscriptions inscribed in Attic Greek on Hebron limestone, as well as a large number of petroglyphs with floral, faunal and human depictions.


1. Subterranean Complex 57, plan and section.


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## Mazor (West)



1. Caves B2 and B3, plan and section.

2. Cave B2, pottery.

3. Cave B4, plan and sections.

4. Cave B4, pottery vessels, in situ.

Ianir Milevski
16/8/2007
A trial excavation was conducted during October 2000 and two seasons of excavation were carried out during January and May 2001 at Mazor (West), c. 180 m west of the mausoleum and east of the hill where a Muslim cemetery is located (Permit Nos. A-3321, A-3364; map ref. NIG 194866/661586; OIG $144866 / 161586$ ), in the wake of work on the Cross Israel Highway. The excavation, on behalf of the Antiquities Authority, was directed by I. Milevski, with the assistance of I. Rahamim, E. Lavi and R. AbuHalaf (administration), A. Hajian (surveying and drafting), D. Sklar and Y. Nagar (physical anthropology), R. Lupu (pottery reading) and C. Hersch (pottery drawing). Laborers of Project 500, from Rahat and Umm el Fahm, participated in the excavation.

Following the damage caused to the cemetery on the hill by mechanical equipment, as well as the trial excavation and the finds recovered from surface, three areas were opened.

## Area A

Four squares ( $4 \times 4 \mathrm{~m}$ ) were opened 10 m west of the cemetery hill; three were partially excavated. A thin tamped layer of light brown soil that included potsherds from the Chalcolithic period and a disarrayed concentration of small and medium-sized stones were exposed on the chalk bedrock.

## Area B

A trial excavation $(1.5 \times 3.3 \mathrm{~m})$ at the end of the cemetery hill's slope, c. 30 m northwest of Area A, revealed numerous dark brown jar sherds and fragments of ossuaries from the Chalcolithic period. During the earthmoving work, four caves (B1-B4) that seemed to have been damaged by the heavy equipment were exposed.
Cave B1 was a shaft ( $1.5 \times 2.0 \mathrm{~m}$, depth 0.75 m ) covered with dark brown alluvium and devoid of any archaeological finds. Potsherds dating to the Chalcolithic period were found on surface around the shaft.
Cave B2 (5 $\times 9 \mathrm{~m}$, depth c. 2.5 m ; Fig. 1), c. 3 m north of Cave B1, comprised several phases of the Chalcolithic period and several later phases with finds from Early Bronze Age I were discovered. The ancient finds on bedrock included fragments of ossuaries and small V-shaped bowls. Overlaying them was a phase of several floor levels that consisted of crushed chalk and layers of soil. The cave was probably used as a dwelling in this phase. The later phases indicate that the cave was used for burial. The finds included many large V -shaped bowls, deep bowls or kraters with vestigial ledge handles (Fig. 2), burial jars from the Chalcolithic period and human bones that were scattered over the cave, as well as a number of animal bones, beads, bone tools, flint, stone implements and the remains of carbonized wood. It appears that some of the interments took place in pits that severed the earlier floor.
Several Canaanean sickle blades and a fragment of a gray-burnished bowl, dating to Early Bronze Age I, attest to the use of the cave at this period.
Cave B3, c. 3 m north of Cave B2, was a shaft covered with small stones ( $1.0 \times 1.5 \mathrm{~m}$, depth c. 1 m ) that contained fragments of jars from the Chalcolithic period. The shaft, connected to Cave B2 in the south, was probably part of a larger cave that postdated Cave B2.
Cave B4 ( $2.5 \times 5.0 \mathrm{~m}$, depth c. 1.7 m ; Fig. 3), located c. 30 m south of Cave B2, contained some fifty intact and restorable pottery vessels (Fig. 4), including jars, bowls, jugs and juglets, one of which originated in Cyprus. Other finds included metal tools, flint items, as well as human and animal bones. An examination of the human bones revealed five individuals. The cave was used for interment during Middle Bronze Age II. Next to the cave and below it were several bell-shaped pits that contained fragments of Chalcolithic pottery. These probably belonged to the Chalcolithic-period occupation phase that was also detected in Caves B2 and B3.

## Area C

A rectangular area ( $2 \times 4 \mathrm{~m}$ ), some 15 m east of Area B. A dark brown earth layer mixed with small stones and gravel was excavated. It contained fragments of pottery vessels and ossuaries from the Chalcolithic period, as well as potsherds from the Roman-Byzantine periods.


2. Cave B2, pottery.

3. Cave B4, plan and sections.

4. Cave B4, pottery vessels, in situ.

## Mesar*

Angelina Dagot
10/1/2007


1. Map of the surveyed area.

2. Area A, plan.

3. Area C, plan.

4. Area E, plan.

5. Pottery.

During October 2002 a trial excavation was conducted c. 600 m west of Mesar village (Cross-Israel Highway Site 8; Permit No. A-3743*; map ref. NIG 20337-90/70558-93; OIG 15337-90/20558-93), within the framework of the Cross-Israel Highway Project. The excavation, on behalf of the Antiquities Authority and funded by the Cross Israel Highway Ltd., was directed by A. Dagot, with the assistance of M. Mulokandov (area supervision), S. Ya'aqov-Jam (administration), V. Essman and V. Pirsky (surveying), A. Glick (GPS), T. Sagiv (field photography) and M. Shuiskaya-Arnov (pottery drawing).

A rectangular tract (c. $100 \times 400 \mathrm{~m}$ ), oriented north-south, on the eastern slope of a hill in a forested area, was examined. Seven excavation areas (A-G; Fig. 1) were opened, revealing various installations.

Area A. Four squares were opened (Fig. 2). The aperture of a water cistern (L106; $1.1 \times 2.4 \mathrm{~m}$, at least 2 m deep) was in the southwestern part of the area. It was filled with large fieldstones (average size $0.3 \times 0.6 \times 0.3 \mathrm{~m}$ ), mostly burnt. The cistern was not excavated. East of it was a wall section, oriented east-west (W112; 1.4 m long). The wall, built of a single row of large fieldstones (average size $0.3 \times 0.4 \times 0.3 \mathrm{~m}$ ), was founded on bedrock. Another north-south oriented wall (W113; 2 m long), built of one row of smaller fieldstones ( $0.2 \times 0.2 \times 0.2 \mathrm{~m}$ ), was visible in the eastern balk of the square. The layer of fill above the cistern aperture contained a large amount of carbon and burnt fieldstones. Circular, bedrock-hewn cupmarks were exposed in the northern part of the area.

Areas B and D consisted of several rock-hewn remains.
Area Comprised a rock-hewn winepress with a square treading floor (L300; $2.4 \times 2.5 \mathrm{~m}$; height of walls 0.2 m ; Fig. 3) and a collecting vat (L301; $0.7 \times 1.7 \mathrm{~m}$ ) whose top was destroyed. The vat's upper part (to a depth of 0.8 m ) was hewn in hard nari bedrock and its bottom was quarried in softer limestone (to an additional depth of 0.5 m ). Traces of thick grayish-white plaster were visible on the walls.

Area E. Rock-cuttings in limestone (to a depth of 2.5 m ; Fig. 4) were exposed over a distance of 21 m . They probably belonged to a quarry that extended north and south beyond the excavation area. Stones in a variety of sizes were extracted and several remained in situ (average size $0.25 \times 0.35$ $\times 0.45 \mathrm{~m}$ ).

Area F. A section of a massive wall (width 1.5 m , preserved height 0.5 m ) was exposed over a distance of 4.5 m at the western end of the area. It was oriented north-south and built of very large fieldstones with smaller fieldstones incorporated between them. A narrower wall (length 1 m , width 0.3 m , preserved height 0.25 m ) built of a single row of medium-sized stones was founded on bedrock, abutting the massive wall from the east.

Area G included two farming terraces oriented north-south (W702, W703; See Fig. 1).

The installations indicate that agriculture and quarrying were conducted in the area. Similar installations were found in a survey that had previously been performed in the region, east and west of the excavation (Survey Map of Ma'anit [54], 1990: Site 34). A small amount of potsherds was found, dating to the Early Roman period (end of the first century BCE-beginning of the first century CE), including cooking pots (Fig. 5:1-3), jars (Fig. 5:4-7) and a jug (Fig. 5:8). It therefore seems that the installations belonged to a site of the same period, which was excavated by K. Sa'id at Kafr Meisar (Permit No. A-3602).


1. Map of the surveyed area.

2. Area A, plan.


3. Area E, plan.


## Mishmarot, the Cemetery*


3. Tomb T1, prior to being opened, looking west.

11. Tomb T4, prior to removal of covering stones, looking north.

12. Tomb T5, looking west.

14. Glass vessels.

15. Glass bottles

Marwan Masarwa
7/6/2007
During November 1995 a salvage excavation was conducted at the Mishmarot site, between the Nahal Barkan and Nahal Mishmarot channels, c. 300 m northeast of the latter and c. 150 m southwest of the AlJamma site ( 50 m above sea level; Permit No. A-2393*; map ref. NIG 19970-20065/71070-140; OIG 14970-15065/21070-140), in the wake of damage caused by mechanical equipment. The excavation, on behalf of the Antiquities Authority, was directed by M. Masarwa, with the assistance of R. Lucia (area supervision, surveying and drafting), T. Sagiv and C. Amit (photography), V. Eshed and Y. Nagar (anthropology), E. Altmark (metallurgical laboratory), O. Shorr (pottery restoration), Y. Gorin-Rosen and N. Katsnelson (glass) and M. Miles (glass drawing).

Prior to the excavation, M. Masarwa and D. Lipkonsky conducted a survey at the site, which thereafter was declared an antiquities site. The survey revealed masonry stones and potsherds dating from the Hellenistic until the late Islamic periods.

## The Cemetery

Seven tombs, five complete ( $\mathrm{T} 1-\mathrm{T} 5$ ) and two severely damaged ( $\mathrm{T} 6, \mathrm{~T} 7$ ), were exposed in the excavation area ( $10 \times 10 \mathrm{~m}$; Fig. 1). The tombs, scattered throughout the area, were dug in light colored hamra soil and covered with a layer of tamped dark brown hamra; their outline was rectangular (average dimensions $1.4 \times 2.7 \mathrm{~m}$ ). The tombs, built of well-dressed ashlar stones, were sealed with similar stones set in place alongside each other. Three of the five excavated tombs contained limestone sarcophagi and artifacts (T1-T3) and the other two were devoid of finds (T4, T5).

Tomb T1. The tomb $(1.4 \times 2.7 \mathrm{~m})$, located in the northern part of the area and oriented east-west (Fig. 2), was built of three ashlar-stone courses ( $0.35 \times 0.60 \mathrm{~m}$ ), the upper course serving as a cover ( $0.50 \times 1.19 \mathrm{~m}$; Figs. 3, 4) that sealed the grave. The long sides of the limestone sarcophagus ( $0.6 \times 2.2 \mathrm{~m}$, height 0.63 m , wall thickness 7 cm , thickness of lid 8 cm ) inside the tomb were decorated with two carefully dressed, adjacent square panels. The gabled sarcophagus lid was adorned with rounded acroteria in its corners (Fig. 5). Three skeletons were laid to rest below the hamra soil that filled the sarcophagus; one was fully articulated, the head in the east, face tilted north and legs extending straight. The two others consisted of bones that had been collected in secondary reposition (V. Eshed and Y. Nagar, below). A complete glass vessel was found between the skeletons (Fig. 14:13).

Tomb T2. The tomb $(1.3 \times 2.5 \mathrm{~m})$, located in the western part of the area and oriented northwest-southeast, was built of three ashlar-stone courses ( $0.35 \times 0.60 \mathrm{~m}$ ) and sealed with a fourth course ( $0.55 \times 1.10 \mathrm{~m}$; Fig. 6 ). A stone sarcophagus ( $0.6 \times 2.2 \mathrm{~m}$, height 0.64 m , wall thickness 7 cm , thickness of lid 8 cm ; Fig. 7), damaged on its northeastern side during the earthmoving work that was undertaken prior to the excavation, was found in the tomb. The walls of the sarcophagus were decorated with two delicately dressed, square panels, adjacent to each other. Its gabled lid was adorned with rounded acroteria in the corners (see Figs. 6, 7). Three skeletons were lying in the sarcophagus below a layer of hamra soil; one was articulated, its head in the southeast and the face tilted to the east and the bones of the other two individuals were gathered in secondary reposition.

Tomb T3. The tomb $(1.3 \times 2.5 \mathrm{~m})$, located in the eastern part of the area and oriented northwestsoutheast, was built of three ashlar-stone courses ( $0.52 \times 0.60 \mathrm{~m}$ ) and sealed with a fourth course (Fig. 8). A stone sarcophagus ( $0.6 \times 2.2 \mathrm{~m}$; height 0.65 m , wall thickness 7 cm , thickness of lid 8 cm; Fig. 9), whose walls were decorated with two adjacent square panels, delicately dressed, was inside the tomb. It contained hamra and fragments of postcranial bones and skulls. The gabled sarcophagus lid has rounded acroteria in its corners (Fig. 10).

Tomb T4. The tomb $(1.1 \times 2.1 \mathrm{~m})$, located in the western part of the area and oriented east-west, was built of three ashlar courses ( $0.35 \times 0.60 \mathrm{~m}$ ) and sealed with a fourth course that included six ashlar stones (average dimensions $0.25 \times 0.55 \mathrm{~m}$; Fig. 11). The tomb contained a layer of hamra ( 0.5 m deep) that was devoid of artifacts.

Tomb T5. The tomb, in the southeastern corner of the area, was oriented northwest-southeast. It was relatively smaller than the other tombs $(0.80 \times 1.65 \mathrm{~m})$, built of two ashlar-stone courses $(0.15 \times 0.50 \mathrm{~m})$ and sealed with four ashlar stones $(0.30 \times 0.55 \mathrm{~m}$, Fig. 12). Apart from a hamra layer ( 0.35 m deep), nothing else was found in the tomb.

## Anthropological Finds

Vered Eshed and Yossi Nagar
The human bones inside the sarcophagi that dated to the Roman period were in a poor state of preservation, which precluded gaining maximum information from the osteological finds. The bones, examined in the field, were thereafter turned over to a representative of the Ministry of Religious Affairs for reburial.

Tomb T1, L508. The finds included fragments of a cranium dome and postcranial bones that are representative of at least three individuals: (1) an individual over 40 years of age, of uncertain gender, (2) a male individual over 30 years of age and (3) a female individual over 40 years of age. At least one of the deceased was in an anatomically articulated position, which indicates primary burial. The bones of the other two individuals were found scattered in the sarcophagus.

Tomb T2, L512. The finds included fragments of a cranium dome and postcranial bones that are representative of at least three individuals: (1) a female 30-40 years of age, (2) a female over 40 years of age and (3) an adult individual of undetermined age and gender. At least one of the deceased was in an anatomically articulated position, which indicates primary burial; the bones of

Tomb T3, L517. The finds included fragments of a cranium dome and postcranial bones that are representative of at least two individuals: (1) a female $30-40$ years of age and (2) an individua over 40 years of age whose gender could not be determined. At least one of the deceased was found in an anatomically articulated position, indicating primary burial, while the bones of the other individual were scattered in the sarcophagus.

## The Glass Artifacts

Natalya Katsnelson
Twenty-nine glass vessels, most of them in soil removed by the bulldozer that damaged the sarcophagi, were found (Fig. 13); a single bottle was inside a sarcophagus (Fig. 14:13).
The vessels belong to the candlestick-like bottle group and consist of several sub-types. Most of them were found intact; some were slightly damaged and three were restored (Fig. 15).
The dominant shade of glass ranges from pale green to pale blue or translucent with slight hue variations. The prevailing form of deposits on the vessels was a partial layer of black-silverish weathering that on most vessels was covered with lime deposits; some vessels have pitted weathering. The vessels are usually medium or small in size ( $8.0-11.3 \mathrm{~cm}$ high) and have an everted rim that is frequently folded-in irregularly (Fig. 14:1-6) or a rounded rim (Fig. 14:7-9). The long cylindrical neck is often unbalanced or deformed and the body is globular (Fig. 14:1) or triangular (Fig. 14:2-11). Many of the bases are concave and some are flat (Fig. 14:2,5,6). The vessels are mostly constricted at the base of the neck. The bottle in Fig. 14:11 has a deformed rim that is not worked, probably due to a manufacturing error. The bottles in Fig. 14:12, 13 are larger than average. The bottle in Fig. $14: 12$ is tall ( 19.1 cm high) and has a flaring rim that is folded inward in the shape of a ledge. Its body is bell-shaped with a thickened wall, particularly near the base, which is concave and irregular. Signs of polishing on the exterior walls of the two bottles form a kind of ridge above the base and two grooves or horizontal depressions on the upper part of the body ( 3.0 and 4.5 cm above base). The bottle in Fig 14:13 ( 16.01 cm high) has a long cylindrical neck and a short squat body.
The vessels in Fig. 16:1, 2 are candlestick-like and fashioned as bottles. They are short and wide, having a low body that is either triangular or squat, a concave base, a broad cylindrical neck and an everted rim that is folded inward.
The vessels in Fig. 14:1-8 are of a better quality than those in Fig. 14:9-12, yet no chronological difference exists between them. The vessels are well-known and very common in burial contexts of the Roman period (the latter part of the first century CE until the beginning of the third century CE) in the Land of Israel. Similar vessels were discovered at numerous sites, e.g., the burial cave at Akeldama (IAA Reports 1:96-98, Fig. 5.3-5.5)

The candlestick-like bottles with a broad body and neck are known in Egypt, where they are characterized by thick walls and dark green or olive green hues. Bottles similar to those from Mishmarot occur in Syria and Jordan.
The assemblage contains no vessels that predate, with certainty, the first century CE, as well as no vessels that are later than the third century CE. Hence, it seems reasonable to date the assemblage to the second century CE.

## The Metal Artifacts

A poorly preserved square mirror of tin bronze ( $0.15 \times 0.15 \mathrm{~m}$; Fig. 17) was recovered from the debris heap that the mechanical equipment removed. It was meant to be hung on a wall based on the two slots in its upper sides. Mirrors of this type, usually enclosed within a wooden frame, were found at Amathous in Cyprus and are ascribed to the Roman period (L. Nicolaou, Excavations at the Eastern Necropolis of Amathous. RDAC 1985:257-261).

The tombs at Mishmarot were built on a flat area and covered with a layer of tamped earth that created an artificial hill. Since only part of the cemetery was excavated, its size remains unknown The tombs were reused for secondary burials of gathered bones that occurred alongside primary burials, a phenomenon that appears to have been widespread in the Land of Israel during the Roman period. Probes conducted near the site revealed other tombs that were scattered to the south and east; in other words, the cemetery's area is larger than the part excavated. The cemetery can be ascribed to several sites in its environs, such as Horbat Bina, Kefar Glickson and Horbat Bavlon, as well as the Mishmarot site (al-Jama), 150 m from the cemetery. It is assumed that the ashlar stones of the tombs originated in the region of Kefar Glickson, 1.5 km northeast of the site, where suitable bedrock is located. Similar tombs in the Land of Israel are known at various sites attributed to the Roman period, e.g., Gesher Ha-Ziv ('Atiqot XXV:77-93), Or 'Akiva (ESI 20:37*), 7 km west of the excavation and Akeldama (IAA Reports 1).



3. Tomb T1, prior to being opened, looking west.

4. Tomb T1, after removal of covering stones, looking west.

5. Tomb T1, the sarcophagus, looking north.

6. Tomb T2, looking south.

7. Tomb T2, the sarcophagus after being excavated, looking south.

8. Tomb T3 covered with stone slabs, looking north.

9. Tomb T3, after removal of the stone covering and the lid, looking north

10. Tomb T3, the sarcophagus after being excavated, looking east.

11. Tomb T4, prior to removal of covering stones, looking north.

12. Tomb T5, looking west.

13. Glass vessels, in situ.

14. Glass vessels.

15. Glass bottles

16. Glass vessels.

17. Bronze mirror

## Mishor Ha-Ruhot*

Mordechai Haiman
20/12/2007
During July 2004 a trial excavation was conducted along a group of farming terraces in a wadibed of a tributary of Nahal Zin, 1 km north of Mizpe Ramon (Permit No. A-4171*; map ref. NIG 1804/6061; OIG 1304/1061). The excavation, on behalf of the Antiquities Authority and financed by the Drainage Authority, was directed by M. Haiman, with the participation of pupils from the Yeshiva Environmental High School in Mizpe Ramon. The work was part of a project that conserves and prepares the ancient agricultural systems for contemporary use.

The site had been surveyed in the past by S. Rosen within the Emergency Survey of the Negev (Survey Map 201, in preparation). The group of terraces is located at the confluence of two wadis. About 20 terraces were checked over a distance of 600 m in one wadi and 12 terraces were examined over 300 m in the other.

The terraces were part of a system of wadis, dammed with farming terraces and spread across Mishor Ha-Ruhot, in wadibeds of tributaries of Nahal Z in and Nahal Nissana and along the northern cliff of the Ramon Crater. The examined twenty walls, built across the wadi channel (length 120 m , width 0.8 m ) to a height of one or two courses, consisted of large stones with small stones and earth fill among them. The walls were erected in those wadibeds where arable loess existed, aiming to level the natural wadi channel, prepare it for cultivation and evenly distribute the flood water, which was the basis for agriculture in the region.
A circular building (diam. 10 m ) had previously been surveyed in the northeastern part of the terrace group. The structure was built of large stones and surrounded by potsherds from the Early Islamic period (seventh-eighth centuries CE). Potsherds from this period, to which the farming terraces are attributed, were found scattered throughout the area. It should be noted that farmhouses, dating only to the Early Islamic period, were surveyed in the region of Mishor HaRuhot, adjacent to dammed wadis of the kind that was excavated here (Haiman, Map of Mtzpe Ramon Southwest [200], 1991:20-21).

## Mizpe Ramon, Landing Strip*

Yeshayahu Lender
25/6/2007


1. Buildings 1, 2, plan.

2. Building 3, plan and section.

During December 2002 a salvage excavation was conducted in three buildings, in an area slated for the construction of the Mizpe Ramon landing strip (Permit No. A-3793*; central map ref. NIG 18128/50663; OIG 13128/00663). The excavation, on behalf of the Antiquities Authority and financed by the Katnani Company Ltd., was directed by Y. Lender, assisted by S. Gal (surveying and drafting).

The site, on the slope of a spur that faces north, had been surveyed in the past by S. Rosen (within Survey Map 201). Several buildings were examined.
The northern, L-shaped building (L1; Fig. 1) was built of a single course of medium-sized fieldstones, set on top of natural bedrock. The eastern (W10; 2.6 m long) and northern (W11; 2.4 m long) walls of the structure were preserved. An elliptical heap of medium-sized fieldstones (diam 1.35 m , height 0.5 m ) was exposed at the western end of W 11 . The excavation below the heap yielded no finds.
Another building was some 6 m to the south and elliptical in shape ( $\mathrm{L} 2 ; 1.8 \times 2.5 \mathrm{~m}$ ). It consisted of a single course of small and medium-sized fieldstones that were placed on natural bedrock. Loess and several stones of unclear origin were found inside the building.
The buildings or their environs did not yield any artifacts that could date or determine the nature of the structures.

Some 60 m northwest of the buildings was a third building (L3; interior dimensions $3.8 \times 4.2 \mathrm{~m}$; Fig. 2), which was horseshoe shaped and opened toward the east (width of opening c. 3.6 m ). The wall of the structure, preserved a maximum of five courses high, was built of a single row of flat fieldstones ( $0.4-0.5 \times 0.7-0.8 \mathrm{~m}$ ) placed one atop the other with small stones in-between. The wall was partly built on top of natural bedrock and partly on a thin layer of soil (c. 10 cm ) that was deposited on bedrock at the time of construction, probably for the purpose of leveling the area. The building was devoid of finds; however, next to it was a body fragment of a Gaza-type jar.
It seems that the building served as a protective wall against the wind for a tent or a shed that was temporarily occupied by shepherds or farmers.


1. Buildings 1, 2, plan.


## Mizpe Ramon, Ha-Gamal Site* <br> Archive report

Mordechai Haiman
7/11/2007
During December 2004 a trial excavation was conducted on a hill within the Ha-Gamal archaeological site in Mizpe Ramon (Permit No. A-4313*; central map ref. NIG 1803/5016; OIG $1303 / 0016$ ), in an area slated for the development of a new neighborhood and following the discovery of what appeared to be a slag on surface. The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Housing and Construction, was devoid of any finds.

## Modi'in*



1. The cave, plan and section.

2. The openings, looking southeast.

3. Entrance to cave, looking southeast.

4. Interior of cave looking northeast.

5. The northern chamber, looking northeast.

Giora Parnos
5/2/2007
During May 2005 a salvage excavation was conducted in the employment district of Modi'in (Permit No. A4461*; map ref. NIG 19714/64768; OIG 14714/14768), in a cave that was discovered during an antiquities inspection by A. Gruber, prior to infrastructure work for an industrial building. The excavation, on behalf of the Antiquities Authority, was directed by the late G. Parnos, with the assistance of S. Ya'aqov-Jam and E. Bachar (administration), A. Hajian and T. Kornfeld (surveying), E. Belashov (drafting) and T. Sagiv (photography)

The cave (Fig. 1) was on the northwestern moderate slope of a rocky hill, at an elevation of c. 170 m above sea level. The natural cave was formed in the interface of the soft qirton bedrock with the harder nari covering. During the Early Roman period the cave was hewn deeper and quarried into an underground installation that was probably a ritual bath or storage space; in the Early Islamic period it was used as a dwelling.

The cave had an irregular shape (width c. 6.5 m , max. height 2.9 m ) and its roof was dome-like ( 0.6 m thick), with two adjacent openings set in its western side (Fig. 2). It was entered via the northern opening (Fig. 3), which was the larger of the two (length 3 m , width 1.8 m ). The cave was found filled with alluvium, reaching a height of c. 0.2 m below the ceiling. The danger of roof collapse during the excavation required its removal by mechanical equipment.

## The Early Roman Period

The cave (Figs. 1, 4) consisted of a square opening (L1) in the west and two chambers, a northern (L6) and a southern (L7)--hewn in qirton. A staircase, whose southern side was damaged by the removal of the cave's roof, led from the opening to the northern chamber (width 1.6 m ; Fig. 5). Eight steps were poorly preserved because bedrock is friable and some were completely worn away; the bottom step was the only one entirely preserved (height 0.18 m , breadth 0.4 m ).
The western and northern walls of the northern oval chamber (length 3.2 m , width 3 m , height 2.2 m ; Fig. 6) were straight and formed a rounded corner. The chamber's eastern wall was curved and the southern wall was breached in a later phase and only its eastern end was preserved. The quality of wall quarrying in the southern chamber (length 2.7 m , width 2.5 m ) was not as meticulous as in the northern chamber.
The initial use of the cave is dated to the Early Roman period, based on the earliest potsherds found in it. Judging by the plan of the complex it was probably used as a ritual bath. As it was hewn in impermeable qirton bedrock, its walls and floor did not need to be sealed with a layer of plaster. Another option is that this was an underground storehouse, which could not be used during the winter months because the qirton bedrock would retain the run-off flowing into the cavity.

## Early Islamic Period

During this period the partition between the northern and southern chambers was removed and the cave was paved with large stones, mostly preserved in the southern side. The pavement, variable and carelessly installed, was primarily meant to raise the habitation level (c. 0.4 m above bottom of cave) above the run-off level that accumulated at the bottom of the cave. Between the paving stones in the center of the cave was a hearth that contained a small amount of ash. Potsherds dating to the Early Islamic period were found on the pavement.


1. The cave, plan and section.

2. The openings, looking southeast.

3. Entrance to cave, looking southeast.

4. Interior of cave, looking northeast.


5. The northern chamber, looking northeast.

## Modi'in - Horbat Hadat and Be'erit (A)



1. Hill B, cluster of oblong-oval shallow cupmarks.


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2. Hill B, copper adze.

3. Stratum 6, jar with strainer.

4. Stratum 3, clay figurine of a bull.

Edwin C.M. van den Brink
12/2/2007
From September to December 2004 salvage excavations were resumed on Hill ' $C^{\prime}$ ' and extended to Hill ' $\mathrm{B}^{\prime}$ ' at Modi'in, Mitham Buchman (Permit No. A-4069; map ref. NIG 2010/6420; OIG 1510/1420). The excavation, on behalf of the Antiquities Authority and financed by the Ministries of Housing and Infrastructures, was directed by A. Onn (Hill 'C') and E.C.M. van den Brink (Hill 'B'), assisted intermittently by W. Shlomi, Y. Zelinger, S. Golan and the late G. Parnos (area supervision), L. Barda (GPS), A. Hajian and T. Kornfeld (surveying and drafting), T. Sagiv (field photography), R. Gat (pottery restoration), A. Pikovsky (pottery drawings), N. Lifschitz (archaeobotany) and G. Bonani (14C analyses).

## Hill B--Cupmarks and Rock-Cut Installations

Separated from Hill 'A' (see HA-ESI 117) by a narrow east-west oriented shallow wadi, Hill 'B' was noted for similar barren outcrops of limestone bedrock, some bearing flint nodules. Sixty-four features, hewn in or built on bedrock outcrops and spread over various descending terraces on the east slope of Hill ' $B$ ', were identified.
The features can be divided into the following subtypes:
(1) Oblong-oval, shallow cupmarks (Fig. 1), appearing usually in clusters and very similar to those exposed at Nevallat (HA-ESI 117) and Kh. el-'Alya (ESI 17: 94-104). As in the case of Hill ' $A$ ', these constituted the majority of cupmarks that were probably used for grinding activities, extending over a long period of time.
(2) Round, deep cupmarks, found in association with the oblong-oval cupmarks (Subtype 1). They may represent mortars used for pounding and crushing, especially when found together with the Subtype 1 cupmarks.
(3) Twenty dispersed large circular vats or basins were recorded (diam. over 1 m ), in addition to 35 similar large vats and basins documented previously on Hill 'A' and another 8 that were noted on Hill 'C' during the current season. The shallow vats (diam. c. 1.2 m ) served perhaps as threshing floors. Deeper, and somewhat tapering ones (basins) were smaller (diam. c. 0.8-1.0 m). At least some of these vats predated the Subtype 1 cupmarks that had cut them. If we were to assume that Subtypes 1 and 3 were contemporary, one might expect them to always appear together at the same site, which is not the case. To date, twelve sites are known to have oblong-oval cupmarks, similar to Subtype 1, but only the Modi'in area (including Mevo Horon) is known to exhibit large vats/basins and oblong cupmarks.
(4) Three man-made, hewn shaft-like features that were not explored to full depth due to time constraints.
Based on pottery and flint tools found in association with some of the features on Hills ' $A^{\prime}$ and ' $B$ ' and corroborated, in retrospect, by results of the excavations at Nevallat, the majority of rock-cut features did not postdate the Late Chalcolithic period, i.e., they could not be later than the early to mid-fourth millennium BCE and some might be earlier, in particular the Subtype 3 basins. A Chalcolithic date for the majority of Subtypes 1 and 2 cupmarks appears to harmonize with the dating of two copper adzes in excellent condition (Fig. 2), found hidden away together in a smal crevice outside one of the rock-cut installations on hill ' $B^{\prime}$ '.

## Hill 'B'--Stratified Deposits

Patches of what appeared to be ancient walls and floor remains were exposed by rainfall along the depression between Hills ' $A$ ' and ' $B$ ' and noted during the 2003 excavations. It was conjectured that this depression was likely to contain in-situ remains of habitations because it was low-lying and protected. A similar topographic situation existed between Hills ' $\mathrm{A}^{\prime}$ and ' C ', where mechanical probing revealed thick anthropogenic deposits, dating from the Chalcolithic and Early Bronze I periods (E. Yannai pers. comm.). Mechanical exposure of Hill ' $B$ ' revealed in one trial trench over 2.5 m of anthropogenic deposits in a depression that were subsequently, manually excavated. The deposits presented a remarkably well-preserved superimposed series of occupations that evidenced a sequence of seven strata (height over 3 m ), each containing remains of stone architecture and associated fills. The strata are described from below upward.

## Stratum 7

Bedrock, gently sloping down from northwest to southeast and from east-northeast to westsouthwest, was exposed in most of the area at $c .3 \mathrm{~m}$ below surface. The highest part of bedrock in the northwest area of the excavation was at 248.95 m asl. The lowest parts in the southeast and southwest areas of the excavation, ranged from 247.26 to c. 246.50 m asl. The northeastsouthwest bedrock gradient of the depression was much steeper than the general northwestsoutheast gradient of the surrounding Hills ' $A$ ' and ' $B$ '. It is highly possible that the original bedrock in the depression was part of a collapsed (?) karstic feature. At the deepest point within the excavated area (c. $1.5 \times 2.5 \mathrm{~m}$ ), bedrock was covered with a layer of sterile, reddish, hamra-like soil (thickness c. 0.5 m ). A small storage pit (diam. 0.8 m , depth c. 0.5 m ), dug into this sterile soil, protruded from the west balk of the excavation. It was lined at the top with two rows of cobblestones. Its bottom was paved with a few flat, heat-cracked fieldstones that provided a stable and leveled surface. A small fireplace, yielding carbonized wood, was uncovered close by. The only potsherd in the pit was a large jar rim fragment of undefined Chalcolithic date. The pit and the limited area excavated around it were sealed by successive layers of carbonized organic materials, grayish soil, a lime layer and again, carbonized organic materials, all sampled for analyses. Two Chalcolithic ceramic bowls, a smaller one atop a larger one, placed upside down, were found resting on the topmost layer of carbonized organic materials. The smaller bowl contained carbonized material, including several olive pits.

## Stratum 6

Stone wall segments that formed part of an apparently substantial, east-west oriented (broadroom?) building ( $6.6 \times 14.6 \mathrm{~m}$, height 0.8 m ), which was internally subdivided into at least two separate rooms, were founded directly on bedrock. One segment rested on the upper layer of carbonized organic materials that sealed the pit of Stratum 7 and must be, therefore, later than these deposits.
A small cache of eleven, mostly intact, pottery vessels rested on a floor of small fieldstones that
created a leveled space over bedrock and abutted one of the stone walls, was associated with this building. The composition of this cache--small and medium-sized bowls and a single jar with strainer (Fig. 3)--is reminiscent of a somewhat larger cache of 16 medium-sized bowls and a single jar with ellipsoid mouth, found in a contemporary layer at Nevallat.

The pottery and flint tools, including several adzes, retrieved from this building point to an early phase within the Late Chalcolithic, Ghassulian IV/Beer-Sheva cultural horizon. The general character of the pottery assemblage from this stratum appears to differ from the assemblages of the subsequent strata (5-1), irrespective of their date within the Chalcolithic or EB IA periods, in that small, open forms seem to dominate this assemblage, in contrast to large, closed forms particularly large storage jars or pithoi, which are dominant in the later strata. This distinction may be indicative of the functional difference between the strata.

## Stratum 5

A straight wall segment, partly overlying and physically separated from the building remains of Stratum 6 by a thick deposit of carbonized wood and more than a thousand carbonized olive stones (Olea europaea; apparently domesticated, N. Liphschitz pers. comm.), was uncovered. Due to the relatively limited extent of the excavated area it was uncertain whether this wall and two additional wall segments in the same stratum formed part of a single building. They may be superimposed on the Stratum 6 building, whose orientation they share. The few diagnostic potsherds deriving from associated fills dated these remains to a phase within the Late Chalcolithic period.

The carbonized materials, which were 'sandwiched' between wall segments of Stratum 6 and Stratum 5, provide an absolute ante quem date for Stratum 6, and a post quem date for the Stratum 5 building. The stratigraphic and horizontal closeness of the two superimposed buildings indicates that a relatively short time elapsed between the disintegration of the Stratum 6 building and the erection of the Stratum 5 structure.

The repeated presence of olive pits and other carbonized organic materials in Strata 6 and 5, together with a date somewhere in the Late Chalcolithic period for both strata, suggests a functional link with the Chalcolithic rock-cut installations and cupmarks that surrounded the site to its north (Hill 'A') and south (Hill 'B').

## Stratum 4

Stone foundations of a single broad-room ( $5.0 \times 13.5 \mathrm{~m}$, height 0.8 m ), partly overlying the building remains of Stratum 6 and physically separated from them by c. 0.5 m of fill, were uncovered. The entrance to the building, still unidentified, was probably in an unexcavated segment of the long, northern wall. The northeast-southwest orientation of this building was at c. 45 degrees variance with that of the underlying architecture of Strata 5 and 6. This change in building orientation possibly reflects a lapse of time between Strata 5 and 4 , which was considerably longer than that between Strata 6 and 5 .
The partly excavated remains of a tightly packed and circular cobblestone floor or installation, a few meters to the south of the building, were probably associated with it.
An intact, decorated jar was found in the northwest corner of the building and apparently indicated a floor level, a few centimeters above a thick lime layer that ran toward the southeast, beneath the stone foundations of this building and above the building remains of Stratum 6. Another notable find, indirectly associated with this building, was a small, piriform and incomplete hematite macehead.

## Two stelae/orthostats

Two carefully shaped, polished and abraded stelae or orthostats (mazzevot), found in overlying EB IA deposits of strata 3 and 2, perhaps derived originally from the Stratum 4 building. A large and deep pit, dug from an EB IA level higher up in the stratigraphy, partly destroyed the stone foundations in the west part of the Stratum 4 broad-room building. One of the stelae was found broken, lying on top of the fill in this pit, while the other, dug up perhaps through the same pit, yet found at a distance of c. 8 m away, was apparently re-used as a visible marker flanking the entrance to an oval enclosure of Stratum 2.
If the two stelae came, indeed, from the Stratum 4 building, it should be asked whether the people who erected the Stratum 2 enclosure, dating from EB IA, were aware of the sacredness attached to these stelae by the former Chalcolithic occupants of the site. A different outlook would be to consider the stelae in primary position at the entrance to the Stratum 2 enclosure and thus, a possible Late Chalcolithic date for the enclosure wall itself. This assumption is contradicted by the many pottery finds from Stratum 2, which are dated to an early phase of Early Bronze IA. The morphology of the two stelae is strikingly similar to two other stelae from a Chalcolithic burial cave near Shoham (IAA Reports 27: Figs. 9.19, 9.20) and a third similar stela that was recently discovered in a Chalcolithic burial cave at Horbat Qarqar South (P. Fabian, pers. comm.).

## Stratum 3

Stone foundations of probably another broad-room structure built perpendicularly and slightly to the west of the Stratum 4 building and overlying part of the Stratum 5 building, were separated from Stratum 4 by fills (thickness c. 0.3 m ). The structure's dimensions ( $5 \times 10 \mathrm{~m}$, height 0.4 m ) were somewhat smaller than those of Stratum 4; the width of the walls was narrower and the fieldstones used were generally smaller. Remains of a lime-washed, earthen floor were exposed in the larger of the two rooms where at least five restorable vessels were found, in situ. Among them were a medium-sized jar with well-developed, wavy ledge handles and a large, coarse pithos with applied rope decoration, the likes of which are known at Yiftah'el, Stratum II (IAA Reports 2: 9.159.18), dating from an early phase of Early Bronze Age I (EB IA). Another find on this floor was a small clay figurine of a bull (Fig. 4) with horns curved backward that originally probably stood in the center of a ceramic bowl or plate, like a specimen unearthed by de Vaux in Tomb 14 at Tell Far'a North (RB 59, 1952: Pl. 14) which has definite EB IA affinities. The floor and the pottery remains
above it were not associated with a curvilinear building, but with an apparently rectangular broadroom building, reminiscent of Chalcolithic precursors. As far as architectural traditions are concerned, the transition from rectilinear buildings to curvilinear ones may have been slightly less abrupt than generally assumed. Other ways of looking at the apparent dichotomy, i.e., a rectangular broad room dating to the early EB IA, are either to consider this building as of a Late Chalcolithic date, which seems to be contradicted by the pottery vessels found on its floor, or to assume that these pottery vessels began earlier, in the Late Chalcolithic, than is usually accepted, i.e., in the EB IA. Whatever the merits of the present issue, it certainly highlights the intricacies involved in the interpretation of the data collected from this transitional site. Morphologically, the pottery from this stratum fits the EB IA period, although technologically, it has strong affinities to the preceding Chalcolithic potting traditions, a situation observed also at a few other sites in the country, e.g., Ashqelon, Afridar - Area G ('Atiqot 45:228).

## Stratum 2

Stone foundation remains of a long, curvilinear enclosure wall, which damaged the rectangular, southwest corner of the EB IA Stratum 3 building and was slightly overlying part of the Stratum 4 Chalcolithic broad-room, were discovered. The enclosure wall had a well-defined entrance in its southeast part, carefully paved with flat stone slabs. Presumably, a wooden door was originally located to the left of the entrance, as indicated by the stone door-socket found in situ, which is one of the earliest examples known to date. A tall and carefully shaped stone stela, lying flat-faced, probably stood erect on the stone pavement at the exterior right side of the entrance. As noted above, this and another broken stela may have been dug up from the underlying Stratum 4 building.

A circular structure on stone foundations was attached to the interior face of the enclosure, at a distance of c. 2 m from its entrance. Remains of a pavement that consisted of a row of carefully arranged flag stones, along the outer face of the enclosure wall, were exposed. Although it is hard to establish a direct stratigraphic relationship between the enclosure and another, freestanding circular structure built on stone foundations toward the northwest, we assume they were contemporary, given that both the curvilinear enclosure wall and the circular wall cut into or damaged the underlying rectangular Stratum 3 building. At least three successive floor levels were preserved within the circular structure; a nearly complete pottery jar rested on the topmost one. A segment of a second curvilinear wall, close to and possibly touching upon the circular structure, represented, in all likelihood, the northwest corner of the foresaid enclosure, although at this point it is difficult to prove a direct stratigraphic link between the various segments. If, however, this assumption is correct, the enclosure would have occupied an area of c. $18 \times 22 \mathrm{~m}$. Sparse, earthen floor remains, as well as remains of pebble stone beddings of possibly superimposed earthen floors, were revealed within the enclosure, with some restorable pottery vessels, mainly storage jars, in situ. The pottery dated these floor levels, and by extrapolation the enclosure and the two circular structures within it, to an early stage in the Southern EB I.

## Stratum 1

This topmost stratum at the site was, most seriously affected by recent natural and human agents The northern part of the excavation area gradually merged into a path leading down-hill that had been used over the years by local people and animals. Moreover, Hill ' $\mathrm{B}^{\prime}$ ' had been used for many years as an IDF military training ground and shooting range. Several shallow pits and a few, disjointed but parallel segments of stone-wall foundations, were uncovered only tens of centimeters below surface. They directly overlaid a Stratum 3 wall segment while foundations of another wall that seem to have cut it overlaid the Stratum 4 circular wall. A stone pavement that sealed part of the Stratum 2 circular wall was attributed to this stratum. Pottery finds from fills within and outside the various pits indicated a date within the EB IA.

## Hill 'C'

Due to time constraints, Hill 'C was only hastily examined for the presence of cupmarks and rockcut installations. Thirty-five features, hewn in bedrock outcrops and spread over the west slope of Hill 'C' were identified and recorded.

The current salvage excavations have revealed the presence of a remarkably well-preserved stratified deposit, evidencing an occupational sequence of seven superimposed strata (7-1), at least six of which contained remains of stone architecture. Strata 6-4 dated from the Late Chalcolithic Ghassulian IV/Beer-Sheva cultural horizon, while Strata 3-1 dated from the initial phase(s) of Early Bronze Age IA. Their chronology is based on radiocarbon samples and analyses of pottery coming from floors.
This site consists of a very tight sequence of occupation strata, associated with an abundance of activity areas, covering much of the Late Chalcolithic period and continuing through the EB IA. It is perhaps the only site known so far to do so, hence of vital importance to the study of these periods.


1. Hill B, cluster of oblong-oval shallow cupmarks.

2. Hill B, copper adze.

3. Stratum 6, jar with strainer.

4. Stratum 3, clay figurine of a bull.

## Modi'in - Horbat Hadat and Be'erit (B)



1. Area C1. Cave 2, after excavation, looking west.

2. Area C2. Two rooms and adjoining courtyard in center; part of karstic cave in lower left corner and winepress and collecting vat in lower right corner; entrance to miqve on the right.

3. Area C2. Schematic, painted representation on the plastered south mique wall.

4. Area C2. Various Chalcolithic grinding facilities hewn in exposed bedrock.

5. Area C3. Stone foundations of the early EB I circular structure.

Edwin C.M. van den Brink
12/6/2007
During February-March and June-July 2006, renewed trial and salvage excavations were conducted between segments of Roads 8 and 12, opposite Horbat Hadat-Be'erit, within the Buchman compound in Modi'in (Permit No. A-4735; map ref. NIG 2010/6420; OIG 1510/1420), in the wake of construction. The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Housing and Construction, was directed by E.C.M. van den Brink (photography), with the assistance of U. 'Ad (supervision Area C2), M Mulokandov (supervision Area C3), Y. Ochayon and E. Bachar (administration), V. Essman, A. Hajan, V. Pirsky, T. Kornfeld, (surveying), T. Sagiv (field photography), Sky Balloons (aerial photography), N. Zak and I. Berin (drafting), S. Levy-Adun (olive stones), P. Gandelman (Roman-Byzantine pottery), R. Avner (depictions in the miqve), J. Neguer, N. Davidoff and R. Abu-Dihab (preservation), M. Sa'id (metal detector) and Y . Elisha and T. Lakichevic (supervision of heavy machinery).
Inspection of mechanical trenching, carried out on behalf of the IAA by A. Onn (September 2005), I. Kornfeld (February 2006) and Y. Elisha (April-May 2006), identified a number of archaeological remains, including stone walls, shafts and cavities, straddled along the slopes of conjoining hills, previously labeled Hills A and C (HA-ESI 119).
The current excavation meant to examine the nature and extent of the various remains, as well as to clear additional bedrock outcrops that showed rock-cut installations.

HILL A
Five $4 \times 4 \mathrm{~m}$ probes were opened on the lower slopes of the hill and excavated down to bedrock. Several stone-built wall segments of unknown date and function were uncovered. Two of these were originally thought to be ancient terrace walls, but turned out to be segments of two parallel alignments of large boulders that bordered an ancient, east-northeast-west-southwest oriented road. A bell-shaped cave higher up the same slope could only be cursorily explored, yielding no clues as to its date or function.

## HILL C

Four sub-areas, labeled Areas C1-C4 were opened.

## Area C1

After the mechanical removal of a Hellenistic-Roman (Hashmonean) farmhouse, whose central and northern parts had been excavated by A. Onn and the late G. Parnos in 2004 (Permit No. 4069), remains of three karstic caves, c. 20 m from each other, were visible in the west section of the hillside, after it was cut by a bulldozer in preparation for Road 8. The caves are briefly described from north to south.

Cave 1. Only the very rear end of this cave (length c. 3 m , width 0.5 m , height 1.5 m ) had survived. The few potsherds collected from the remaining fill dated its usage to the Late Chalcolithic period.

Cave 2 (Fig. 1). It is estimated that about one third of this cave was removed unnoticed, including the original entrance. Three layers were identified in the soil fill that was in the remaining cave area (length 4 m , width 2.5 m , height 4 m ) up to its ceiling. The first layer (Stratum 3; c. 2 m thick) consisted mainly of stone debris that had fallen from the ceiling, mixed with eroded soils that had filtered into the cave over time. Stratum 3 sealed the remains of several fieldstone courses that lined and followed the cave's contour, forming a semicircle that contained a layer of gray, powdery fill (c. 1 m thick), apparently the remains of a limekiln (Stratum 2). Although the limekiln is rather substantial, it was devoid of potsherds that could indicate its date. It may have been associated with the Hashmonean farmhouse, situated above and less than 10 m southeast of the cave. Stratum 1, badly affected by the limekiln activities, was composed of a fill (c. 0.5 m thick) deposited on the cave's bedrock floor, which contained anthropogenic materials, but no distinguishable features, such as pits or hearths. The ceramic assemblage from Stratum 1 was a mixture of Late Chalcolithic potsherds and several restorable, early EB I jars. It is yet too early to determine whether this mixture is a result of actual post-depositional processes in the cave or this assemblage is perceived as a mixture based on prevalent preconceptions concerning Late Chalcolithic and early EB I pottery assemblages. Among the finds was an intact, loop-handled jar, with clear affinities to early EB I rather than Late Chalcolithic, found, in situ, on the floor of the cave, as well as the indisputable fragments of a Chalcolithic churn, found higher up the fill. In the absence of any features, it seems likely that the cave was used for storage, rather than for dwelling in its earliest stages and perhaps for burial, based on a few, as yet unidentified bones.

Cave 3. Half of this cave was removed, including its original entrance. However, it was the most rewarding cave in Area C1. The cave (length c. 7 m , width 2 m , height 1.8 m ) was filled with soil up to its ceiling. The top part of the fill consisted of natural, eroded soils that had filtered inside over the years. The lower fill (last $0.3-0.4 \mathrm{~m}$ ), particularly in the southern part of the cave, rested directly on bedrock floor and yielded large amounts of well preserved, Late Chalcolithic pottery, a ring base fragment of a fenestrated basalt bowl, as well as over six hundred carbonized olive stones, retrieved through dry sieving of the soil; three olive stones were sampled for Carbon 14 dating. The concentration of olive stones, apparently stored away in the cave, lends additional support to the concept of cultivating olive trees in this area, as early as the Late Chalcolithic period. It joins another cache in the excess of 1200 carbonized olive stones that had previously been discovered in the nearby transitional Chalcolithic-early EB I site, excavated in the natural, deep depression between Hills A and B (HA-ESI 119). A functional relationship may perhaps be assumed between the abundant presence of olives pits and the hundreds of oval cupmarks, appearing on bedrock surfaces of Hills A-C.
Above the lower levels of the fill that contained the artifacts and olive stones, a stone wall, sealing off the south part of the cave and separating it from the north part, was built. Behind this wall, a deep man-made rectangular niche ( $0.6 \times 0.7 \mathrm{~m}$ ) was found, containing pottery that dated exclusively to early EB I. At a later stage, a deep cylindrical pit had been cut through the cave's top in the north part, penetrating the bedrock floor and afflicting damage to the niche. This pit can be
dated to the Persian period on the basis of pottery recovered from its fill, including several oil-lamp fragments.

## Area C2

Seven $4 \times 4 \mathrm{~m}$ squares and two smaller probes were opened immediately south of the previously excavated Hashmonean farmhouse that comprised a central courtyard with a large oil press, surrounded on three sides by various rooms. The current excavation revealed two additional rooms to the west and a courtyard in the east, belonging to the south wing of the former complex (Fig. 2, center). Both rooms show three successive floor levels, as well as evidence of minor adjustments to several of their stone walls. The earliest floor level is dated to the late Hellenistic Period, namely the Hashmonean era (first century BCE) and the latest floor level--to the Roman period (beginning of the second century CE). A partially intact stone pavement in the north room had apparently been partly removed in antiquity. Inside this room and north of the remaining stone pavement an ash layer was noted, yielding a complete, soot-stained Roman-period juglet. This layer seems to indicate that the room was destroyed by fire and subsequently abandoned. A cylindrical shaft in the newly discovered courtyard led into a rectangular, carefully plastered water cistern, the second one found in association with the farmhouse. A small water channel, composed of two parallel alignments of small, standing fieldstones, led to this cistern from the south.
The pottery found in the rooms and courtyard indicates that the complex had been founded during the Hashmonean period and abandoned at the beginning of the second century CE, perhaps during the Bar-Kokhba Revolt.
It is noteworthy that wherever the earliest floor level was cut through, oval cupmarks, segments of stone walls and potsherds, dating to the Late Chalcolithic period, were found hewn into or built above bedrock. A wall segment of the farmhouse was built directly atop an earlier wall of small fieldstones that was, most likely, Chalcolithic in date and rested immediately above bedrock, which showed some shallow, oval grooves, undoubtedly of Chalcolithic date. In conjunction with the presence of the nearby Chalcolithic caves in Area C1, these in situ remains on bedrock point to intensive use of the area, as early as the Late Chalcolithic period.
A similar situation was noted when a square and deep rock-cut vat that adjoined the farmhouse and was perhaps originally associated with it, was excavated. The bottom of the vat was found cut through, leading into another karstic cave. The danger of possible roof collapse required the mechanical removal of bedrock above the cave, exposing its inner space (c. $2 \times 6 \times 7 \mathrm{~m}$; Fig. 2, lower left corner), which was excavated down to bedrock. The most characteristic feature of the cave consisted of ten niches carved in the surrounding walls, some of which yielded large quantities of Late Chalcolithic pottery fragments. Several basalt vessel fragments and a single bone tool were also retrieved from the cave. This single thin layer of anthropogenic deposits (c. 0.1-0.2 m thick) is attested throughout the cave and indicates that it was used for a relatively short period of time, either for storage and/or as a dwelling. This layer rested on a c. 0.5 m thick fill of eroded and archeologically sterile soil mixed with limestone chips, which directly overlaid the cave's bedrock floor.
Near the southeast corner of the former farmhouse, a winepress that included a rectangular threading floor and a square collecting vat (Fig. 2, lower right corner) was revealed. The bottom of the collecting vat was also found cut through, leading into a deep shaft/pit, whose bedrock bottom was 4.5 m below surface. The shaft could be dated exclusively to early EB I on the basis of restorable potsherds recovered from the shaft's fill, including a storage jar with two pushed-up ledge handles.

A miqwe (ritual bath) excavated near the winepress was the second one identified in the area; apparently, it was associated with the farmhouse. The miqwe was accessed via a rectangular, almost shaft-like court (Fig. 2, extreme lower right corner) with a flight of shallow hewn stairs, descending toward the rectangular, slightly damaged rock-cut entrance to the miqwe. A number of earthen, plastered steps behind the entrance led down into an immersion pool, which originally was a karstic cave, adapted for its designated use as a miqwe. Various cracks in the cave's walls were reinforced with fitting fieldstones in an attempt to prevent the possible collapse of the ceiling. The floor, roof and walls were coated with a blackish gritty layer, overlaid with a fine, water-proof, yellowish plaster. On the southern wall, a number of white-colored schematic representations of churches, alongside several apparent roads and road crossings, are depicted on a strip of the plaster (length 1.3 m , width 0.4 m ; Fig. 3). To preserve for future research what appears to be a road map with holy sites, the painted plaster was eventually lifted from the wall by an IAA Conservation team. Perhaps the map had been drawn by a monk or pilgrim, staying in the abandoned miqwe during the Byzantine period, sometime in the sixth-seventh centuries CE, according to the pottery retrieved from the miqwe's fill. A connection with the nearby Byzantine monastery/church at Horbat Hadat, less than 150 m south of the miqwe, seems plausible.

A rectangular, stone-cut passage was discerned a short distance south of the farmhouse. It led to a doorway of a burial cave, found blocked with a large boulder (Fig. 4). Several kokhim were visible in the cave, which could not be excavated due to IAA regulations. The cave dated, most likely, to the Hellenistic or Early Roman periods.

Cleaning bedrock surfaces and pockets in Area C2 yielded additional cupmarks or oval shallow grooves (Fig. 5), tentatively identified as stationary grinding facilities from the Chalcolithic period (HA-ESI 119), as well as bedrock pockets filled with soil that contained Chalcolithic potsherds and flints. A seemingly disproportionate high number of cornet bases and large lug handles with a triangular cross-section, which were friable and in a bad state of preservation, came from one such pocket.

Area C3
Fifteen squares were opened over an area (c. $12 \times 70 \mathrm{~m}$ ) on the lower reaches of the hillside, to examine the various wall remains exposed by mechanical means and to uncover and clean bedrock surfaces in search of possible archeological deposits. The main feature in the area was an ancient, slightly curving road (length at least 60 m ; S. Gibson, pers. comm.), oriented east-west and
located on the very edge of one of the hillside's terraces (Fig. 6). Integrated into the north side of the road was a long, straight segment of a possible retaining wall (length c. 6 m ), built of mediumsized and dry-laid fieldstones, whose date is uncertain. The wall had only one defined face, on the southern side, facing uphill. Behind the wall and retained by it was a sloping fill of small fieldstones (c. 2 m wide) that directly overlaid bedrock and was the foundation of the road. The other side of the road, closest to the terrace edge, was not preserved. The majority of potsherds associated with this road dated from the Roman and Byzantine periods, providing an approximate date for its construction. Cutting through the road's stone foundation, several oval grooves/cupmarks of Chalcolithic date were exposed in the underlying bedrock, to the west of the wall segment. An unusually large Chalcolithic flint axe was found close to two oval cupmarks.
The only architectural remains in this area comprised the stone foundation of a circular structure (diam. c. 3 m ; Fig. 7). The wall, built of a double row of medium-sized fieldstones and preserved a single course high, rested on a sterile layer of colluvial deposit that overlaid bedrock. A sunken, earth-beaten floor, slightly below the bottom level of the foundation course, yielded a spread of badly preserved early EB I potsherds, as well as an intact copper awl.

## Area C4

Prior to the excavation, small amounts of Chalcolithic potsherds had been noticed in three mechanically-dug trenches. Four adjoining probes ( $4 \times 4 \mathrm{~m}$ ) on the plateau, along the east slope of Hill C and overlooking Road 12, were excavated down to bedrock. A fifth $4 \times 4 \mathrm{~m}$ probe c. 30 m to the southeast was excavated on the southern extreme of the plateau. The archaeological deposits appeared almost immediately below surface (c. 268 m above sea level) and reached a maximum depth of c. 1.5 m down to bedrock, depending on their location on the plateau that gently sloped in a northeast-southwest direction. A group of four, partly subterranean, silos in one of the probes was carved out of bedrock; one of the silos had been partially stone-lined. Three wall segments, founded directly on bedrock or on a sterile colluvial deposit, protruded from the balks of two probes and possibly belonged to domestic structures.
The remains exposed in the five probes are dated to the Late Chalcolithic period. The presence of cornets on the one hand and the absence of combed pottery, typical of the latter phases of Late Chalcolithic on the other, implies that the settlement remains on this plateau slightly predated the Chalcolithic remains excavated in 2004 (HA-ESI 119), which yielded combed pottery and only a few cornets.

The exposure of the southern wing of the Late Hellenistic-Roman (Hashmonean) farmhouse, which included an additional courtyard with two adjoining rooms, one of which had a stone pavement, a winepress and a collecting vat, another miqwe and a deeper, well-plastered water cistern, completed the plan of this complex.
A span of almost a century is envisaged for the continuous use of this complex, based on the identified floor levels in the two rooms.
The painted 'road map' on the south wall of the miqwe indicates a secondary use of the miqwe as a dwelling during the Byzantine period and provides an unexpected glimpse into the religious landscape of the period.
Around and below the farmhouse, bedrock is honeycombed with karstic caves and cavities, which were partially used for dwelling or storage during the Late Chalcolithic period; in one case the use extended into early EB I, whereas one other cavity was restricted to early EB I.
Subterranean storage facilities and wall segments of possible dwellings, all dating from the Late Chalcolithic period, were uncovered on the plateau.
The density of rock-cut grinding and pounding facilities evinces intensified usage of the area, presumably for agricultural activities, during the Late Chalcolithic period. This presumption, however, challenges the apparent marginal agricultural potential of this hilly, rocky area in terms of water resources and availability of quality arable land. Another possibly related point that still awaits clarification is the almost complete absence of animal bones in Late Chalcolithic contexts at the site.


1. Area C1. Cave 2, after excavation, looking west.

2. Area C2. Two rooms and adjoining courtyard in center; part of karstic cave in lower left corner and winepress and collecting vat in lower right corner; entrance to miqve on the right.

3. Area C2. Schematic, painted representation on the plastered south miqwe wall.

4. Area C2. Entrance to burial cave.

5. Area C2. Various Chalcolithic grinding facilities hewn in exposed bedrock

6. Area C3. Aerial view of ancient road.

7. Area C3. Stone foundations of the early EB I circular structure.

## Modi'in West*

## Tzach Kanias

11/9/2007


1. Plan and sections.

During November 2001 a trial excavation was conducted in Lot 238 in Modi'in West (Permit No. A-3528*; map ref. NIG 20012-15/64335-49; OIG 15012-15/14335-49). The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Construction and Housing, was directed by T. Kanias, with the assistance of I. Rahamim (administration), A. Hajian and V. Pirsky (surveying) and T. Sagiv (photography).

A winepress (Fig. 1) that consisted of a rock-hewn treading floor (Fig. 1:1) and two collecting vats was exposed. A hewn channel led from the treading floor, which had been extensively damaged by mechanical equipment, to a small collecting vat ( $0.8 \times 0.8 \mathrm{~m}$, depth 0.9 m ; Fig. $1: 2$ ). Another channel conveyed liquid from that vat to a larger collecting vat ( $1.0 \times 1.2 \mathrm{~m}$, depth 1.4 m ; Fig. $1: 3$ ) whose plaster floor incorporated potsherds that probably dated to the Byzantine period. At the bottom of each vat was a settling pit.


1. Plan and sections.

## Modi'in, Development Survey of Industrial Zone

## Leticia Barda and Israel Korenfeld

12/12/2007


1. Survey map.

During November 2003 a development survey was conducted between the industrial zone in Modi'in and Wadi 'Anaba (Permit No. A-4049*; map ref. NIG 1940-7/64500-62; OIG 1440-7/14500-62), along the route of a planned sewer line. The survey, on behalf of the Antiquities Authority, was directed by L. Barda and I. Korenfeld.

The remains of walls built of dressed stones and fieldstones (Fig. 1:1, 2), as well as flint flakes and numerous potsherds, dating to the Iron Age(?), Roman, Byzantine, Early Islamic, Mamluk and Ottoman periods, were found on the eastern fringes of Horbat Nekhes.
On a rocky hillside north of Horbat Nekhes was a concentration of flint implements (map ref. NIG 195766/644470; OIG $145766 / 144470$; Fig. $1: 4$ ), farming terraces and field walls, stone clearance heaps, two water cisterns (Fig.1:10, 24), a rectangular vertical rock-cutting that may be a burial cave and a cupmark (Fig. 1:23). A concentration of dressed masonry stones in secondary use was found in the field walls (Fig. 1:18-20).
The potsherds, tesserae and bones from the Roman and Byzantine periods, which were scattered on gray soil (Fig. 1:17) may have originated from Horbat Nekhes, located to the south.


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1. Survey map.

## The Ben Gurion Airport-Modi'in Railway Route, Development Survey*

## Leticia Barda and Marwan Masarwa

20/12/2007
During November 2003, a development survey was conducted along the route of the Ben-Gurion AirportModi'in railroad line (Permit No. A-4031*). The survey, on behalf of the Antiquities Authority, was conducted by L. Barda and M. Masarwa.

Most of the survey area was situated in agricultural fields; the noteworthy sites are described below.

1. Map ref. NIG 20189-91/64113-35; OIG 15189-91/14113-35. One or more installations, south and east of the Kafr Jindas ruin. Potsherds from the Byzantine, Early Islamic and Ottoman periods are scattered on surface, as well as large white tesserae and plaster fragments.
2. Map ref. NIG 192949/648848; OIG 142949/148848. A scattering of flint implements, cores and flakes from the Middle Paleolithic period (Mousterian culture) on surface, over an area of c. $150 \times$ 300 m.
3. Map ref. NIG 19321/64768; OIG 14321/14768. A rock-hewn winepress that includes a square treading floor, in one of whose sides was a hewn niche for inserting a press beam. The rectangular collecting vat was converted to a water cistern in a later phase. Round hewn openings that may have belonged to water cisterns or tombs (?) were surveyed, as well as vertical rock-cuttings. Potsherds from the Middle Bronze Age, the Roman and Byzantine periods and a few flint objects were collected on surface.
4. Map ref. NIG 193735/646030; OIG 143735/146030. A concentration of rock-hewn installations, winepresses, cupmarks, quarries, burial caves and arcosolia was surveyed. The finds are associated with a nearby ruin located on the hilltop (map ref. NIG 193785/646363; OIG 143785/146363), which consists of a large concentration of masonry stones, clusters of small and large white and gray tesserae, water cisterns and potsherds from Middle Bronze IIB and the Persian, Roman, Byzantine and Ottoman periods.
5. Map ref. NIG 194839/645049; OIG 144839/145049. A circular watchman's booth (diam. c. 4.5 m ) built of fieldstones and a few dressed stones, which was preserved three-four courses high. Close by are rock-cuttings that probably represent the remains of a winepress. A plastered building (c. $4 \times 4 \mathrm{~m}$, preserved height 1 m ) and nearby farming terraces were noted c. 330 m to the northwest.

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## Nahal 'Aneva*

## Tzach Kanias

18/12/2007
During August 2002 a trial excavation was conducted at the site of Nahal 'Aneva West (Permit No. A-3710*; map ref. NIG 19608/64455; OIG 14608/14455), prior to work along the route of Highway 4 in Modi'in. The excavation, on behalf of the Antiquities Authority and financed by the E. Tayyar Construction Company, was directed by T. Kanias, with the assistance of V. Essman and V. Pirsky (surveying) and T. Sagiv (photography).
The excavation was conducted along the western slope of the wadi, next to two limekilns from the Ottoman period. Remains of a rectangular winepress and a water cistern were exposed. Only the western part of the winepress had survived intact and the bell-shaped cistern, entirely coated with hydraulic plaster, was hewn inside the winepress' collecting vat. A surface coated with white plaster mixed with gray temper (thickness 0.1 m ) was in the center of the treading floor (width c. 2.5 m ). It was impossible to date the winepress or the water cistern. However, to the west of the winepress and above bedrock were several pottery fragments, mostly Gaza ware, dating to the Ottoman period.

## Nahal Beqa*

Vlada Nikolsky
18/12/2007


1. Plan.

2. Pottery.

During April 2003 a salvage excavation was conducted on the access road to the settlement of Segev Shalom (Permit No. A-3884*; map ref. NIG 18475-95/56875-95; OIG 13475-95/06875-95), in the wake of paving the road. The excavation, on behalf of the Antiquities Authority and financed by the Department of Public Works, was directed by V. Nikolsky-Carmel, with the assistance of V. Essman and V. Pirsky (surveying and drafting ), T. Sagiv (photography) and N. Ze'evi (pottery drawing).
Remains of two walls (W11, W12; Fig. 1), built of wadi pebbles mixed with limestone, were discovered in two half squares ( 25 sq m ). The walls were probably part of a building whose floor was not preserved and only the foundations of the walls survived. The finds from the Late Byzantine period included a few pottery fragments of bowls (Fig. 2:1-3), a cooking pot (Fig. 2:4), a cooking pot lid (Fig. 2:5), a Gaza jar (Fig. 2:6), a bag-shaped store jar (Fig. 2:7) and jugs (Fig. 2:8, 9).

The scant artifacts and the poorly preserved remains preclude identifying the building or its use.


1. Plan.

2. Pottery.

## Nahal Hadera


3. Area A, burial structure, plan and sections.

4. Area A, burial structure, the rolling stone, looking south

6. Area $A$, the burial structure and installations, looking east.

9. Area B, burial cave, plan and sections.

Amir Gorzalczany and Ahmed 'Ouda
17/6/2007
During September 2003 an excavation was conducted along the route of the Cross-Israel Highway (Permit No. A-3716; map ref. NIG 20160-230/70200-40; OIG 15160-230/20200-40), in the wake of constructing an interchange at Baqa al-Gharbiya. The excavation, on behalf of the Antiquities Authority and financed by the Cross-Israel Highway, was directed by A. 'Ouda, S. Mahajna and A. Gorzalczany, with the assistance of K. Sa'id, D. Barkan, M. Taver and D. Inbar (area supervision), A. el-Salam Sa'id and A. Shadman (preliminary examinations), S. Ya'aqov-Jam (administration), T. Sagiv (field and studio photography), V. Essman, V. Pirsky and T. Kornfeld (surveying), I. Berin and N. Zak (drafting), M. Shuiskaya-Arnov (drawing), P. Gandelman (ceramics), Y. Gorin-Rosen and N. Katsnelson (glass), O. Shorr (glass restoration), L. Kupershmidt (metallurgical laboratory), E. Barzilay (geomorphology), E. Oren (general assistance and archaeological inspection), H. Abu Fana, A. Mawasi and A. Mas'oud (mechanical equipment). Additional assistance was rendered by Y. Mor (Gadish Co.), Z. Horowitz, E. Yannai, E. 'Awawdy and inspectors of the Haifa District of the Antiquities Authority. D. Amit provided information about the Qumran tombs.

The site (Fig. 1) is situated on a hilltop of soft qirton and gray rendzina soil, c. 500 m southeast of Horbat Kosit, which is a large site that was initially occupied during the First Temple period and reached its zenith in the Second Temple period.
Four areas were extensively excavated.
Area A (Fig. 2). Twenty one squares were excavated. A hewn subterranean structure, oriented north-south, which served as an entrance hall to a chamber (Walls 607,608 ), was exposed. The walls, in a mediocre state of preservation, were built of ashlar stones ( $0.4 \times 0.4 \times 0.8 \mathrm{~m}$ ) and rose to four courses high. They slanted inward and it seems the room was originally covered with a barrel vault that had since collapsed (Fig. 3).
Six rock-hewn steps were uncovered at the northern end of the building, descending in a southerly direction toward the opening of another void that was sealed with a rolling stone, found in situ (diam. 1.2 m, width 0.4 m; Fig. 4). The chamber behind the stone was not excavated.
Twenty four rock-hewn installations were exposed to the north, south and east of the structure. They were divided into two main groups: (1) A small rectangular structure ( $0.4-0.6 \times 1.6 \mathrm{~m}$ ) of varying depth; a narrow shallow channel was visible along one of the long walls, at the joint between the wall and the floor, and (2) A larger deeper structure (average $1.5 \times 2.5 \mathrm{~m}$ ) with rockhewn shelves (width 0.2-0.3 m; Figs. 5-7), extending the entire length of its long sides. The hewn installations were clearly related to the underground burial structure and although devoid of osteological and archaeological finds they correspond to the burial style known at Qumran and the adjacent cemeteries at 'Ein el-Ghuweir, which are dated from 175 BCE to 70 CE (P. Bar-Adon, Eretz Israel 10:73-89). However, unlike the tombs at Qumran, which are mostly oriented north-south and whose kokhim were dug along the eastern wall, the rock-cut installations at Nahal Hadera are practically all oriented east-west and the kokhim are dug either in the northern or southern sides. A refuse pit, ascribed to the Byzantine period (diam. 4.8 m ), was also found in the area.

Area B (Fig. 8). Sixty squares were excavated. A wall (W2405; length 20 m , width c. 2 m ) was exposed in the eastern part of the area. It was oriented north-south and built of indigenous fieldstones. Fragments of a sarcophagus (Samaritan?) were incorporated in secondary use within the southern end of W2405 and a corner was formed at its northern end with a similar wall (W2450) that extended 4 m westward. It seems the walls enclosed a region where a total of 68 rock-hewn tombs and installations, similar to those in Area A, were exposed. As in Area A, the installations were found mostly empty. The shallow channel, which connected the walls to the installation, was partly covered with stone slabs. A well-preserved bronze ladle was found in the small-type Installation 118 that was equipped with a channel.
Rock-hewn burial caves, oriented east-west and north-south, were discovered in the middle of the site's area, which together with W2405, delimited the region where the rock-hewn installations were exposed. Several caves were sealed with rolling stones, discerned in situ. The caves were not excavated.
Cave 124 (Fig. 9) consisted of a rectangular main chamber ( $2.4 \times 3.1 \mathrm{~m}$ ) whose ceiling was slightly curved (max. height 1.7 m ). The entrance to the chamber was in the eastern wall by way of a rockhewn staircase that descended to a rectangular opening $(0.50 \times 0.55 \mathrm{~m})$ found blocked by stones. Nine elongated kokhim in the cave were arranged perpendicular to the walls: two in the eastern wall, flanking the opening on either side, two in the western and southern walls and three in the northern wall. All the kokhim had similar dimensions (length 2 m , width 0.5 m , height 0.8 m ) with a slightly curved ceiling, except for those in the southern wall that were shorter (length 0.9 and 1.3 m , width 0.6 m ). An assemblage of intact glass vessels in an excellent state of preservation was discovered in the cave, which was not excavated; some of the vessels are rare, dating to the third century CE.
Numerous fragments of pottery vessels were found in the southwestern part of the area, particularly jar fragments, dating to the Chalcolithic period (a refuse pit?); the excavation in this region was not completed.

Area C. Two squares ( $0.4-0.6 \mathrm{~m}$ deep) excavated down to qirton bedrock, were devoid of any archaeological finds.

Area D. A hewn elliptical installation, exposed 0.2 m below surface, had a flat floor; its walls opened slightly to form a bell-shaped outline (min. diam. 1.6-1.8, depth 1.7 m ). A trapezoidshaped pit ( $0.3 \times 0.6 \mathrm{~m}$, depth 0.15 m ) that was filled with small fieldstones (diam. $0.10-0.15 \mathrm{~m}$ ) and worn potsherds, probably jars and cooking pots from the Byznatine period, as well as scattered tesserae, was exposed next to the western wall. This was apparently a silo or an installation that held liquids.

The eastern and southern boundaries of Horbat Kosit were ascertained in the excavation at Nahal Hadera and in excavations conducted in the Jatt-Baqa al-Gharbiya region. As customary in many
periods, the region around the tell was utilized for burials, industry and other functions that were incompatible with a residential area.
The overall architectural plan and the meticulous finish of the underground burial structure are outstanding. Although the hewn installations around it were empty, a typological and stylistic comparison suggests they were used for burial. The route of the Cross-Israel Highway in this region overlaps, to a great extent the historic route of the Via Maris and mortuaries along the roads was a known and accepted phenomenon in the Roman period.
The Nahal Hadera site may possibly be part of an extensive necropolis that was exposed c. 500 m north of the site, between the eastern fringes of Horbat Kosit and the village of Baqa al-Gharbiya (HA-ESI 118). Nevertheless, the finds at Nahal Hadera can probably be associated with the RomanByzantine site in Jatt, despite the difficulty in crossing Nahal Hadera. The mechanically dug probes in the area between the two cemeteries yielded no finds; however, the difference in burial continuity between the two sites probably stemmed from the alluvium soil that was unsuitable for digging graves.
Settlements from the Roman and Byzantine periods in the vicinity of the tombs were excavated at Horbat Kosit (Permit Nos. A-3499), Jatt ('Atiqot 37) and Baqa al-Gharbiya (ESI 10:113).


1. Location map.


2. Area A, burial structure, plan and sections.



3. Area B, plan.


## Nahal Hadera


3. Area A, burial structure, plan and sections.

4. Area A, burial structure, the rolling stone, looking south

6. Area $A$, the burial structure and installations, looking east.

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Amir Gorzalczany and Ahmed `Ouda
17/6/2007
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Area B (Fig. 8). Sixty squares were excavated. A wall (W2405; length 20 m , width c. 2 m ) was exposed in the eastern part of the area. It was oriented north-south and built of indigenous fieldstones. Fragments of a sarcophagus (Samaritan?) were incorporated in secondary use within the southern end of W2405 and a corner was formed at its northern end with a similar wall (W2450) that extended 4 m westward. It seems the walls enclosed a region where a total of 68 rock-hewn tombs and installations, similar to those in Area A, were exposed. As in Area A, the installations were found mostly empty. The shallow channel, which connected the walls to the installation, was partly covered with stone slabs. A well-preserved bronze ladle was found in the small-type Installation 118 that was equipped with a channel.
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Numerous fragments of pottery vessels were found in the southwestern part of the area, particularly jar fragments, dating to the Chalcolithic period (a refuse pit?); the excavation in this region was not completed.

Area C. Two squares ( $0.4-0.6 \mathrm{~m}$ deep) excavated down to qirton bedrock, were devoid of any archaeological finds.

Area D. A hewn elliptical installation, exposed 0.2 m below surface, had a flat floor; its walls opened slightly to form a bell-shaped outline (min. diam. 1.6-1.8, depth 1.7 m ). A trapezoidshaped pit ( $0.3 \times 0.6 \mathrm{~m}$, depth 0.15 m ) that was filled with small fieldstones (diam. $0.10-0.15 \mathrm{~m}$ ) and worn potsherds, probably jars and cooking pots from the Byznatine period, as well as scattered tesserae, was exposed next to the western wall. This was apparently a silo or an installation that held liquids.

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The overall architectural plan and the meticulous finish of the underground burial structure are outstanding. Although the hewn installations around it were empty, a typological and stylistic comparison suggests they were used for burial. The route of the Cross-Israel Highway in this region overlaps, to a great extent the historic route of the Via Maris and mortuaries along the roads was a known and accepted phenomenon in the Roman period.
The Nahal Hadera site may possibly be part of an extensive necropolis that was exposed c. 500 m north of the site, between the eastern fringes of Horbat Kosit and the village of Baqa al-Gharbiya (HA-ESI 118). Nevertheless, the finds at Nahal Hadera can probably be associated with the RomanByzantine site in Jatt, despite the difficulty in crossing Nahal Hadera. The mechanically dug probes in the area between the two cemeteries yielded no finds; however, the difference in burial continuity between the two sites probably stemmed from the alluvium soil that was unsuitable for digging graves.
Settlements from the Roman and Byzantine periods in the vicinity of the tombs were excavated at Horbat Kosit (Permit Nos. A-3499), Jatt ('Atiqot 37) and Baqa al-Gharbiya (ESI 10:113).


1. Location map.


2. Area A, burial structure, plan and sections.



3. Area B, plan.


## Nahal Hava*

Yeshayahu Lender
6/9/2007


1. Location map and plan.

2. Plan and sections.

During March 2003 a salvage excavation was conducted next to Mizpe Ramon (Permit No. A-3866*; map ref. NIG 18230/50470; OIG 13230/00470), prior to preparing the area for use as a disposal site for solid waste. The excavation, on behalf of the Antiquities Authority and financed by the Mizpe Ramon Local Council, was directed by Y. Lender, assisted by S. Gal (surveying and drafting).

The excavation was conducted along two of six terraces inside a secondary wadi channel that drains an area of c. 30 dunams (Fig. 1). The length of the terraces conformed to the width of the channel--c. 30 m in the lower terrace and $6-7 \mathrm{~m}$ in the upper one.
Probe trenches were excavated and the bottom (L1; Fig. 2) and top (L2) terraces were cleaned. The probes revealed that the terraces were built of two rows of small stones that formed a single course high wall (width 0.35 m , height $0.10-0.15 \mathrm{~m}$ ). The stones were set on the loess in the channel. The excavation did not yield any artifacts that could aid in dating the construction of the terraces. It seems that the size of the drainage basin dictated the nature of the terraces, which played a role in retaining the soil and run-off and preventing erosion, thereby enabling the cultivation of the ground.


1. Location map and plan.

[^3]
## Nahal Maresha*

Yoram Haimi
20/12/2007


1. Plan and section.

2. The Roman road, looking north.

During July 2001 a salvage excavation was conducted in Nahal Maresha (Permit No. A-3515*; map ref. NIG 191695-845/610891-900; OIG 141695-845/110891-900), in the wake of damage to the ancient Roman road by a tractor. The excavation, on behalf of the Antiquities Authority, was directed by Y. Haimi (photography), assisted by V. Essman and V. Pirsky (surveying) and I. Berin (drafting).

A square was excavated down to bedrock in an 80 m long section of the road. A tamped fill that leveled the road was found. On either side of the road (width 4.8 m; Figs. 1, 2) was a row of curb stones. Those in the western row were large and included milestones in secondary use, whereas the stones of the eastern row were smaller and included, as well, milestones in secondary use. No potsherds were found.


1. Plan and section.

2. The Roman road, looking north.

## Nahal Samtar, North*

Ron Steinmetz
24/12/2007


1. Winepress, plan and section.

During December 2003, an agricultural installation was excavated in a quarry in Nahal Samtar (North; Permit No. A-4061*; map ref. NIG 2055-6/7097-8; OIG 1555-6/2097-8), which was discovered in the wake of development work. The excavation, on behalf of the Antiquities Authority, was directed by R. Steinmetz.

On the northern ridge of a quarry, a Byzantine winepress hewn in limestone of the Cenomanian epoch was exposed. The installation consisted of a square treading floor (L100; $2.7 \times 2.9 \mathrm{~m}$, depth 0.2 m ), which was relatively small for the square collecting vat situated to its north (L101; $1.7 \times$ 1.8 m , depth 2.0 m ). A step that aided in the descent inside was in the northeastern corner of the vat, 0.6 m above the floor. The collecting vat was paved with coarse tesserae, which were gently inclined toward a paved settling pit (L102; diam. 0.55 m , depth 0.4 m ) that was adjacent to the vat's southern wall. It seems that fermentation was done on site, based on the size of the collecting vat, which was probably covered with a wooden platform that was secured in place by stones. The size of the winepress indicates the industrial scale of activity at the site.


1. Winepress, plan and section.

## Nahal Shalva*

## Pirhiya Nahshoni

20/12/2007
During May 2005 a trial excavation was conducted at the Nahal Shalva site near the Ahuzam pool (Permit No. A-4449*; map ref. NIG 18087/60585; OIG 13087/10585), prior to the construction of the Cross-Israel Highway. The excavation, on behalf of the Antiquities Authority and financed by the Cross-Israel Highway Company, was directed by P. Nahshoni, assisted by H. Lavi (administration).

The area was surveyed by Y. Dagan (Map of Lakhish [98], Site 222) who found building remains, stone clearance heaps, a cave and potsherds from the Roman period on the adjacent hill to the northeast.
The excavation was conducted along the western slope, which descends toward Nahal Shalva. One square was opened in a ploughed field and ex situ architectural remains were discovered.

Numerous river pebbles and potsherds from the Roman and Ottoman periods were scattered on top of the ploughed area (thickness c. 0.2 m ). A layer, which contained different-sized wadi pebbles and worn potsherds dating to the Roman and Ottoman periods, was exposed at a depth of 0.3 m . A reddish brown layer of clay, devoid of archaeological finds, was uncovered at a depth of 0.4 m . All potsherds were found in an alluvium layer on the western slope of the hill, where the ancient remains were located. It seems the excavation area was lying beyond the limits of the settlement.

## Nahal Siah south*



1. Tomb T1, plan and section.

2. Tomb T1, pottery.

3. Tomb T2, plan and section.

Zach Horowitz and Kareem Sa'id
11/3/2007
During December 2002 a salvage excavation was conducted at the Nahal Siah south site, on the southwestern outskirts of Haifa (Permit No. A-3801*; map ref. NIG 19725/74510; OIG 14725/24510), in the wake of damage to antiquities caused during work by the Electric Company. The excavation, on behalf of the Antiquities Authority and financed by the Electric Company, was directed by K. Sa'id and Z. Horowitz, assisted by A. Lalush (administration), V. Essman (surveying) and M. Shuiskaya-Arnov (pottery drawing).
The site is located on the western side of King Solomon Street, next to the Kefar Samir cemetery, c. 700 m north of Horbat Castra. The excavation was carried out in the western section of a trench (width 5 m , depth 4 m ) where two damaged shaft tombs from the Intermediate Bronze Age were discovered. Another tomb from the same period had previously been excavated nearby (HA-ESI 117).

Tomb T1 (Fig. 1)
The eastern side of the burial chamber was damaged by the development work; however, it was still possible to discern its architectural components. A shaft that was hewn from the surface (depth 2 m ) in hard nari bedrock at the top and in soft qirton bedrock below accessed the tomb. The upper part of the shaft had a square cross-section with rounded corners (L102; $1.3 \times 1.7 \mathrm{~m}$ ) and further down it became narrower and circular (diam. 0.8 m ). At the bottom of the shaft was an opening that faced east and was sealed by a partially worked rolling stone. The passage from the shaft into the burial chamber was via a short sloping corridor.
The eastern half of the kidney-shaped burial chamber (Loci 100, 101) was damaged. The floor had two levels; the northern level (L101) was 0.2 m lower than the southern one (L100). The ceiling over the two parts of the burial chamber had the shape of two intersecting vaults. Based on the shape of the ceiling and the two levels of the burial chamber it seems that initially, the chamber consisted of the northern side and later on, was expanded to the south.
The chamber yielded pottery vessels, with no anthropological remains. Two intact teapots of different types were on the northern side of the floor. One was the thin grained amphoriskos-type teapot with a long neck (Fig. 2:1) and the second was a coarse-grained globular teapot with a short neck (Fig. 2:2). A teapot spout (Fig. $2: 3$ ) and the upper part of an amphoriskos (Fig. 2:4) were also present.

Tomb T2 (Fig. 3)
The tomb, 50 m south of T 1 , was severely damaged by the development work and its entire architectural plan could not be reconstructed.
The tomb was entered by way of a shaft hewn from the surface ( 1.9 m deep). Its upper part was cut through the hard nari bedrock and its continuation was quarried in soft qirton. The shaft had a round cross-section (L105; diam. 1 m ) and an opening at its bottom faced south. Passage from the shaft to the burial chamber was direct, without a corridor and down a single step that facilitated the descent into the chamber. The preserved western part of the chamber indicates it was elliptical (c. $1.3 \times 3.1 \mathrm{~m}$ ).
The chamber's floor was hewn in two levels, the northern side being slightly higher than the southern one. The ceiling, 1.8 m above the floor, was vaulted. On the southern side of the shaft was another hewn recess (L104) whose relation to the tomb is unclear, owing to modern damage that largely destroyed it. The tomb apparently consisted of two burial chambers and the modern fill inside them was devoid of ancient finds.

The two tombs are ascribed to the Intermediate Bronze Age, based on their architectural plans and the ceramic finds recovered from them. It appears that the pottery vessels were manufactured according to the northern ceramic tradition, characterized by spherical vessels and the extensive use of the 'teapot on amphoriskos' type teapots. The ceramic tradition of the site was inclined toward the central coastal plain region, similar to the finds from Horbat Tawassim near the village of el Fureidis ('Atiqot 38:1-4), Horbat Ibreiktas and the cemetery at the Barkai Junction. The tombs' architectural plan resembles that of the tombs on the central coastal plain, and they are especially similar to the Intermediate Bronze Age tombs excavated at Horbat Castra.


1. Tomb T1, plan and section.

2. Tomb T1, pottery.

3. Tomb T2, plan and section.

## Nahal Siah south*



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2. Tomb T1, pottery.

3. Tomb T2, plan and section.

Zach Horowitz and Kareem Sa'id
11/3/2007
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Tomb T1 (Fig. 1)
The eastern side of the burial chamber was damaged by the development work; however, it was still possible to discern its architectural components. A shaft that was hewn from the surface (depth 2 m ) in hard nari bedrock at the top and in soft qirton bedrock below accessed the tomb. The upper part of the shaft had a square cross-section with rounded corners (L102; $1.3 \times 1.7 \mathrm{~m}$ ) and further down it became narrower and circular (diam. 0.8 m ). At the bottom of the shaft was an opening that faced east and was sealed by a partially worked rolling stone. The passage from the shaft into the burial chamber was via a short sloping corridor.
The eastern half of the kidney-shaped burial chamber (Loci 100, 101) was damaged. The floor had two levels; the northern level (L101) was 0.2 m lower than the southern one (L100). The ceiling over the two parts of the burial chamber had the shape of two intersecting vaults. Based on the shape of the ceiling and the two levels of the burial chamber it seems that initially, the chamber consisted of the northern side and later on, was expanded to the south.
The chamber yielded pottery vessels, with no anthropological remains. Two intact teapots of different types were on the northern side of the floor. One was the thin grained amphoriskos-type teapot with a long neck (Fig. 2:1) and the second was a coarse-grained globular teapot with a short neck (Fig. 2:2). A teapot spout (Fig. $2: 3$ ) and the upper part of an amphoriskos (Fig. 2:4) were also present.

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1. Tomb T1, plan and section.

2. Tomb T1, pottery.

3. Tomb T2, plan and section.

## Nahal Yo'el*

Yuval Baruch
9/5/2007


1. Section of the soil fills between the terrace wall and the bedrock outcrop, looking

2. Pottery.

3. Stone vessels.

4. Jar handle bearing a LMLK impression.

5. Mortises in the wall of the winepress, looking southwest.

During October 2002 a salvage excavation was conducted near 'En Yo'el, on the western slope of Har Refa'im in the Jerusalem Hills (Permit No. A-3741*; map ref. NIG 2095/6268; OIG 1595/1268), as part of upgrading the Jerusalem-Bet Shemesh railway. The excavation, on behalf of the Antiquities Authority and financed by the Israel Railway Authority, was directed by Y. Baruch (surveying and photography), assisted by R. Abu Di'ab (administration) and A. Pikovski (pottery drawing).
A farming terrace on the northern slope of the Nahal Yo'el site was excavated (Fig. 1). The terrace was located on a bedrock ledge, alongside the road leading to the site and below a row of burial caves, which dated to the Second Temple period and possibly even earlier; some had been excavated in the past by D. Weiss (ESI 14:145).

Between the terrace wall and the bedrock outcrop an accumulation of soil fills was excavated. It overlaid an intentional fill of gravel and stones that was deposited during the construction of the terrace and retained by it. At the top of the gravel fill, which continued southward beyond the limits of the excavation, were patches of crushed chalk, whose nature is unclear.

The soil and gravel fills yielded a large amount of potsherds from Iron Age II-III, including a krater (Fig. 2:1), a jar (Fig. 2:2), a pithos (Fig. 2:3) and a holemouth jar (Fig. 2:4). The potsherds from the Second Temple period included cooking pots (Fig. 2:5, 6), jars (Fig. 2:7, 8), a juglet (Fig. 2:9) and an unguentaria (Fig. 2:10, 11). In addition, fragments of three stone vessels, namely a chiseled-carved bowl with a ledge handle (Fig. $3: 1$ ) and lathe-turned hemispheric bowls (Fig. 3:2, 3 ), as well as a small metal pickax in an excellent state of preservation, were found. The gravel fill contained a handle with a stamped LMLK impression (Fig. 4) and remains of letters that probably join the initials למ[לך] [חברו] (to the king of Hebron).
The large quantity of potsherds found in the gravel fill raises the possibility that it was brought from a place with a large concentration of ceramic debris. Since the dating of the potsherds is limited to the Iron Age, it is presumed to be the date of the terrace wall as well.

Some 20 m above the bedrock ledge where the terrace wall was excavated, a rock-hewn winepress was documented. Its architectural components, especially a pair of hewn mortises in the upright wall of the working surface, are characteristic of Iron Age winepresses in the region of Judah (Fig. 5). Other bedrock outcrops and vats that were associated with the winepress' activity were discerned nearby.


1. Section of the soil fills between the terrace wall and the bedrock outcrop, looking



2. Mortises in the wall of the winepress, looking southwest.

## Nahf (East)*



1. Map of excavations at the Nahf village.

2. Plan.

3. Pottery and stone vessels.

4. Stone collapse, section of L103, looking north.

Yotam Tepper
16/8/2007
During September 2003 a trial excavation was conducted at the top of the southeastern slope of the Nahf village (Permit No.
A-3995*; map ref. NIG 230/760; OIG 180/260), prior to the construction of a private dwelling. The excavation, on behalf of the Antiquities Authority, was directed by Y. Tepper, with the assistance of A. Dadush (administration), V. Essman and V. Pirsky (surveying), I. Berin (drafting), D. Avshalom-Gorni (pottery reading), H. Tahan (drawing), L. Kupershmidt (metallurgical laboratory), D. Syon (numismatics) and laborers provided by the contractor.

The ancient site of Nahf is located on a hilltop northeast of Karmi'el and north of it is a perennial spring. Previous excavations in the village uncovered remains that dated to the Early Bronze Age, Hellenistic and Roman periods and a pottery workshop from the end of the Roman and beginning of the Byzantine periods (Fig. 1; HA-ESI 117; F. Vitto, The Western Galilee Antiquities, 1986: 451-456 [Hebrew]). Remains from the Intermediate Bronze Age and from the Persian to the Ottoman periods were recorded in a survey.
A single square was excavated in an open lot at the top of a bedrock ledge, revealing two strata (Fig. 2).

## Stratum II

Stone and soil collapse, dating to the Hellenistic period, was excavated atop bedrock. Pottery vessels were found in and above the collapse, including a mortarium (Fig. 3:1), jars of Phoenician tradition (Fig. 3:2, 3, 6), bowls (Fig. 3:4,5) and a lamp fragment (Fig. 3:7) from the Hellenistic period, as well as a fragment of a basalt bowl, a grinding stone (Fig. $3: 13,14$ ) and a loom weight (Fig. 3:15). In addition, potsherds that belonged to types of vessels, produced in the pottery workshop at Kefar Hananiya and dated to the Early Roman period, among them kraters (Fig. 3:8, 10) were also recovered. Two coins were found. The first dated to the reign of Antiochus III (200187 BCE; IAA 106074) from the mint of 'Akko and the second belonged to the Ptolemaic dynasty (third century BCE; IAA 106073).

## Stratum I

Mixed finds were discovered between surface and the top of the collapse. These included bowls from the Byzantine period (Fig. 3:9, 11) and a brown-glazed bowl from the Mamluk period (Fig. 3:12).
Potsherds from Early Bronze Age II, the Iron Age and the Persian period were also discovered in both strata.

The Early Roman period (first century CE) remains found on bedrock are indicative of a building that was at the top of the hill. It can reasonably be assumed that it was first constructed in the Hellenistic period (third-second centuries BCE). This may allude to changes the region underwent with the Hasmonean conquest in the second century BCE, but also to a settlement that existed thereafter. The finds from the excavation show that the settlement on the upper part of the village's southeastern slope reached its peak during the Hellenistic period. Based on the scant, single-period accumulation of remains in this part of the village, it can be posited that the location of the multiple-period settlement should be sought elsewhere at the site, possibly near the spring.


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Current excavation © © המצרה הנוכחית

1. Map of excavations at the Nahf village.

2. Plan.


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## 4. Stone collapse, section of L103, looking north.

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## Na'ura*



1. Plan and sections

2. The excavation, looking east.

3. Wall 1, looking north.

4. Pottery.

5. Capstone next to Wall

1 , looking east.

Edna Amos
11/9/2007
During July 2003 a salvage excavation was conducted along the eastern slope of the Na'ura village, descending toward Nahal Na'ura (Permit No. A-3956*; map ref. NIG 2374/7245; OIG 1874/2245) after ancient remains were exposed when preparing for construction. The excavation, on behalf of the Antiquities Authority, was directed by E. Amos, with the assistance of V. Essman and V. Pirsky (surveying), E.J. Stern (pottery reading) and H. Tahan (pottery drawing).

A single square was opened $(5.0 \times 5.3 \mathrm{~m})$, revealing three strata that comprised building remains and a bell-shaped pit from the Umayyad and Abbasid periods (Figs. 1, 2).

Stratum III. The opening of a bell-shaped pit was uncovered at the eastern end of a bedrock terrace that descends sharply to the east (bottom diam. 6 m , depth 6.5 m ). The western side of the pit's opening was c. 1 m higher than its eastern side because of the precipitous slope. The pit's walls were coated with plaster; in the western wall, 1.1 m below the top of the pit, was a hewn aperture that led to a niche $(2 \times 3 \mathrm{~m})$. In the niche's northern wall was an aperture ( $0.5 \times 0.8 \mathrm{~m}$ ) blocked by stones. The pit and the niche were not excavated; therefore, their use or dating could not be determined. A wall (W4) preserved a single course high (Fig. 3), whose western side faced the inside of the pit, was built on the lower eastern rim of the pit's opening. The wall was probably intended to raise lower eastern rim of the pit to that of the western one. The ceramic finds were scant and mostly included ribbed body fragments that probably dated to the end of the Byzantine and the Umayyad periods (seventh-eighth centuries CE).
Stratum II. Two phases were discerned. In the earlier phase (IIb) Wall 4 was dismantled down to its bottom course and Wall 1 was built above it, oriented east-west and c. 0.3 m north of the pit's opening (Fig. 4). The wall was built of large fieldstones with smaller ones between them. The area south of the wall and east of the pit's opening was filled with a thick layer of soil (L113; Fig. 5) that contained animal bones and potsherds that dated to the Umayyad and the beginning of the Abbasid periods (eighth century CE). This layer reached the height of bedrock west of the pit. It seems that the pit was no longer used in this phase because its opening was blocked by large fieldstones.
Another wall (W3) was built in the later phase (IIa). It was oriented north-south at the eastern end of W1 and formed a corner with it. West of W3 was a floor (L108) of small and medium fieldstones set on a bed of small stones, overlying the layer of soil fill (L113) that was probably intended to raise the eastern side of the building. The bedding of the floor was dated to the Umayyad and the beginning of the Abbasid periods (eighth century CE), based on the potsherds that included a gray jar (Fig. 6:1) and body fragments of 'Fine Byzantine Ware'. The fieldstone floor and the bedrock surface west of the pit's opening were covered with a thick plaster layer (L106).
At the western end of W1, c. 2 m west of the pit's opening and where bedrock is high, was the capstone of a well ( $0.4 \times 0.8 \times 0.95 \mathrm{~m}$ ) in secondary use. The stone had a rectangular aperture $(0.3 \times 0.4 \mathrm{~m})$ in the center and a depression on one of its corners with a narrow channel that extended to the opening. The depression was probably used to place a storage vessel. The capstone was found lying on top L106 and next to the southern face of W1 (Fig. 7). The capstone was part of an installation that consisted of a layer of plaster mixed with small stones and potsherds and apparently, it was originally positioned on the bell-shaped pit (Stratum III).
North of W1 and perpendicular to it was Wall 2, which was built on bedrock, aligned north-south (Fig. 8) and preserved c. 0.8 m high. West of W2 was a tabun and a fieldstone pavement (L110), overlaid with potsherds, including two cooking pots (Fig. $6: 2,3$ ), which dated to the Umayyad and the beginning of the Abbasid periods (eighth century CE). The ceramic finds were similar to those found in the bedding of the stone floor (L108), to the west of W3.
East of W2 was an accumulation of soil that extended from bedrock surface to the height of the surviving top of the wall. The ceramic finds recovered from the fill also dated to the Umayyad and the beginning of the Abbasid periods, similar to those found west of the wall, including a jar of light colored clay (Fig. 6:4), a bowl (Fig. 6:5) and a cooking krater (Fig. 6:6), as well as a Byzantine follis (IAA No. 111611) from the time of Justin I (518-527 CE) that was minted in Nicomedia.

Stratum I. following the abandonment of the Stratum II building, the area was covered with a thick layer ( 0.2 m ) of tamped soil that contained plaster, small stones and small potsherds. This layer (L102) contained potsherds from the eighth-ninth centuries CE, including a jug of light colored clay (Fig. 6:7), a glazed bowl with green and brown stripes (Fig. 6:8) and two glazed bowls with splashed yellow and green paint (Fig. 6:9, 10). It seems that the region was not built-up in this period; rather, the area was open and may possibly have been used as a threshing floor. No subsequent activity was recorded in this area until a layer of alluvium that included among others, potsherds from the twelfth-thirteenth centuries $C E$, had accumulated.


1. Plan and sections.

2. The excavation, looking east.

3. Wall 4; in background, Wall 1, looking north.

4. Wall 1 , looking north

5. Locus 113 , looking east.

6. Pottery.

7. Capstone next to Wall 1, looking east.

8. Wall 2, looking west.

## Newe Efrayim*



1. Map of the excavation areas.

2. Area $A$, collecting vat, plan and sections.

3. Area A, pottery.

4. Area C: pottery.

5. Area E, pottery.

Galit Birman
14/3/2007
During February-March 2001 an excavation was conducted at the Newe Efrayim neighborhood in Yehud (Permit No. A-3379*; map ref. NIG 18800-22/66000-8; OIG $13800-22 / 16000-8$ ). The excavation, on behalf of the Antiquities Authority and financed by the Meqorot Water Company, was directed by G. Birman, with the assistance of V. Shlomi (Area A supervision), Y. Dangur, R. Abu Khalaf, Y. Rahamim and A. Lavi (administration), A. Hajian (surveying and drafting), T. Sagiv (photography), E. Kamaisky (pottery restoration), R. Vinitsky (metallurgical laboratory), D.T. Ariel (numismatics), Y. Gorin-Rosen (glass) and H Tsion-Cinamon (GPS). E. Yannai and R. Kletter assisted in dating the ceramic finds.

Five areas (A-E) were opened across 200 m on the southern side of Highway 461 (Fig. 1), in places where ancient remains had been exposed during an antiquities inspection. Modern disturbances were discerned on the northern and southern sides of all the areas. Other disturbances were noted in the middle of the trial trench in Areas $D$ and $E$, caused by infrastructures for the installation of electricity, lighting, telephone and cable television wires. Two agricultural installations and a single industrial installation, dating to the Byzantine period, were exposed in Areas A-C. Walls and floors that could not be dated were exposed in Area D, as well as finds from the Persian, Late Roman, Byzantine and Early Islamic periods. Remains from the Early Islamic period were uncovered in Area E, which was quite disturbed. The site had previously been excavated by B. Isserlin (Permit No. \&14/1958).

Area A. Two collecting vats of a winepress were exposed 10 m apart, in an area of very soft, sandy soil. The southern half of a square collecting vat ( 1.3 m long; Fig. 2) was revealed at a depth of just $0.2-0.3 \mathrm{~m}$ below surface. The vat's southern, eastern and western walls (W1, W2, W4) were built of medium-sized stones bonded with mortar and their exterior face consisted of a row of small stones. The walls were preserved 0.85 m high and plaster was applied to their interior surface. The exterior face of W2 was adjoined by a wall (W3) built of large fieldstones that were dressed on the side that abutted W2. The latter may have been a retaining wall that was meant to prevent the collapse of the installation, which was built on soft and sandy soil. Two plastered steps descended from a treading floor, which extended to the west and was not preserved, to the collecting vat. The bottom of the vat was paved with white tesserae characteristic of industrial installations, and a circular, plastered settling pit was installed in its center.

The ceramic finds recovered from the collecting vat included open bowls (Fig. 3:1), jars (Fig. 3:2) and the body fragments of cooking pots and jugs, dating to the end of the Byzantine period.

The second circular collecting vat (Fig. 4) had been damaged on its northern and southern sides by modern activity. The curved wall (height 0.35 m ) that enclosed the vat was built of small stones bonded with mortar and coated with a layer of plaster (thickness $1.5-2.0 \mathrm{~cm}$ ) on both sides. The bottom of the vat (diam. 1.5 m ) was paved with 24 concentric circles of white tesserae characteristic of industrial installations; a settling pit (diam. 0.6 m , depth 0.27 m ) in its center was also paved with a white mosaic. A few fragments of pottery vessels dating to the Byzantine period were retrieved from the collecting vat.

Area B. An elliptical plastered installation ( $1.5 \times 2.5 \mathrm{~m}$; Fig. 5) was exposed in soft sandy soil, 20 m southeast of the circular collecting vat in Area $A$. The sides of the installation were preserved $0.1-0.2 \mathrm{~m}$ high, except for the northern side that had been destroyed by modern activity. The installation was built on a layer of medium-sized fieldstones coated with a layer of plaster. A round, hewn pit (diam. 0.3 m , depth 0.4 m ) in the middle of the installation, intended to convey liquid to a plastered channel, was also coated with plaster. The installation may have been used for soaking cloth or washing skins.
The installation contained fragments of kraters (Fig. 6:1), jars (Fig. 6:2, 3) and cooking pots (Fig. $6: 4$ ), as well as bowl rims and potsherds that dated to the Byzantine period. Other finds included the base of a glass bottle; numerous shells that were worked along their edges, perhaps for use as inlays (such finds are known from Byzantine-period workshops); a coin dating to the fourth-fifth centuries CE (IAA No. 92556) and a small lump of metal. A glass drop, probably from glass production debris, was found outside the installation.

Area C. A half square that was opened 60 m east of Area B consisted of a refuse pit in soft, sandy earth, which contained a large quantity of potsherds mixed with gray soil. The ceramic assemblage, dating to the Byzantine period, included Late Roman C bowls (Fig. 7:1-3), a bowl, (Fig. 7:4) and a lamp (Fig. 7:5), as well as fragments of glass vessels, including rims of bowls, wine glasses with hollowed ring bases, oil lamps with hollowed stems and bottles, dating to the Byzantine period. A small chunk of raw green glass that evidenced glass production in the area was also found.

Area D. Seven squares were opened in a trial trench (width 2.5 m ; Fig. 8) dug in brown soil and extending for 40 m adjacent to the highway. The entire area had previously been disturbed by modern activity but some architectural remains were preserved, including two identified building phases. At the western end of the trench were building remains attributed to the first phase that consisted of Walls 2 and 3, oriented southeast-northwest and Wall 1 that was perpendicular to them and delineated two spaces (Loci 602, 603). The walls were built of medium-sized fieldstones, reinforced with small stones without bonding material (width 0.6 m , preserved height $0.3-0.4 \mathrm{~m}$ ). A stone socket was discerned in W1. Two circular clay ovens with traces of soot inside them were placed above the small-stone floor of the eastern space (L603). Above the earthen floor in the western space (L602) were fragments of pottery vessels, remains of a tabun (oven) and charcoal.

Three other walls (W4, W6, W7; width 0.4 m , height 0.5 m ) that enclosed a room, had a similar orientation as Walls 1 and 2 and were built of medium-sized fieldstones, reinforced with small stones. Remains of a tabun and traces of soot were discerned on a tamped-earthen floor that
abutted W6 on the west.
A building in the eastern side of the trench is ascribed to the second phase of construction. A floor (L606) of large flagstones, overlaid with pottery vessels and metal artifacts, was exposed.

The ceramic finds from Area $D$ are presented as a mixed assemblage. All the squares in this area were cut by modern trenches that did not leave any finds in situ or in a clear stratigraphic context. The Persian, Byzantine, Early Islamic and Mamluk periods appear in this assemblage. A base and rim of a mortaria (Fig. 9:1, 2) and a base of an Attic juglet that is black slipped on the interior and exterior (Fig. 9:3) are attributed to the Persian period. The vessels dating to the Byzantine period include bowls, kraters and cooking pots (Fig. 9:4-6), as well as fragments of jars, jugs and juglets. The Early Islamic-period ceramics consists of kraters (Fig. 9:8-10), holemouth jars (Fig. 9:11), jars with a short neck (Fig. 9:12) and buff-ware vessels, namely a bowl, a jar rim and a juglet (Fig. 9:7, $13,14)$ and also fragments of bowls, jars and cooking pots. The Mamluk-period pottery includes bowls painted white on the exterior and glazed bright green, dark green and brown on the interior and exterior (Fig. 9:15-20).

Three coins were recovered from this area; two are dated to the Umayyad period (IAA 92558, 92559) and one to the Mamluk period. The scant glass artifacts include a chunk of raw bluish-green glass that may point to the occurrence of glass production in the region. The metal artifacts consist of nine nails and a fragment of an earring.

Area E. A single square, completely disturbed, was excavated east of Area D. Scattered collapse stones were found in the brown soil and ceramic finds dating to the Early Islamic period, including open bowls (Fig. 10:1, 2, 4), a glazed bowl (Fig. 10:3) and a jar rim (Fig. 10:5).


1. Map of the excavation areas.

2. Area A, collecting vat, plan and sections.




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7. Area C: pottery.

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## 9. Area D, pottery


10. Area E, pottery.

## Newe Monosson*



1. Plan and sections.

2. The excavation,
looking north.

3. Pottery.

## Ofer Sion

18/12/2007
During May 2003 a salvage excavation was conducted next to the acoustic wall in Newe Monosson (Permit No. A-3877*; map ref. NIG 18780/65960; OIG 13780/15960). The excavation, on behalf of the Antiquities Authority and financed by the Department of Public Works, was directed by O. Sion, with the assistance of V. Pirsky (surveying), T. Sagiv (photography), E. Belashov (drafting) and A. Pikovski (pottery drawing).

The excavation was conducted at the site of Khirbat Kafrajun, next to Newe Monosson, where two previous excavations had been conducted. The first (License No. \&-14/1958) exposed remains from the Iron Age and the Persian, Byzantine and Early Islamic periods and the second (HA-ESI 119) revealed agricultural installations that dated to the Byzantine and Early Islamic periods.
Meager remains, including a pillar and two ovens (tabun) were uncovered in the current excavation (Figs. 1, 2). A tamped-soil floor was exposed (L54) throughout the entire area of the square. The base of a pillar, built in hamra soil $(0.3 \times 0.3 \mathrm{~m})$ of kurkar stones, was preserved a single course high. A tabun (L58), c. 1.5 m north of the pillar, had a double wall lined with small stones (inner diam. 0.3 m , outer diam. 0.6 m ) and another tabun (L59), of bright reddish clay (diam. 0.65 m , height 0.55 m , wall thickness $2-3 \mathrm{~cm}$ ), were exposed. To their south, four inverted jars stood in a row and it seems they were connected to the activity of and around the tabun.
The pottery vessels included jars (Fig. 3:1-6) and a clay lamp (Fig. 3:7), dating to the Byzantine period (fifth-sixth centuries CE).
The Byzantine site apparently extended across c. 15 dunams and its center was located south of the excavation. The paucity of remains in the excavation may indicate that the area is located along the fringes of the site.


1. Plan and sections.

2. Pottery.

## Newe Herzog*



1. The tombs, plan.

2. Tomb T10, looking east.

3. Pottery.

Peter Fogel and Aviva Buchennino
21/3/2007
During March 2001 a salvage excavation was conducted at the Newe Herzog Yeshiva, northeast of Ashdod (Permit No. A-3387*; map ref. NIG 17052-7/63686-90; OIG 12052-7/13686-90) in the wake of damage caused to antiquities during the course of construction work. The excavation, on behalf of the Antiquities Authority, was directed by P. Fogel, with the assistance of A. Buchennino (area supervision), H. Lavi (administration), V. Essman and P. Pirsky (surveying), T. Sagiv (photography). Y. Nagar (physical anthropology), N. Zak (drafting), E. Altmark (metallurgical laboratory), M. Ben-Gal (pottery restoration), M. Shuiskaya-Arnov (pottery drawing) and D.T. Ariel (numismatics).

Nineteen cist graves (average dimensions $0.5 \times 2.0 \mathrm{~m}$, height 0.6 m , wall thickness $0.10-0.15$; Fig. 1) were documented and 16 others were exposed during an antiquities inspection that was conducted at the site after the excavation.
The excavation was carried out inside pits that were dug by the building contractor (Fig. 1:A-H, J, K ).
The tombs, discovered at a depth of c. 1.2 m below surface, were mostly oriented east-west and two were aligned north-south (T7, T19). Their walls were built of dressed rectangular slabs of beach rock (Figs. 2-5). Almost all the tombs were found plundered.

The finds from the tombs were meager, due to extensive destruction, including mostly jar body fragments from the Early Roman period. Two almost complete jars were found in Tomb T20 (Fig. 6:1) and near Tomb T19 (Fig. 6:2). Piriform bottles (Fig. 6:3) came from Tombs T2 and T7. A bronze coin of Agrippa I minted in Jerusalem in $42 / 43$ CE (IAA 95610) was retrieved from Tomb T16. Fragments of bronze earrings (Fig. 7:2) and a piece of a bronze ring (Fig. 7:1) were uncovered in Tomb T2. A few fragments of long bones in Tombs T1 and T16 are of no value in establishing the gender or age of the deceased.

The ceramic and numismatic finds indicate that the cemetery should be dated to the Early Roman period. Preliminary probes performed by O. Segal exposed remains of a magnificent site that is dated to the Roman period and includes numerous architectural remains, such as mosaics and marble facades, as well as pottery vessels dating to the first century CE.


1. The tombs, plan.

2. Tomb T5, looking southwest.

3. Tomb T10, looking east.

4. Tombs T11 and T12, looking northeast.



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3. Pottery.

Peter Fogel and Aviva Buchennino
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1. The tombs, plan.

2. Tomb T5, looking southwest.

3. Tomb T10, looking east.

4. Tombs T11 and T12, looking northeast.



## Palmahim, Prehistoric Survey



1. Survey map.

Hamudi Khalaily and Moshe Ajami
During June 2003 a prehistoric survey was conducted next to Qibbuz Palmahim (Permit No. A-3932; map ref. NIG 1720-38/6492-500; OIG 1220-38/1492-500), in an area slated for the construction of a desalinization facility. The survey, on behalf of the Antiquities Authority and financed by the Tahal Company, was directed by H. Khalaily, M. Ajami and L. Barda (GPS).

An area ( 2 sq km ), c. 150 m east of the beach and c. 25 m south of Nahal Soreq was surveyed.
The area slated for construction and parts of the kurkar ridge that parallels the coastline are today covered with vegetation and sand dunes from the Holocene epoch, which spread across the coastal strip after the Early Bronze Age. These two elements make it difficult to discover sites in general and prehistoric sites in particular. The survey focused on depressions and spots where the ancient surface levels were exposed. Several flint implements were discovered in the course of the survey, scattered on the surface of the dunes, which may indicate that the sand dunes probably cover prehistoric sites.
Two strips, where pipes that connect the installation to the shore will be laid, were also surveyed. These cross the kurkar hill west of the installation and pass through the middle of a unique and rich prehistoric site by the name of 'Giv'at Ha-‘Esev' (Fig. 1). A high concentration of flint implements occurs at the site, outstanding among them are geometric microliths characteristic of the Geometric Kebaran culture of the Epipalaeolithic period, dating to 14,000 years BP.


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1. Survey map.

## Peqi'in



1. The ancient sites and springs in the eastern part of the Peqi'in Valley.

2. The excavation, W16 and the pavement in L18, looking north.

Nimrod Getzov
9/5/2007
During July 2003 a limited excavation was conducted in the southern part of the Peqi'in village (Permit No. A-3950; map ref. NIG 2312/7640; OIG $1812 / 2640$ ), in the wake of damage to a prehistoric settlement caused by digging foundations for a building. In addition, a survey was conducted to define the ancient settlement area in Peqi'in (Fig. 1). The excavation and survey, on behalf of the Antiquities Authority, were directed by N. Getzov, with the assistance of A. Grishna (registration), H. Tahan (drawing), M. Smilanski (flint drawing) and R. Getzov (GPS surveying). Y. Lerer, F. Abu Zidan and R. Getzov participated in the survey.

Three strata were revealed; the two bottom strata (III and II) dated to the Late Chalcolithic period and the upper stratum (I) was from Early Bronze IA.

Stratum III. A single course of a wall (W16; Fig. 2), built of large ashlar stones, was exposed on virgin soil. A pavement (L18; 547.07 m above sea level) composed of small stones, numerous potsherds and flint items abutted the top of the wall from the east.
Stratum II. This stratum consisted of an accumulation, surmounted by a pavement ( 547.38 m above sea level) that was similar to the one in L18.
Stratum I. An accumulation of soil and stones superposed by a pavement of small stones (547.70 m above sea level) was exposed. Above this layer was a deposit of alluvium ( 0.8 m thick) that did not yield any significant archaeological finds.
The finds from Strata III and II, which should be ascribed to the Late Chalcolithic period, included potsherds that are characteristic of the Galilee and are mostly are slipped red, as well as several vessels of the Golan pottery tradition. Among the artifacts recovered from Stratum I were residual potsherds from previous strata and a few potsherds that can be ascribed to Early Bronze IA, including gray-burnished vessels.

Four plots with artifacts from the Chalcolithic period and the Early Bronze Age were discerned in the survey; no artifacts were found in five other plots. The prehistoric settlement at Peqi'in is estimated to have covered an area of c. 100 dunams (c. $200 \times 600 \mathrm{~m}$ ). It is impossible to assess whether the settlement was densely built or if groups of buildings within it were spread out some distance from each other. Nevertheless, it should be noted that the artifacts recovered from the four plots were from the two settlement periods found in the excavation.

Early Bronze II potsherds were collected from farming terraces near the tomb of Rabbi Yosey and 'En Yosey, which lie beyond the limits of the Chalcolithic and Early Bronze IA settlement, on the slope below the ancient core of the village. A settlement had probably been established there.

The excavation and survey indicate that a large protohistoric settlement existed in the eastern part of the Peqi'in Valley during the Late Chalcolithic period and the beginning of the Early Bronze Age.
The discovery of the Chalcolithic settlement significantly contributes to the interpretation of the finds from the large burial cave excavated on the other side of Nahal Peqi'in, c. 400 m outside the limits of the settlement (ESI 16:22-24). During Early Bronze II a new settlement was established on a higher terrace beyond the boundaries of the previous one.


1. The ancient sites and springs in the eastern part of the Peqi'in Valley.

2. The excavation, W16 and the pavement in L18, looking north.

## Qiryat Ata*

Eiad 'Awawdy
11/9/2007


1. Plan and section.

During June 2001 a salvage excavation was conducted on Bethlehem Street in Qiryat Ata (Permit No. A3450*; map ref. NIG 210185-200/745525-540; OIG 160185-200/245525-540), in the wake of digging foundations for an electric pole. The excavation, on behalf of the Antiquities Authority and funded by the Electric Company, was directed by E. 'Awawdy, assisted by V. Pirsky (surveying).

An area $(2.5 \times 5.0 \mathrm{~m})$ was opened, revealing a wall (W1; length 1.5 m , width 0.8 m , height 0.5 m ; Fig. 1) oriented east-west. Only two courses of the wall were preserved. Threshold stones in secondary use were incorporated in the lower course and a weight from an oil press was used in the upper course.
The ceramic finds recovered from either side of the wall included jars fragments dating to the Roman period.


1. Plan and section.

## Ramat Yishay*



1. Plan and sections.

2. Byzantine pottery.

3. Stratum II, W126 and L114, looking southwest.

4. Abbasid pottery.

5. Abbasid bowls.

## Leea Porat

6/2/2007
During May 2005 an excavation was conducted in Ramat Yishay (Permit No. 4471*; map ref. NIG $21621-$ 6/73443-7; OIG 16621-6/23443-7) in the wake of construction work for a private house. The excavation, on behalf of the Antiquities Authority and financed by Yizhaq Koter, was directed by L. Porat, with the assistance of Y. Lavan (administration), V. Essman and V. Pirsky (surveying and drafting), A. Shapiro (GPS), H. Smithline (photography), Y. Gorin-Rosen (glass finds), H. Tahan (pottery and glass drawing), E.J. Stern (pottery reading), L. Kupershmidt (coin cleaning), G. Bijovsky (numismatics) and additional assistance was provided by D. Syon.

The excavation area is located on top of the hill where the older section of the modern town Ramat Yishay was built. Archeological remains and potsherds from the Roman to the Ottoman periods were recorded in A. Raban`s survey (Map of Nahalal [28], Site 48). Several previous excavations at the site had been conducted between 1992 and 2005 (License No. B-54/1995; Permit Nos. A-2866, A-3229; HA-ESI 117). These excavations exposed remains from the Middle Bronze Age I (a tomb) and the Roman, Byzantine, Early Islamic, Crusader and Mamluk periods.

Three squares were opened in the current excavation (Fig.1): A ( $2.8 \times 4.0 \mathrm{~m}$ ), B ( $4.0 \times 8.2 \mathrm{~m}$ ) and $\mathrm{C}(3.35 \times 3.50 \mathrm{~m})$. Remains from the Abbasid (Stratum I), Umayyad (Stratum II) and Byzantine (Stratum III) periods were revealed. Mixed pottery without associated structures was found in Sq A.

Stratum III. Remains of a building from the Byzantine period were found in Sqs B and C. Wall 120 (length 2 m ) and Wall 116 (length 7.4 m , width 1 m ), oriented north-south, were constructed from medium-sized dressed limestone blocks, set directly on bedrock and preserved $1.0-1.6 \mathrm{~m}$ high. A white beaten-earth floor (L121) was identified between them and only a small part of it was excavated (Fig. 2). A third wall in Sq B (W127; length 1.5 m , width 1 m ), oriented east-west, may have formed a corner with W116. It was later used as a foundation for an Umayyad wall (W126, below). Some glass fragments from L121, L124 and L125 were dated to the seventh and eighth centuries CE. The pottery from this stratum was dated from the fifth to the seventh centuries CE and came mostly from the floor (L121) and from L125 south of W127. It included imported bowls and plates (Cypriot Red Slip Wares; Fig. 3:1, 2) and jars, including Gaza Ware (Fig. 3:3, 4).

Stratum II. Segments of the Byzantine walls were re-used during the Umayyad period or incorporated in new walls. Walls 120 and 116 continued in use without modification in Sq C. A thick, white plaster floor (L119) was set between them. A new wall was built in Sq B (W126; length 7.5 m , width $0.85-1.00 \mathrm{~m}$ ), using two stems of Byzantine-period walls (W116, W127) as its foundation. Wall 126 was unevenly constructed from large fieldstones (preserved height 1.5 m ), its two ends curving eastward (Fig. 4). A layer of brown, burned soil, alternating with ash (L114; thickness 1 m ), which contained large quantities of pottery, was to the east of W126 and to its west, no signs of burned soil were identified (L115). No floor that connected to W126 was found. The pottery, dating to the Umayyad period, included imported bowls and plates (Egyptian Red Slip Wares; Fig. 5:1-3), basins (Fig. 5:4-6), cooking pots and pans (Fig. 5:7,8) and jars (Fig. 5:9-12). Furthermore, large quantities of glass fragments were recovered from L119, including a zoomorphic vessel of a camel or a horse, carrying a basket on its back (Y. Gorin-Rosen, below). The finds were dated to the eighth century CE. Three coins were found in this stratum. Two were recovered from L106 (above W126) and one of them (IAA 99850) was identified as a coin of Antiochus III (223-187 BCE). The third coin (IAA 99851) of Constans II, dating to 642 CE, was retrieved from the burnt layers of L114.

Stratum I. Remains of an Abbasid building with four rooms were identified in Sqs B and C. Wall 103 (length 5.2 m , width 0.4 m ) and Walls 104 (length 3.47 m , width 0.4 m ) and 108 were constructed from medium-sized dressed stones, one stone wide and preserved c. 1 m high. Wall 103 and W104 were partly built atop the earlier W116 and the western part of W104 superposed W120 from Stratum III. Two pairs of stones tentatively identified as W113 and W122, probably divided the space between W104 and W103, which was covered with a hard earthen floor (L111). A tabun (diam. 0.65 m ), preserved 0.2 m high and surrounded by a circle of medium-sized stones was set on this floor. A small segment of a hard earthen floor (L109) was excavated west of W108, while east of this wall was a round silo (L117; diam. 1.6 m , depth 1.4 m ), dug into a hard earthen floor (L107). The silo, next to W104 and over the Byzantine W116 from Stratum III, was built of roughly hewn, medium-sized stones, which were larger toward the bottom that was heavily plastered, with pieces of charcoal applied to it. The pottery from this stratum, dating to the Abbasid period (ninth century CE), included bowls, among them Splash Glazed Ware (Figs. 6:1-4; 7), basins (Fig. 6:5), cooking pots (Fig. 6:6) and jars (Fig. 6:7-9), one of which came from the silo (Fig. 6:7). A few pieces of glass were found, as well as a coin of Constans II dated 640-642 CE (IAA 99852) and a large quantity of apparently bovine bones, both recovered from the silo.

## Glass Finds

Yael Gorin-Rosen
The scant glass finds from this excavation included a distinct artifact. It is a zoomorphic vessel, showing an animal that carries a vase on its back (Fig. 8). It could be a camel that carries a vase on its hump, but it may as well be a donkey or a horse. The vessel was produced in two stages. Initially, the artist blew and shaped the vessel and later, added strips of hot glass to form the animal shape, the legs and the decoration. The vessel was shaped on the pontil (glass rod), which left a scar on its base. Tooling marks are visible on the edge of the feet. It is made of colorless glass with yellowish pinge, severely corroded by patches of black and white enamel-like crust.

Zoomorphic vessels are mostly found in collections, such as the Corning Museum of Glass, the Toledo Museum of Art, the Metropolitan Museum in New York, the British Museum and the Israel

Museum, without an exact provenance. These animal-shaped vessels carry the load on their back in a container wrapped in basketry of glass trails. Their small volume indicates that they were cosmetic jars. Not two vessels are the same, since they are freely created as individual vessels rather than standard ones.

The original provenance of these vessels is unclear; Syria, the eastern Mediterranean littoral, or Egypt, are suggested as possible sources. To date, only a few fragments of such vessels were recovered from legitimate excavations and most are not published; one fragment from the Byzantine cemetery church at Horbat Karkur 'Illit in the northern Negev was recently published by N. Katsnelson (P. Gigueras, ed. Horvat Karkur 'Illit [Beer-Sheva Archaeological Monographs Vol. 1]. 2004. Pp. 265-290).

Similar vessels that derived from IAA excavations were dated to the Early Islamic period, particularly to the Umayyad period. The fragment from Ramat Yishay is also dated to this period, based on the other glass fragments found in the excavation (Fig. 9). These include a rim of a beaker/bowl/wineglass/oil lamp, upright and rounded by fire, made of very bubbly brown glass of inferior quality (Fig. 9:1); a delicate wineglass rim of greenish blue glass, slanting somewhat outward and rounded by fire to create an in-curving edge (Fig. 9:2). Two types of wineglass bases occur; tubular of bluish green glass (Fig. 9:3) and two solid bases of light bluish glass and of bluish green glass, which are familiar in Umayyad assemblages (Fig. 9:4,5). The rims of bottles are also of two types, common to this period. The first is a small bottle, made of light blue and clear glass, whose rim is folded inward and flattened and its body is globular or squat (Fig. 9:6). A very similar fragment was found in the same locus as the zoomorphic vessel. The second greenish glass bottle, which is decorated with multiple turquoise glass trails wound around the neck (Fig. 9:7), first appeared in the Byzantine period and became very popular in the Umayyad period. Another fragment belongs to a solid beaded stem of an oil lamp (Fig. 9:8) that is prevalent in this period. The glass of the lamp is of a special dark yellowish-green hue, which like the brown hue of the rim in Fig. 9:1, are characteristic of the Umayyad period. It should be mentioned that the greenish bluish hue, which is dominant in vessels of this period, exists in our assemblage and is noted for its clarity and translucence that distinguish it from vessels of earlier periods. Therefore, the quality of the fabric is another denominator that assists in dating this assemblage to, and not later than, the Umayyad period.

Consequently, the special glass vessel from Ramat Yishay is very important, as it comes from a licensed archaeological excavation, together with additional finds that allow for a close-range chronology. Furthermore, the existence of such an item in a small community, within an assemblage that denotes local manufacture, demonstrates that zoomorphic vessels were probably produced in local workshops during the Umayyad period and were not imported from production centers afar, in Egypt or Syria.


1. Plan and sections.

2. Stratum III, W120 and Floor 121; Floor 119 from Stratum II, looking west.

3. Byzantine pottery.

4. Umayyad pottery.
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5. Abbasid pottery.


6. Abbasid bowls.

7. A zoomorphic vessel of glass.


## Ramla, Survey in the Region*



1. Map of surveyed area.

2. Site 1, installation, plan.

3. Site 1 , installation, plan.

4. Site 1, marble object (gravestone?), plan and section.

## Oren Shmueli and Tzach Kanias

5/2/2007
During November 2002 a development survey was conducted along the southern precincts of the city of Ramla, in an area that belongs to Moshav Mazliyah and Camp Oded, south of the Ramla-Bilu Junction road (Permit No. A-3784*; map ref. NIG 1869-84/6465-75; OIG 1369-84/1465-75), within the survey map of Rehovot (76) and in the wake of development work and the uprooting of an orchard in Moshav Mazliyah. The survey, on behalf of the Antiquities Authority, was directed by O. Shmueli and T. Kanias (surveying and drafting), assisted by A. Glick (GPS) and M. Avissar (pottery reading).

Four sites, including a large site that dated to the Early Islamic period (Site 1), were recorded in the surveyed area (Fig. 1), whose northern part has a site that was excavated by N. Messika and Y. Paz (License No. B-153/1998).

Site 1 (map ref. NIG 18754/61469; OIG 13754/11469) is a ruin that extends across c. 150 dunams, at the top of a hamra hill and along its northern slope. The ruin is delimited in the south and east by a wadi channel escarpment. Architectural remains at the top of the hill are connected to the ancient settlement and include buildings, installations, a millstone from a flour mill and a cemetery. Pottery fragments, sporadically scattered across surface to the north of the ruin, were probably swept from the hilltop.

At the top of the ruin, near the entrance to Camp Oded, a circular installation (diam. 2.5 m , wall thickness 0.2 m ; Fig. 2) whose wall is built of stone with bonding material was discerned. The inner wall of the installation is coated with a layer of plaster ( 1.5 cm thick) combined with potsherds. A wall (exposed length 0.75 m ) built of fieldstones $(0.2 \times 0.3 \mathrm{~m})$ abuts the installation to the north. Fragments of a clay bowl (FBW, Type 3), dating to the sixth century CE, were collected next to the installation.
A basalt millstone, not in situ, was found inside Camp Oded. The base of the stone is circluar (diam 0.83 m ) and the upper part--conical (height 0.6 m ).

The southern part of the ruin was severely damaged by mechanical equipment. Numerous architectural remains, such as tops of walls, masonry stones scattered on surface, plaster remains, square marble slabs $(0.3 \times 0.3 ; 0.2 \times 0.2 \mathrm{~m})$, tesserae and a platitude of pottery fragments, were discerned in open trenches that remained in the area. Remains of a U-shaped installation (height at least 1.5 m ; Fig. 3) were discovered in the eastern trench. Its western half was damaged by mechanical equipment and its floor and walls ( 0.3 m thick) were built of small stones with grayish white bonding material. A layer of plaster mixed with potsherds was applied to the sides of the installation, which seems to have been used for storing liquids. The accumulation of fill in the installation contained, in its upper part, fragments of an imported amphora dating to the Early Islamic period, whereas metal slag and fragments of glass were found lower down in the fill. On the bottom of the installation was a round metal object (diam. 7 cm ) with a hole in its center, perhaps part of cymbals that were discarded inside.

Three white plaster floors were exposed c. 0.5 m below surface; overlying the upper two were layers of gray ash. Farther along the eastern trench, to the south of the installation, were the remains of another installation that had a circular cross-section and was built of fired mud bricks plastered on the interior.

Masonry stones and bones were scattered in a cemetery that was exposed on the southern fringes of the site. A marble object (height 0.57 m ), probably a gravestone, was discovered next to the cemetery. Its base is circular (diam. 0.22 m ) and its broken top is conical (diam. 0.13 m ; Fig.4).

Remains of a smaller settlement, dating to the Ottoman period and the British Mandate era, were exposed in the western part of the site. Fragments of pottery vessels from these periods were discovered in the area west of the access road to Moshav Mazliyah.

The pottery assemblage from Site 1 is mostly dated to the Early Islamic period (seventh-tenth centuries CE). The settlement, built on a hill overlooking Ramla, c. 350 m from its southern fringes, was probably associated with the historic city, which served as the capital of Filastin district during the Umayyad and Abbasid periods.

Site 2 (map ref. NIG 18819/64716; OIG 13819/14716). A scattering of potsherds, fragments of basalt vessels, masonry stones and bones was documented on a moderate slope of a hamra hill. The broken lid of a limestone sarcophagus ( $0.7 \times 1.5 \mathrm{~m}$, thickness 0.1 m ) was discerned on surface. The base of the lid is flat, while its upper part is slanted. A boss that protruded from one of the lid's corners was preserved. The site probably continues farther east, beyond the limits of the survey. The ceramic finds were ascribed to the Byzantine and Ottoman periods.

Site 3 (map ref. NIG 18819/64664; OIG 13819/14664). Potsherds, dating to the Ottoman period, as well as tesserae and fragments of marble were scattered along the surface of a hamra hill.

Site 4 (map ref. NIG 18804/64686; OIG 13804/14686). Fieldstones ( $0.5 \times 0.5 \mathrm{~m}$ ) that may be the remains of a building were scattered in the area.


1. Map of surveyed area.

2. Site 1 , installation, plan.


3. Site 1, marble object (gravestone?), plan and section.

## Ramla, Survey in the Region*



1. Map of surveyed area.

2. Site 1, installation, plan.

3. Site 1 , installation, plan.

4. Site 1, marble object (gravestone?), plan and section.

## Oren Shmueli and Tzach Kanias

5/2/2007
During November 2002 a development survey was conducted along the southern precincts of the city of Ramla, in an area that belongs to Moshav Mazliyah and Camp Oded, south of the Ramla-Bilu Junction road (Permit No. A-3784*; map ref. NIG 1869-84/6465-75; OIG 1369-84/1465-75), within the survey map of Rehovot (76) and in the wake of development work and the uprooting of an orchard in Moshav Mazliyah. The survey, on behalf of the Antiquities Authority, was directed by O. Shmueli and T. Kanias (surveying and drafting), assisted by A. Glick (GPS) and M. Avissar (pottery reading).

Four sites, including a large site that dated to the Early Islamic period (Site 1), were recorded in the surveyed area (Fig. 1), whose northern part has a site that was excavated by N. Messika and Y. Paz (License No. B-153/1998).

Site 1 (map ref. NIG 18754/61469; OIG 13754/11469) is a ruin that extends across c. 150 dunams, at the top of a hamra hill and along its northern slope. The ruin is delimited in the south and east by a wadi channel escarpment. Architectural remains at the top of the hill are connected to the ancient settlement and include buildings, installations, a millstone from a flour mill and a cemetery. Pottery fragments, sporadically scattered across surface to the north of the ruin, were probably swept from the hilltop.

At the top of the ruin, near the entrance to Camp Oded, a circular installation (diam. 2.5 m , wall thickness 0.2 m ; Fig. 2) whose wall is built of stone with bonding material was discerned. The inner wall of the installation is coated with a layer of plaster ( 1.5 cm thick) combined with potsherds. A wall (exposed length 0.75 m ) built of fieldstones $(0.2 \times 0.3 \mathrm{~m})$ abuts the installation to the north. Fragments of a clay bowl (FBW, Type 3), dating to the sixth century CE, were collected next to the installation.
A basalt millstone, not in situ, was found inside Camp Oded. The base of the stone is circluar (diam 0.83 m ) and the upper part--conical (height 0.6 m ).

The southern part of the ruin was severely damaged by mechanical equipment. Numerous architectural remains, such as tops of walls, masonry stones scattered on surface, plaster remains, square marble slabs $(0.3 \times 0.3 ; 0.2 \times 0.2 \mathrm{~m})$, tesserae and a platitude of pottery fragments, were discerned in open trenches that remained in the area. Remains of a U-shaped installation (height at least 1.5 m ; Fig. 3) were discovered in the eastern trench. Its western half was damaged by mechanical equipment and its floor and walls ( 0.3 m thick) were built of small stones with grayish white bonding material. A layer of plaster mixed with potsherds was applied to the sides of the installation, which seems to have been used for storing liquids. The accumulation of fill in the installation contained, in its upper part, fragments of an imported amphora dating to the Early Islamic period, whereas metal slag and fragments of glass were found lower down in the fill. On the bottom of the installation was a round metal object (diam. 7 cm ) with a hole in its center, perhaps part of cymbals that were discarded inside.

Three white plaster floors were exposed c. 0.5 m below surface; overlying the upper two were layers of gray ash. Farther along the eastern trench, to the south of the installation, were the remains of another installation that had a circular cross-section and was built of fired mud bricks plastered on the interior.

Masonry stones and bones were scattered in a cemetery that was exposed on the southern fringes of the site. A marble object (height 0.57 m ), probably a gravestone, was discovered next to the cemetery. Its base is circular (diam. 0.22 m ) and its broken top is conical (diam. 0.13 m ; Fig.4).

Remains of a smaller settlement, dating to the Ottoman period and the British Mandate era, were exposed in the western part of the site. Fragments of pottery vessels from these periods were discovered in the area west of the access road to Moshav Mazliyah.

The pottery assemblage from Site 1 is mostly dated to the Early Islamic period (seventh-tenth centuries CE). The settlement, built on a hill overlooking Ramla, c. 350 m from its southern fringes, was probably associated with the historic city, which served as the capital of Filastin district during the Umayyad and Abbasid periods.

Site 2 (map ref. NIG 18819/64716; OIG 13819/14716). A scattering of potsherds, fragments of basalt vessels, masonry stones and bones was documented on a moderate slope of a hamra hill. The broken lid of a limestone sarcophagus ( $0.7 \times 1.5 \mathrm{~m}$, thickness 0.1 m ) was discerned on surface. The base of the lid is flat, while its upper part is slanted. A boss that protruded from one of the lid's corners was preserved. The site probably continues farther east, beyond the limits of the survey. The ceramic finds were ascribed to the Byzantine and Ottoman periods.

Site 3 (map ref. NIG 18819/64664; OIG 13819/14664). Potsherds, dating to the Ottoman period, as well as tesserae and fragments of marble were scattered along the surface of a hamra hill.

Site 4 (map ref. NIG 18804/64686; OIG 13804/14686). Fieldstones ( $0.5 \times 0.5 \mathrm{~m}$ ) that may be the remains of a building were scattered in the area.


1. Map of surveyed area.

2. Site 1 , installation, plan.


3. Site 1, marble object (gravestone?), plan and section.

## Ramla, Jerusalem Boulevard*


2. Square B, plan.

3. Pottery.

During July 2002 a trial excavation was conducted on the Jerusalem Boulevard in Ramla (Permit No. A3681*; map ref. NIG 188564-790/64868-89; OIG 138564-790/14868-89). The excavation, on behalf of the Antiquities Authority, was directed by H. Torge, with the assistance of V. Essman (surveying), T. Sagiv (photography), N. Zak (drafting) and M. Shuiskaya-Arnov (drawing).

Based on finds discovered in probe trenches dug prior to the excavation, two half squares were opened.

Two walls and a section of a plaster floor were uncovered in the southern square ( A ; Fig. 1). The southern wall (W1; preserved length 4 m , width 1 m ) was oriented north-south and consisted of two rows of stones; only the bottom course was discovered. Two stones survived from the northern wall (W6; length 1.3 m ). A small plaster floor section (L107) was discerned west of W1. The area was severely damaged by modern infrastructure work, which made it impossible to determine the relationship between the plaster floor and the wall, as well as between the two walls.

Part of a building that divided the area into four spaces was exposed in the northern square ( $B$; Fig. 2). A white plaster floor (c. 0.5 cm thick) with a damaged installation above it was uncovered in the northwestern space (L104), which was delimited by Wall 4 in the east and Wall 3 in the south. The northeastern space was an installation (L106; $2.0 \times 2.5 \mathrm{~m}$ ) with a vault that was partially discovered. It was enclosed within Wall 7 in the north, which incorporated a dressed stone that may have been a step, W4 in the west and Wall 5 in the east. The latter two were arched and constituted the base of a vault that covered the installation in the past. The southern border of the space, as well as the bottom of the installation (excavation reached depth of 1.5 m ) was not revealed. Based on shape, size, the vault and the absence of a plastered bottom, the installation was probably used as a septic pit.

The space in the southwestern part of the area (L102) contained a white plaster floor, overlying a bedding of thin hamra bricks. This space was surrounded by W3 in the north, which was severely damaged, precluding the ability to discern the direction of the wall's smooth face, and W2 in the east, which was better preserved (length 4.2 m ). One of its sides was built of smoothed stones and faced Space 102 and the other side comprised small stones with a gray plaster debesh. The wall extended beyond the limits of the excavation.

The southeastern space (L105), which was enclosed by W2 in the west, W3 in the north and W4 in the east, had no plaster floor. Wall 3 was better preserved here, consisting of two faces (a total length of 3.5 m ); Walls 2 and 3 were intermingled and contemporaneous and W3 abutted W4.
A pipe of ceramic sections was discovered 0.5 m below surface in a pit dug by mechanical equipment next to the square; nearby was a small section of a plaster floor. It is feasible that another higher layer existed in part of the area, missing nowadays in the excavation squares due to development and infrastructure work of a modern road.

The finds were quite meager and consisted of a few pottery fragments, mostly recovered from the septic installation and dating the site to the Early Islamic period, including bowls (Fig. 3:1-7), kraters (Fig. 3:8, 9), a cooking pot (Fig. 3:10), a jar (Fig. 3:11), jugs (Fig. 3:12-14), cups (Fig. 3:15-17), a handle (Fig. 3:18) and a decorated bowl fragment (Fig. 3:19).


1. Square A, plan.

2. Square B, plan.

3. Pottery.

## Ramla, Birkat el-Jamus*



1. Installation in Square

A, plan.
Israel Korenfeld
16/4/2007
During February 2004 a salvage excavation was conducted in the vicinity of Birkat el-Jamus in Ramla (Permit No. A-4100*; map ref. NIG 18814-35/64705-51; OIG 13814-35/14705-51), finishing the excavation that had begun by Y. Elisha in August 2003 (Permit No. A-3971) and prior to construction. The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Construction and Housing, was directed by I. Korenfeld, with the assistance of A. Bachar (administration), V. Essman, V. Pirsky and T. Kornfeld (surveying), T. Sagiv (photography) and M. Shuiskaya-Arnov (pottery drawing).

The site, located east of the Old City of Ramla, lies in an area of cultivated farmland and is poorly preserved. Three excavation squares (A-C; c. 75 sq m), spread out over an area of c. 2 dunams, were opened. The finds in the three squares were uncovered in a single stratum and included building remains, installations and ceramic finds that dated from the Late

4. Pottery. Byzantine period until the Early Islamic period.

Square A (Fig. 1). An oval installation ( $1.5 \times 1.8 \mathrm{~m}$ ), built of small fieldstones and gray bonding material, was exposed. Its walls, preserved 11 courses high ( 1.1 m ), were dug into the ground. Fragments of pottery vessels that dated to the Byzantine period were found next to the installation. Some 50 m to the north, another similar installation was excavated in the past by Y. Elisha (Permit No. A-4090), who dated it to the Byzantine period.

Square B (Fig. 2). An oval installation ( $1.6 \times 1.8 \mathrm{~m}$ ), similar to the one in Square A, yet in a better state of preservation, was exposed beneath a plastered floor, survived by only a few pieces. It was also built of fieldstones and gray bonding material, preserved 15 courses high and the opening in its upper side was smaller than the one in the installation in Square A. The ceramic finds below the floor and inside the installation dated to the Late Byzantine or the Early Islamic period and included a cup (Fig. 4:1), a krater (Fig. 4:2) and jars (Fig. 4:3-5).

Square C (Fig. 3). The remains of a wall (W105), built of small fieldstones and gray bonding material and preserved a single course high ( $0.4 \mathrm{~m} ; 0.2 \mathrm{~m}$ wide), were exposed. The bedding of a floor (L106) composed of wadi pebbles and bonding material mixed with potsherds from the Late Byzantine period abutted the wall. South of W106, the remains of another wall were found, also built of fieldstones (not drawn). These remains were probably the foundations of an ancient building.

The two oval installations are probably septic pits based on their shape and the black soil that included organic material found in them. They yielded no datable artifacts and have no comparisons dating to the Byzantine period (except for the installation uncovered in the trial excavation of Y Elisha). The ceramic finds recovered from the vicinity are dated to the Late Byzantine or Early Islamic periods. A pipe fragment of gray clay (Fig. 4:6), dating to the eighteenth century CE, was found close to surface in Square B.


1. Installation in Square A, plan.

2. Installation in Square B, plan.


## Ramla, David Razi'el Street*



1. Plan.

2. Pottery.

Miriam Avissar
29/7/2007
During March 2002 a trial excavation was conducted on David Razi'el Street in Ramla (Permit No. A-3614*; map ref. NIG 187046/64759; OIG 137046/14759), following the construction of a ritual bath (miqwe). The excavation, on behalf of the Antiquities Authority, was directed by M. Avissar, with the assistance of A. Hajian (surveying) and I. Pikovski (pottery drawing).

Two excavation squares, revealing meager architectural remains, were opened (Fig. 1).
A habitation level (elevation c. 75.3 m above sea level) was uncovered in Square A. Next to the square's eastern balk was a circular fieldstone surface that stood a single course high (W1). It was impossible to determine if this was the base of a wall, an installation or a section of pavement. Around it were sections of a tamped-earth floor that yielded fragments of pottery vessels, dating to the Early Islamic period.

Sections of massive walls (W2, W3, W4) were discovered in the eastern part of Square B. The walls stood a single course high and were built of two rows of dressed stones with a core of small fieldstones. The walls were constructed atop the natural sand that is characteristic of Ramla. A thick habitation level of tamped earth abutted the walls. An entrance was probably located between Walls 2 and 4. A section of a curved wall (W5), built of fieldstones and preserved a single course high, was exposed in front of the entrance. It was probably part of an installation that did not survive. Most of the building was situated beyond the limits of the excavation square.

The habitation level in Square B contained numerous fragments of pottery vessels, characteristic of the Early Islamic period in Ramla, including delicate glazed bowls decorated with a polychrome splash (Fig. 2:1) and plain glazed bowls decorated with brown and green painting under the glaze (Fig. 2:2,3), as well as plain unglazed bowls of buff clay (Fig. 2:4-8), bowls of red clay (Fig. 2:9, 10 ), cooking kraters and closed cooking pots (Fig. 2:11-13), jars that probably originated in the vicinity of Jerusalem (Fig. 2:14-16), jugs of buff clay (Fig. 2:17-20), a jug of very light brown clay, coated on the interior and exterior with a green alkali glaze (Fig. 2:21), a lid (Fig. 2:22) and a lamp with a tongue handle (Fig. 2:23). Several accessories of buff clay, used by potters to arrange and support the vessels in the kilns prior to firing, were discovered among the fragmentary vessels, indicating the presence of a ceramic workshop in the vicinity. All of the vessels were locally produced, except for the glazed jug (Fig. 2:21) that was an import from Mesopotamia. A few glass vessels were also found. All of the artifacts are dated to the Early Islamic period--the ninth century CE.
רחבוע Square



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## Ramla, Qiryat Menachem Begin*



1. Plan and sections

2. Pottery.

3. Glass vessels

During November-December 2002 a salvage excavation was conducted in the Qiryat Menachem Begin neighborhood in Ramla (Permit No. A-3781*; map ref. NIG 198906/638437; OIG 148906/138437), following the installation of sewage and drainage conduits at a construction site. The excavation, on behalf of the Antiquities Authority, was directed by V. Shlomi, with the assistance of D. Porotski (surveying), T Sagiv (photography), I. Berin (drafting), M. Avissar (pottery reading and dating), M. Shuiskaya-Arnov (pottery drawing), Y. Gorin-Rosen (glass finds) and C. Hersch (glass drawing).
The remains of floors and a wall that dated to the Early Islamic period were exposed in an area of 25 sq m (Fig. 1). The southern side of the wall (W5; width 1 m , height 1.9 m ) was built of ashlar stones (average size $25 \times 35 \mathrm{~cm}$ ), coated with a layer of light gray plaster. The excavation did not reach the foundation of W5. Its northern, inner side was built of fieldstones and light gray bonding material mixed with chalk.
The upper southern part of W5 slanted inward and a robber trench was visible in the section above it. The wall had no evidence of having two phases and it seems that it was a single wall whose upper part was narrower than its base. Wall 5 was probably connected to Walls 3 and 4 that formed part of a built-up space, but most of W4 was beyond the limits of the excavation area. Almost all that remained of W3 was a robber trench. Several levels of mortar/chalk to the north of W5 were founded on alternating layers of soil or sand (thickness $5-20 \mathrm{~cm}$ ) and served as floors in the building. The loci were not sealed.
The potsherds collected in the excavation area represented a wide variety of vessel types, including bowls (Fig. 2:1-6), kraters (Fig. 2:7, 8), cooking vessels (Fig. 2:9, 10), jars (Fig. 2:11-15), jugs (Fig. 2:16, 17) and lamps (Fig. 2:18-20). The decorative techniques included incising, molding relief, painting and glazing. Most of the vessels dated to the ninth-tenth centuries CE and a few were from the eighth century CE.
Noteworthy among the ceramic finds are a fragment of a jug with a molded decoration and an Arabic inscription (Fig. 2:21) and a fragment of animal figurine (Fig. 2:22).
The ceramic and glass finds from the excavation, as well as the location of the area in proximity to previous excavations in Ramla (HA-ESI 110:51*), are in keeping with our knowledge about Ramla as the capital of the country during the Early Islamic period.

## The Glass Vessels

Yael Gorin-Rosen
Forty-three glass items were found, eleven of which were unidentifiable body fragments. Types characteristic of the Umayyad period were discerned among the identified fragments, including a bottle with an infolded and flattened rim, bowls with rounded and slightly inverted rims, traildecorated vessels and a fragment with a tonged decoration. Other vessels were dated to the Abbasid period and included plain vessels, bowls and bottles and two special objects.

The first is a small intact bottle, decorated with cutting, which was a surface find. It is made of very light green bluish glass covered with silvery iridescence and sand deposits (Fig. 3:1). This tiny cosmetic bottle, in an excellent state of preservation, represents a group of small decorated bottles, mostly made of colorless glass, which were used for cosmetics in the Early Islamic period.
The vessel is entirely decorated with cutting. The neck has a row of irregular, elliptical or rectangular facets, oriented vertically. The body has a center row of four heart-shaped patterns, arranged head-to-tail; in the space left between them an ellipsoid was inserted instead of a heart, for which the room did not suffice. A deeply cut wide strip is found below the row of hearts. The base is not entirely symmetric. A similar vessel from Fustat is slightly larger and decorated with two rows of heart-shaped patterns that are referred to as 'chevrons'. It is dated to the ninth century CE based on the Fustat stratigraphy (Scanlon G.T. and Prinder-Wilson R. 2001. Fustat Glass of the Early Islamic Period: Finds Excavated by the American Research Center in Egypt 1964-1980. London. Pp. 92, 98; Fig. 42-u).

The second object is a base and wall fragment (Fig. 3:2) of very light green glass covered with a layer of black and silver weathering. This is a honeycomb-patterned mold-blown bottle fragment, made in a deep mold. The vessel is blown and removed, without being further blown, so that the pattern remains distinct and rather uniform. The decoration begins in a protruding horizontal strip above the base, followed by the main pattern, unlike many other bottles whose honeycomb design begins from the middle of the base and ascends up the walls. The quality of the vessel and the molded pattern is very fine in comparison with other mold-blown vessels that were recovered from salvage excavations at Ramla.


1. Plan and sections.



## Ramla, AI-Amal School*

Alla Nagorsky
8/11/2007


1. Plan and section.

2. Pottery.

During June 2001 a trial excavation was conducted in the courtyard of the AI-Amal Elementary School in the Old City of Ramla (Permit No. A-3439*; map ref. NIG 188010-35/648018-38; OIG 138010-35/14801838). The excavation, on behalf of the Antiquities Authority, was directed by A. Nagorsky, with the assistance of I. Rahamim (administration), V. Pirsky (surveying), T. Sagiv (photography), E. Belashov (drafting) and I. Lidski (pottery drawing).

Remains of a large residential building were discovered in the southern part of the excavation. It was constructed in the middle of the 1930s and was demolished in 1963 when the Al-Amal School was built (Fig. 1). Mechanical equipment was used in Square B2, digging to a depth of 2.5 m below the foundations of the building. Numerous potsherds, fragments of glass vessels and pipes from the Ottoman period were found, as well as a broken marble capital (diam. 0.85 m ; height 1.1 m ). A wall (W70; preserved height 1.1 m ) built of small and medium fieldstones with reddish gray bonding material was exposed in the northwestern corner of the excavation area. Another wall stump (W73) was opposite an opening (width 0.6 m ) in W70. Between the walls and in the opening was a floor of small stones (L65). A yellowish gray plaster floor (Loci 69, 76) with burnt marks was exposed to the north of W70. The fill above and below the floor contained numerous potsherds that dated to the seventeenth-eighteenth centuries CE, including bowls (Fig. 2:1, 2), kraters (Fig. 2:35), jars (Fig. 2:6-11) and a handle (Fig. 2:12), as well as glass fragments, bracelets and animal bones. Fifteen mostly complete pipes were discovered in the fill above and below the Ottoman floors and four other pipes were on surface in Square A5 (in preparation).


1. Plan and section.


## Ramla, Birkat el-Jamus*



1. Location map.

2. Square 1, plan.

3. Square 1, pottery.

4. Square 2, plan.

Yossi Elisha
18/12/2007
During August 2003 a trial excavation was conducted south of Ramla, near the headquarters of the HomeFront Command (Permit No. A3971*; map ref. NIG 18814-35/64705-752; OIG 13814-35/14705-752), after ancient remains were discovered during an antiquities inspection. The excavation, on behalf of the Antiquities Authority, was directed by Y. Elisha, with the assistance of S. Ya'aqov-Jam and E. Bachar (administration), V. Pirsky and V. Essman (surveying), T. Sagiv (photography), L. Kupershmidt (metallurgical laboratory), M. Shuiskaya-Arnov (pottery drawing) and D.T. Ariel (numismatics).
Three squares were opened (Fig. 1).
Square 1. A curved wall (W12; Fig. 2), built of ashlar stones and preserved a single course high, was exposed. The remains of a rectangular foundation $(1.17 \times 2.00 \mathrm{~m}$, height 0.5 m$)$, built of ashlar stones with gray bonding material, were discovered north of the wall and at a lower elevation. A floor of fieldstones and bonding material ( $\mathrm{L} 10 ; 0.6 \times 1.8 \mathrm{~m}$ ) abutted the foundation on the north. The foundation and the floor were dated to the Early Islamic period, based on the recovered potsherds that included bowls (Fig. 3:1-3), a jar (Fig. 3:4), jugs (Fig. 3:5, 6), a juglet (Fig. 3:7) and a Mafjar-type lamp fragment (Fig. 3:8).

Square 2. An elliptical installation (1.5-1.8 m; Fig. 4), built of fieldstones sunk in the ground and surmounted by a top course that partly consisted of ashlar stones, was exposed. The installation, preserved to a depth of eleven courses ( 1.1 m ), was filled with the remains of bonding material that apparently lined its sides. Potsherds dating to the Early Islamic period were found.

Square 3. The remains of a plaster floor were exposed. A coin and a glass bead were found on the floor. The coin, minted in the city of Balkh (Western Iran), is dated to the first half of the eighth century CE (IAA 97777). The ceramic finds included bowls (Fig. 5:1-3), a cooking pot (Fig. 5:4) and jars (Fig. 5:5, 6), dating to the Early Islamic period.

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1. Location map.




2. Square 3, pottery.

## Ramla, the White Mosque*

Yehiel Zelinger
18/12/2007


1. Location map.

2. Pottery.

3. Glass.

During September 2005, a trial excavation was conducted along the edge of the parking lot between the Ramla City Hall and the district courthouse (Permit No. A-4595*; map ref. NIG 18770/64835; OIG $13770 / 14835$ ), for the purpose of installing a drainage pipeline. The excavation, on behalf of the Antiquities Authority and funded by the Leqtibi Development Company, was directed by Y. Zelinger, with the assistance of R. Vinitsky (metallurgical laboratory), R. Kool (numismatics), N. Katsnelson (glass) and I. LidskyRezinkov (pottery drawing).

The excavation area was located in the middle of Ramla, c. 500 m north of the White Mosque. A previous excavation had been conducted south of the area (ESI 18:76). Four squares were opened along the route of the drainage pipe, in places where ancient remains were discovered (Fig. 1). The scant remains consisted mostly of plaster floors and layers of fill that dated to the eighth-tenth centuries CE.

Square 1. A half square ( $2 \times 4 \mathrm{~m}$ ) was opened. Following the removal of surface layer, gray fill that included stones and soot was exposed. A refuse pit ( $0.6 \times 0.8 \mathrm{~m}$; depth 0.8 m ) in the eastern half of the square was filled with loose soil that contained numerous fragments of pottery vessels, plaster, a tabun and a lump of raw glass, which indicates a glass workshop was probably located nearby. A coin from the Abbasid period (IAA 109331) and a grenade-like vessel typical of the period (Fig. 2:4) dated the lump of glass to the ninth century CE. A wall stump (height 0.23 m ) in the southwestern corner of the square was not abutted by any floor, nor was it connected to the adjacent refuse pit.
Square 2. A half square whose eastern part was excavated to a depth of 1.2 m was opened. The soil fill removed from this area was mixed with potsherds, but no architectural remains were found. A refuse pit in the northeastern corner contained numerous potsherds, including a lamp, characteristic of Ramla and dating to the ninth-tenth centuries CE (Fig. 2:6). Due to the meager finds, the western half of the square was dug with the aid of a backhoe, revealing no architectura finds. A layer of sterile sand was discerned at the bottom of the square.
Square 3. A poorly preserved white plaster floor ( $0.8 \times 1.1 \mathrm{~m}$ ) was exposed in the southeastern corner of the square. The limited excavation area revealed no remains of walls that could be abutted by the floor. A sounding below the western part of the floor exposed no other remains, except for potsherds that dated to the Early Islamic period.
Square 4. After the removal of top soil from the northern part of the square, a modern refuse pit was found. At a depth of 0.6 m below surface, a damaged plaster floor ( $0.7 \times 1.1 \mathrm{~m}$ ), which was founded on a bedding of small stones bonded with plaster, was uncovered. The potsherds beneath it included a bowl (Fig. 2:1), a glazed bowl (Fig. 2:2), a frying pan (Fig. 2:3) and a lamp fragment (Fig. 2:5), as well as a glass cup with a short handle (see below), all dating to the eighth-tenth centuries CE. A modern refuse pit, south of the floor, extended across the entire southern half of the square. A probe conducted with the aid a backhoe revealed a layer of sterile sand at a depth of 1.8 m .

The extensive plundering of masonry stones in Ramla has left its sites in a bad state of preservation. The present excavation, along the narrow route of the drainage pipeline and in a limited area, made it difficult to understand the discovered remains. The material finds (potsherds, glass and coins) indicate that the area was settled from the middle of the eighth century until the tenth century CE.

## The Glass Vessels <br> Natalya Katsnelson

The site yielded a small number of glass finds. Only one fragment came from a secure context, while others were in unstratified fills and dumps. The glass vessels consisted of bowls (Fig. 3:1-3) and a few closed vessels (Fig. 3:4-6), including a miniature vial. Most vessels, made of naturally colored glass, were covered with a thick weathering crust. This small assemblage is dated from the eighth-early eleventh centuries CE and represents a modest addition to the Early Islamic repertoire of domestic glassware, known from Ramla, Caesarea, Yoqne'am, Bet She'an and Tiberias.
The yellowish green chunk points to the possibility of glass production in the vicinity.
Fig. $3: 1$ is a small bowl, decorated with yellowish horizontal trails. The shape and style of decoration were especially popular during the Umayyad period and continued into the Abbasid period.
Fig. $3: 2$ is a larger bowl type with a flattened base, often with trailed or ridged incurving rims, which is common to the Abbasid layers.
These two fragments belong to very common types of cylindrical bowls.
Fig. $3: 3$ is a small cup with a short handle, which was found on a floor dated by pottery to the Abbasid period. Such cups appeared during the Early Islamic period, but were not as common as the bowls discussed above.
Fig. $3: 4$ is a small fragment of a pinched mouth from a typical Islamic vessel. Ewers with such beak-shaped rims, made of glass and other materials, were widely produced during the eightheleventh centuries CE.
Fig 3:5 is the bulgy funnel neck of a bottle that has a broad dating range. Similar bottles were found in the eighth-eleventh centuries CE layers at Bet She'an and Ramla, as well as in contexts dating to the twelfth-fourteenth centuries CE.
Fig. 3:6 is a miniature tubular-shaped vial that was preserved in two parts. This type of vial discovered in an Umayyad shop at Bet She'an, predominated in the Abbasid period. Many such vials were found in layers of the late eighth-early ninth centuries CE, as well as in a later context dating to the late tenth-early eleventh centuries CE.


1. Location map.


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2. Pottery.


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## Rehovot, Weizmann Institute of Science

Aviva Buchennino
16/12/2007


1. Plan.

2. Pottery and stone vessels.

During April-May 2003 a trial excavation was conducted in the recreation center of the Weizmann Institute of Science in Rehovot (Permit No. A-3894*; map ref. NIG 18269/64657; OIG 13269/14657), in the wake of construction work. The excavation, on behalf of the Antiquities Authority, was directed by A. Buchennino, with the assistance of E. Bachar (administration), V. Essman and V. Pirsky (surveying and drafting), T. Sagiv (photography), M. Shuiskaya-Arnov (pottery drawing), I. Berin (drafting) and Y. Gorin-Rosen (glass).

Walls, apparently part of a building, were exposed.
A section of a wall (W10, length 3 m , width 0.6 m ), oriented north-south, was exposed in the middle of the area. It was built of fieldstones without bonding material and preserved a single course high (height 0.19 m ). Along the continuation of the wall to the north (W11) were scattered fieldstones that probably derived from a collapse. Two sections of walls, built of fieldstones without bonding material, were exposed to the west of W10. Wall 12 (length 2.9 m , width 0.6 m , average height 0.27 m ) formed a corner with W 10 , and Wall 13 (length 1.8 m , width 0.3 m , average height 0.27 m ) either abutted W12 or was cut by it. The area west and south of W13 had been damaged in the past during the installation of electrical and water infrastructures.

Another north-south oriented section of a wall (W20; length 1.85 m , width 0.6 m ), whose construction was identical to that of W10, was exposed in the northeastern corner of the site. The wall was preserved two courses high ( 0.7 m ). A floor (L205) of square beach rock, overlaying a bedding of natural hamra that was devoid of any datable finds, abutted on the southern side of W20. Fragments of ribbed jars (Fig. 2:9,10) were found on the floor.

The finds from the excavation did not come from sealed loci and included mixed potsherds. Some were dated to the Hellenistic period (a bowl; Fig. 2:1), the Early Roman period (juglet; Fig. 2:2; lamp; Fig. 2:3) and the Late Roman period (cooking krater, Fig. 2:4; jars, Fig. 2:5, 6). Most of the finds were from the Byzantine period, including open cooking pots and lids (Fig. 2:7, 8), jars (Fig. $2: 9,10$ ) and lamps (Fig. 2:11-14) and the Early Islamic period, including glazed bowls (Fig. 2:15, 16), a bowl (Fig. 2:17) and a flask (Fig. 2:18). A few non-diagnostic fragments of glass vessels were also found.
During an antiquities inspection that preceded the excavation a basalt crushing vessel (Fig. 2:19) was exposed.

Based on the ceramic finds, the site was dated from the Byzantine until the Early Islamic periods (HA-ESI 113:124*). The considerable destruction in and around the excavation area made it difficult to reconstruct the architectural remains.



## 2. Pottery and stone vessels.

## The Revadim Quarry

Ofer Marder, Ianir Milevski and Rivka Rabinovich
30/7/2007

2. Area C, section showing layers C1-C5 and geological Units 2 and 3.

4. Area C, sub-area West, Layer C3, looking north.

5. Area C, sub-area East, Layer C3, looking south.

7. Hand axes, early type (1), late type (2).

8. Elephant pelvis and mandible.

From June to September 2004 the fourth season of salvage excavations was conducted at the Lower Paleolithic site of the Revadim Quarry (Permit No. A-4191; map ref. NIG 182599-183199/63220-80; OIG 132599-133199/13220-80), prior to the reutilization of the quarry. The excavation, on behalf of the Antiquities Authority, was directed by O. Marder, I. Milevski and R. Rabinovich, with the assistance of R Lupu (directors' assistant and photography), Z. Matskevich, R. Ekshtain, R. Avissar, V. Golsberg, Y. Ashkenasi and D. Eisenberg-Degen (field supervision), N. Gubenko (registration), H. Lavi and R. Abu-Halaf (administration), A. Hajian, V. Essman and V. Pirsky (surveying), E. Weiss (archaeobotany), R. Barkai, A. Buller-Malinsky, N. Solodenko and T. Rosenberg (flint-assemblage analyses), O. Ackermann (geomorphology), R. Shahack-Gross (mircromorphology), M. Bar-Matthews, N. Porat, H. Valladas, N. Mercier and C. Falgueres (dating methods), H. Ron (Paleomagnetic analyses) and L. Zeiger (flint drawing). Further assistance was extended by P. Nahshoni, D. Varga and D. Nahlieli of the IAA southern district, A. Giladi who discovered the site and students and volunteers from Israel and abroad, as well as laborers from Project 500 and the Single-Mothers project.
The site is located on the southern coastal plain, 1.5 km north of Qibbuz Revadim and 40 km southeast of Tel Aviv (Fig. 1). The area is characterized by undulating topography, sloping northward to the nearby confluence of Nahal Timna and one of its tributaries.
Situated on a hillock, at an elevation of $71-73 \mathrm{~m}$ above sea level, the initial use of the Revadim Quarry was during the British Mandate, extracting sand for construction. The quarry was since deserted until the 1990s, when its exploitation was revived. During these quarrying activities, lithic and faunal remains were exposed.
The geological sequence exposed at the quarry section is c. 20 m thick and its upper part is composed of alternating layers (paleosols), including Dark Brown Grumusol (Unit 1), Quartzic Gray-Brown Paleosol (Unit 2) and Quartzic Sand and Red Hamra-Husmas (Unit 3; Fig. 2).
The most ancient living surface was located on top of the unconformity surface, separating Unit 3 from Unit 2. The ancient topography of the site was buried more than 5 m below the current surface. It was more undulating in the northern part of the site, dissected by rills and gullies, including vertical collapsed depressions (diam. 0.5 m ) that were created by pipe flow processes and functioned as artifact trap areas. In the southern part of the site Unit 2 was located directly above Unit 3 and the contact between these paleosols was relatively regular.

## The Excavations

Four seasons of excavations were conducted at the site since 1996 (Mitekufat Haeven 28, 1998:21 54; ESI 20:113*-114*). Two main areas of excavation (A, B) were opened in the first season tc salvage the remains found in a collapsing section and to determine the extent of the archaeologica deposits. A third excavation area (C) was opened in the second and third seasons (1998-1999) During the 2004 season, work was concentrated in Areas B and C that were substantially enlargec and a fourth area (D) was opened. Furthermore, two trenches (length 12 and 23 m respectively) aiming to correlate the stratigraphy of Areas B and C, were excavated. Altogether, a total of 250 sc m , composed of 170 sq m at the site and c .80 sq m in the trenches, were investigated.

Area B was divided into three sub-areas, North, Center and South and Area C--into two sub-areas West and East. The majority of the archaeological remains in Area B was excavated directly on the contact of Unit 3 with Unit 2. Two archaeological layers were discerned (B1 and B2 from top tc bottom; Fig. 3). While Layer B1 was very limited in extent, containing a few finds and identifiec mostly in sub-area North, B2 was a most distinct layer (c. 70 sq m ). The greater part of finds ir both layers was exposed in horizontal position, whereas the large animal bones were found in pits.
The most complete stratigraphical sequence was encountered in Area C (c. 80 sq m ), where five archaeological layers (C1-C5) were identified in sub-Area West (see Fig. 2). Layers C1-C4 wert discerned within Unit 2, while Layer C5 was exposed directly on the contact between Units 2 and 3 Layers C2 and C3 (each c. 15-20 cm thick) in sub-areas West and East (Figs. 4, 5) contained the highest density of flint artifacts and bones at the site (c. 150-200 per sq m). Layer C5 apparentl correlated with Layer B2.

## The Flint Tools

Flakes formed $90 \%$ of the flint-tool assemblage. A small number of core-tools, mainly hand axes and core-choppers, especially in Layers B1, B2 and C5, were also found (Fig. 6). A few spheroids were encountered in Area D. The hand axes were divided into two groups according to thei stratigraphic ascription. Those originating from the earlier layers (the majority of the hand axes a the site) are characterized by thick pointed shapes, namely amigdaloids, lanceolates and thick pointed ovates (Fig. 7:1); thin, unpointed forms are rare. The hand axes from the later layers are short and relatively thin. Typologically, the later assemblage is characterized by discoidal forms mostly irregular in shape with a low level of symmetry (Fig. 7:2). The bifacial shaping is usually partial, showing a low number of scars. In some cases where shaping was more intensive, it was probably performed by large, thick, thinning flakes. An interesting phenomenon is the recycling o hand axes into cores, most common in Area C. The detached pieces constituted the mair component of lithic assemblages, wherein tools had a relatively high percentage. The typical tool kit consisted of a large variety of types, including awls, notches, denticulates and scrapers.

## The Fauna

Hundreds of animal bones that appeared in all levels of occupation were retrieved from all seasons of excavation. The bones included bovids (Bos primigenius, Gazella gazella), cervids (Dama mesopotamica, Cervus elaphus, Capreolus cf. capreolus), pigs (Sus scrofa), equids, carnivores (Felis silvestris), rodents (Microtus guentheri, Spalax Ehrenbergi), carapace of chelonia and ophidic vertebrates. Although the faunal remains encompass numerous species, most of the bones are splinters that can rarely be identified as a body-sized group. However, the outstanding fauna
remains from the Revadim Quarry are represented by the straight-tusk elephant (Palaeloxodon antiquus), which form the largest assemblage in the southern Levant, to date. The numerous bones from this species, which represent at least seven individuals, include mandible and teeth, scapula and pelvis (Fig. 8), a tusk (Fig. 9), vertebrae, ribs and long-bone shafts. The age of the elephants varies from young to old, including prime adults. Two items are possible bone tools; one is an elephant long bone whose one edge has been smoothed (Fig. 10) and the second is a modified detached flake.
Several large elephant bones were deposited in depressions in Layer B2, including the deposition of a pelvis on top of a mandible, on top of a tusk. These accumulations, not anatomically articulated, were found within an area of human activity that contained stone artifacts and bone 'lumps'. However, at the present stage of research, it is not clear whether the presence of large bones within the pits was due to water action, probably over-bank flows and other post-depositional processes on the site, or direct human activity.

## Dating

Paleomagnetic analyses on the geological sequence of the Revadim Quarry indicate that the site is of normal polarity (younger than 780,000 years BP). In addition, more samples were obtained in the last season to provide a more accurate dating of the occupation levels. Some samples analyzed the carbonate cortex of flint artifacts, utilizing the Uranium-Isotopic Series (M. Bar-Mathews) and gave new minimum dates of 400,000 years BP. Other samples will eventually be analyzed, using the Luminescence and the Electro Spin Resonance (ESR) methods.
The Revadim Quarry site can be ascribed to the Late Acheulian culture. The general stratigraphy of the site indicates the existence of an early complex, represented mainly by Levels B2 and C5 and a late complex, represented mainly by Levels C2 and C3. The techno-typology of the hand axes found in these levels reinforces our interpretation that the two complexes should be attributed to the Late Acheulian culture. It is postulated that the later complex has some affinities (hand-axe typology and size) to the assemblages of Tabun (E and F), Holon and Kefar Menahem (West). Our interpretations demand further studies, including absolute dating and a comprehensive analysis of the entire assemblage components (flint, fauna, sedimentology, geochemistry). The site bears significant features that can highlight and reconstruct the ecological habitat of the region, as well as the hominid economic behavior during the Lower Paleolithic period.


1. Location of excavated areas and trenches.


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8. Possible bone tool.

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From June to September 2004 the fourth season of salvage excavations was conducted at the Lower Paleolithic site of the Revadim Quarry (Permit No. A-4191; map ref. NIG 182599-183199/63220-80; OIG 132599-133199/13220-80), prior to the reutilization of the quarry. The excavation, on behalf of the Antiquities Authority, was directed by O. Marder, I. Milevski and R. Rabinovich, with the assistance of R Lupu (directors' assistant and photography), Z. Matskevich, R. Ekshtain, R. Avissar, V. Golsberg, Y. Ashkenasi and D. Eisenberg-Degen (field supervision), N. Gubenko (registration), H. Lavi and R. Abu-Halaf (administration), A. Hajian, V. Essman and V. Pirsky (surveying), E. Weiss (archaeobotany), R. Barkai, A. Buller-Malinsky, N. Solodenko and T. Rosenberg (flint-assemblage analyses), O. Ackermann (geomorphology), R. Shahack-Gross (mircromorphology), M. Bar-Matthews, N. Porat, H. Valladas, N. Mercier and C. Falgueres (dating methods), H. Ron (Paleomagnetic analyses) and L. Zeiger (flint drawing). Further assistance was extended by P. Nahshoni, D. Varga and D. Nahlieli of the IAA southern district, A. Giladi who discovered the site and students and volunteers from Israel and abroad, as well as laborers from Project 500 and the Single-Mothers project.
The site is located on the southern coastal plain, 1.5 km north of Qibbuz Revadim and 40 km southeast of Tel Aviv (Fig. 1). The area is characterized by undulating topography, sloping northward to the nearby confluence of Nahal Timna and one of its tributaries.
Situated on a hillock, at an elevation of $71-73 \mathrm{~m}$ above sea level, the initial use of the Revadim Quarry was during the British Mandate, extracting sand for construction. The quarry was since deserted until the 1990s, when its exploitation was revived. During these quarrying activities, lithic and faunal remains were exposed.
The geological sequence exposed at the quarry section is c. 20 m thick and its upper part is composed of alternating layers (paleosols), including Dark Brown Grumusol (Unit 1), Quartzic Gray-Brown Paleosol (Unit 2) and Quartzic Sand and Red Hamra-Husmas (Unit 3; Fig. 2).
The most ancient living surface was located on top of the unconformity surface, separating Unit 3 from Unit 2. The ancient topography of the site was buried more than 5 m below the current surface. It was more undulating in the northern part of the site, dissected by rills and gullies, including vertical collapsed depressions (diam. 0.5 m ) that were created by pipe flow processes and functioned as artifact trap areas. In the southern part of the site Unit 2 was located directly above Unit 3 and the contact between these paleosols was relatively regular.

## The Excavations

Four seasons of excavations were conducted at the site since 1996 (Mitekufat Haeven 28, 1998:21 54; ESI 20:113*-114*). Two main areas of excavation (A, B) were opened in the first season tc salvage the remains found in a collapsing section and to determine the extent of the archaeologica deposits. A third excavation area (C) was opened in the second and third seasons (1998-1999) During the 2004 season, work was concentrated in Areas B and C that were substantially enlargec and a fourth area (D) was opened. Furthermore, two trenches (length 12 and 23 m respectively) aiming to correlate the stratigraphy of Areas B and C, were excavated. Altogether, a total of 250 sc m , composed of 170 sq m at the site and c .80 sq m in the trenches, were investigated.

Area B was divided into three sub-areas, North, Center and South and Area C--into two sub-areas West and East. The majority of the archaeological remains in Area B was excavated directly on the contact of Unit 3 with Unit 2. Two archaeological layers were discerned (B1 and B2 from top tc bottom; Fig. 3). While Layer B1 was very limited in extent, containing a few finds and identifiec mostly in sub-area North, B2 was a most distinct layer (c. 70 sq m ). The greater part of finds ir both layers was exposed in horizontal position, whereas the large animal bones were found in pits.
The most complete stratigraphical sequence was encountered in Area C (c. 80 sq m ), where five archaeological layers (C1-C5) were identified in sub-Area West (see Fig. 2). Layers C1-C4 wert discerned within Unit 2, while Layer C5 was exposed directly on the contact between Units 2 and 3 Layers C2 and C3 (each c. 15-20 cm thick) in sub-areas West and East (Figs. 4, 5) contained the highest density of flint artifacts and bones at the site (c. 150-200 per sq m). Layer C5 apparentl correlated with Layer B2.

## The Flint Tools

Flakes formed $90 \%$ of the flint-tool assemblage. A small number of core-tools, mainly hand axes and core-choppers, especially in Layers B1, B2 and C5, were also found (Fig. 6). A few spheroids were encountered in Area D. The hand axes were divided into two groups according to thei stratigraphic ascription. Those originating from the earlier layers (the majority of the hand axes a the site) are characterized by thick pointed shapes, namely amigdaloids, lanceolates and thick pointed ovates (Fig. 7:1); thin, unpointed forms are rare. The hand axes from the later layers are short and relatively thin. Typologically, the later assemblage is characterized by discoidal forms mostly irregular in shape with a low level of symmetry (Fig. 7:2). The bifacial shaping is usually partial, showing a low number of scars. In some cases where shaping was more intensive, it was probably performed by large, thick, thinning flakes. An interesting phenomenon is the recycling o hand axes into cores, most common in Area C. The detached pieces constituted the mair component of lithic assemblages, wherein tools had a relatively high percentage. The typical tool kit consisted of a large variety of types, including awls, notches, denticulates and scrapers.

## The Fauna

Hundreds of animal bones that appeared in all levels of occupation were retrieved from all seasons of excavation. The bones included bovids (Bos primigenius, Gazella gazella), cervids (Dama mesopotamica, Cervus elaphus, Capreolus cf. capreolus), pigs (Sus scrofa), equids, carnivores (Felis silvestris), rodents (Microtus guentheri, Spalax Ehrenbergi), carapace of chelonia and ophidic vertebrates. Although the faunal remains encompass numerous species, most of the bones are splinters that can rarely be identified as a body-sized group. However, the outstanding fauna
remains from the Revadim Quarry are represented by the straight-tusk elephant (Palaeloxodon antiquus), which form the largest assemblage in the southern Levant, to date. The numerous bones from this species, which represent at least seven individuals, include mandible and teeth, scapula and pelvis (Fig. 8), a tusk (Fig. 9), vertebrae, ribs and long-bone shafts. The age of the elephants varies from young to old, including prime adults. Two items are possible bone tools; one is an elephant long bone whose one edge has been smoothed (Fig. 10) and the second is a modified detached flake.
Several large elephant bones were deposited in depressions in Layer B2, including the deposition of a pelvis on top of a mandible, on top of a tusk. These accumulations, not anatomically articulated, were found within an area of human activity that contained stone artifacts and bone 'lumps'. However, at the present stage of research, it is not clear whether the presence of large bones within the pits was due to water action, probably over-bank flows and other post-depositional processes on the site, or direct human activity.

## Dating

Paleomagnetic analyses on the geological sequence of the Revadim Quarry indicate that the site is of normal polarity (younger than 780,000 years BP). In addition, more samples were obtained in the last season to provide a more accurate dating of the occupation levels. Some samples analyzed the carbonate cortex of flint artifacts, utilizing the Uranium-Isotopic Series (M. Bar-Mathews) and gave new minimum dates of 400,000 years BP. Other samples will eventually be analyzed, using the Luminescence and the Electro Spin Resonance (ESR) methods.
The Revadim Quarry site can be ascribed to the Late Acheulian culture. The general stratigraphy of the site indicates the existence of an early complex, represented mainly by Levels B2 and C5 and a late complex, represented mainly by Levels C2 and C3. The techno-typology of the hand axes found in these levels reinforces our interpretation that the two complexes should be attributed to the Late Acheulian culture. It is postulated that the later complex has some affinities (hand-axe typology and size) to the assemblages of Tabun ( E and F ), Holon and Kefar Menahem (West). Our interpretations demand further studies, including absolute dating and a comprehensive analysis of the entire assemblage components (flint, fauna, sedimentology, geochemistry). The site bears significant features that can highlight and reconstruct the ecological habitat of the region, as well as the hominid economic behavior during the Lower Paleolithic period.


1. Location of excavated areas and trenches.


| Flint item | F1 | פריט צור |
| :---: | :---: | :---: |
| Bone | B | עצם |
| Manganese/Ferum | $\mathrm{Mn} / \mathrm{Fe}$ | מנגן/ברול |
| Pebbles | Pb | חלוקי נחל |
| Calcium Carbonate | $\mathrm{CaCO}_{3}$ | תצבירים גירניים |

2. Area C, section showing layers C1-C5 and geological Units 2 and 3.

3. Area $B$, sub-area Center, Layer B2, looking west.

4. Area C, sub-area West, Layer C3, looking north.

5. Area C, sub-area East, Layer C3, looking south.

6. Area $B$, hand axes and anvil, in situ.


7. Elephant tusk.

8. Possible bone tool.

## Rosh Ha-‘Ayin - Mizpe Afeq*

Uzi 'Ad
7/3/2007


1. Map of the excavation areas.

2. Area 1, plan.

3. Areas 2, 3, plan.

During October 2000 a trial excavation was conducted in Lot 3140 on Ohalē Kedar Street in Rosh Ha-‘Ayin (Permit No. A-3269*; map ref. NIG 19635-40/66606-13; OIG 14635-40/16606-13). The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Defense, was directed by U. 'Ad, assisted by A. Hajian and V. Pirsky (surveying and drafting), as well as by the antiquities inspectors of the IAA Central District.

Architectural remains and a cave that were discerned in a survey and trial trenches in the area prompted the excavation, whose area was c. $30-100 \mathrm{~m}$ north and northeast of excavations carried out by R. Avner and H. Torge in 1995-1996 (ESI 19:40*) and c. 100 m west of the excavation conducted by E. Haddad (ESI 20:45*).

Three excavation areas were opened and the entrance to the cave was cleaned (Fig. 1).
Area $1(6 \times 7 \mathrm{~m})$. Two parallel walls (W1, W2; Fig. 2) were exposed. Wall 2 was on the east side of the square and only its upper course was revealed. Wall 1 ( 4 m long), on the west side of the square, was preserved three courses high and built breadthwise on bedrock, across the slope. It seems the wall served as a retaining wall for a stone fill on its east, which was probably the collapse of an ancient building whose remains were not found. Another wall (W2a) was discovered at the northern end of W2.
Area $2(4 \times 5 \mathrm{~m})$. Remains of an east-west oriented wall were uncovered. These included severa partly dressed fieldstones and a line in bedrock that indicated the foundation trench of the wall's continuation (Fig. 3).
Area 3 (3 $\times 5 \mathrm{~m}$ ). Several partly dressed fieldstones, whose precise direction could not be ascertained due to the limitations of the excavation area, were found.
The close proximity to bedrock in Areas 2 and 3 affected the finds' state of preservation.
The potsherds recovered from the vicinity of the walls dated from Iron Age II to the end of the Persian-beginning of the Hellenistic period (eighth-fourth centuries BCE). Only a handful of potsherds found close to surface dated to the Byzantine period (fifth-sixth centuries CE).
The survey conducted inside the cave after the modern fill was removed from its entrance, revealed a heap of small stones that had been discarded inside through a circular aperture in the cave's ceiling. Two rock-hewn kokhim that were coated with mud plaster were noted in the southern wall.

The excavated remains seem to be part of a large settlement whose southern section was exposed in Avner and Torge's excavation and its eastern segment was uncovered in Haddad's excavation. The settlement had several phases that ranged from the end of Iron Age II until the end of the Persian-beginning of the Hellenistic period. The limited excavation area and the relatively poor preservation did not enable the reconstruction of the buildings at the site. During the Byzantine period, the site was apparently converted into a cultivation plot and the stones cleared from the area were discarded into the cave discovered in the survey.


1. Map of the excavation areas.

2. Area 1, plan.


## Rujum Pik*



1. General plan.

2. Area A, the corner of W6 and W7, plan.

3. Pottery.

4. Area B, square structure, plan.

Moshe Hartal
9/7/2007
During April 1999 a salvage excavation was conducted at Rujum Pik (Permit No. A-3037*; map ref. NIG 26828/74474; OIG 21828/24474) after its northeastern corner was damaged in the wake of paving a road. The excavation, on behalf of the Antiquities Authority, was directed by M. Hartal, with the assistance of V. Essman and V. Pirsky (surveying and drafting) and H. Tahan (pottery drawing).

A system of walls, built of fieldstones and roughly hewn stones (Fig. 1), was discerned on surface, along the fringes of the site. The walls, set on virgin soil, were preserved a single course high. A corner of two walls (Area A; W6, W7; Fig. 2) was exposed in the section damaged by the road paving. The walls, built of poor quality large fieldstones ( 1.3 and 1.0 m thick respectively), were set directly on bedrock that was covered with a shallow layer of soil (L203), which contained potsherds from the Late Roman period, including cooking bowls (Fig. 3:3, 4) and cooking pots (Fig. 3:9, 10). Fragments of other contemporary jars (Fig. 3:11-13) were found in a bedrock hollow (L204) below the foundation of W7.
The nature of the walls and their diffusion in the area indicates they were used as fences or courtyards rather than as parts of buildings. The ceramic finds date the walls to the fourth century CE.

A square structure ( $9.5 \times 10.0 \mathrm{~m}$; Area $B$; Fig. 4) whose walls were built of two rows of roughly hewn stones with a core of small stones (W1-W4 thickness 0.95 m ) was erected west of Area A and over the walls that continued the system of walls in the area. Walls 2 and 4 were well-preserved and stood two courses high ( 0.7 m ). The two corners of the northern wall (W1) were destroyed down to its foundation course ( $0.8-1.0 \mathrm{~m}$ wide). The building's entrances were probably in this wall. The southwestern end of W3 ( 2.7 m long) was completely destroyed; however, remains of its outer facade were preserved, including a very thick layer of white plaster that was mixed with small fieldstones ( 0.25 m thick at the bottom). Similar plaster remains were found in the southeastern corner of the building, yet no plaster was traced on the interior side of the building.
The fieldstone pavement covered the entire building, which was partitioned lengthwise by a wall (W5; 1.2 m thick) in whose center was a doorway ( 1.1 m wide) that opened into two rooms. The doorjambs consisted of roughly hewn stones of a better quality than the stones used for the walls.

The ceramic finds in the building were meager and included cooking bowls (Fig. 3:5,6) and cooking pots (Fig. $3: 7,8$ ). On the floor in the northwest of the building (L109) was a small concentration of potsherds, composed of frying pans (Fig. 3:1, 2), a jar (Fig. 3:14) and a lamp with two nozzles (Fig. 3:15).

The ceramic finds date the structure to the fourth century CE. Its use is unclear, but judging by the thick plaster that covered its exterior, which was meant to seal out moisture, it was probably used for storage, possibly a granary.
A similar structure was found in a survey conducted on the northern fringes of the site by E . Kalmachter. It was partly built below surface, coated with a thick layer of plaster on the exterior and it probably also served for storage, perhaps a granary.
Remains from the late Roman and Byzantine periods were discovered in surveys at the site.
The excavation results indicate that the settlement reached its zenith in the fourth century CE. Since no remains from the Byzantine period were found it would seem that the occupation area was reduced at this time.


1. General plan.


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3. Pottery.

4. Area $B$, square structure, plan.

## Senir*


2. The excavation, plan.

5. Area 20, plan and section.

7. Area 20, L2002 and L2004 in the northeastern square

8. Pottery.

9. Area 20, general view at the end of the excavation, looking east.

Hervé Barbé
22/2/2007
During March-April 2005, a salvage excavation was carried out near the access road to Qibbuz Senir (A4420*; map ref. NIG 26305/79415; OIG 21305/29415; Fig.1) in the wake of ancient remains visible on surface where an electric pylon is due. The excavation, on behalf of the Antiquities Authority and financed by the electric company, was directed and photographed by H. Barbé, assisted by Y. Ya'aqoby (administration), V. Essman and V. Pirsky (surveying), N. Zak (drafting) and C. Hersch (find drawing).

The visible remains were at a level of c. 229 m above sea level. A previous excavation conducted in 2000 (HA-ESI 116:1*-2*), 700 m to the northeast, revealed a tomb from the Roman period that consisted of two rectangular cells.

Two areas, c. 5 m distant from each other, were excavated (Areas 10 and 20; Fig. 2). Area 10 (4.5 $\times 5.0 \mathrm{~m})$ was opened right on the site of the electric pylon. Bushes and brush were cleared in Area $20(7 \times 10 \mathrm{~m})$ to record the alignment of walls visible on surface.

## Area 10

The absence of archaeological remains called for the progressive reduction of the area (Fig. 3). Natural bedrock, undisturbed by human activity, was reached at a depth of 1.0-1.4 m below topsoil (Fig. 4). The scant and eroded pottery finds in the upper soil layers (L1000, L1001) belonged to different periods, namely Byzantine, Crusader, Mamluk and the latest potsherds were Rashaya elFukhar from the Ottoman period. The potsherds atop bedrock (L1002) were homogeneous, Byzantine-period ceramics, including a roof tile (tegula).

## Area 20

Two squares were excavated within the rectangular enclosure ( $6.5 \times 9.5 \mathrm{~m}$; Fig. 5 ); one square was in the northeast ( $\mathrm{L} 2000 ; 3 \times 4 \mathrm{~m}$ ) and the second in the northwest ( $\mathrm{L} 2003 ; 1.0 \times 1.5 \mathrm{~m}$ ). The north (W200) and east (W202) walls of the enclosure were still evident, whereas the west wall (W201) was badly damaged and the south wall (W203) was practically non-existent. The walls, preserved to a maximum of a single course high, had one or two layers of fieldstone foundations and a superstructure of substantial limestone ashlars, lain as stretchers (average $0.55 \times 0.70 \times$ 1.20 m ). The presence of a profiled angle, a plinth or a cornice (Fig. 6), a door jamb set as a stretcher in W200, a column base, also lain as a stretcher in the corner of W200 and W201 and a column shaft in W201, testify to the secondary use of these architectural elements, deriving most likely, from an ancient building.
Brown organic sediment that evidenced a surface layer of forest humus was excavated in the northeastern square (L2000). Below it and overlaying bedrock was beige sediment with small chunks of chalk (L2001). The two sediment layers were 0.5 m thick. Two more probes (L2002--0.8 $\times 2.3 \mathrm{~m}$; L2004--1.0 $\times 1.7 \mathrm{~m}$; Fig. 7) were oriented east-west and did not produce any further remains, except for a few bone fragments in the upper part of L2002.
The brown organic sediment (L2003) excavated in the northwestern square overlaid bedrock, which was quarried into a straight-sided rectilinear shape, whose one corner was exposed (L2005; $0.5 \times$ 1.0).

The form of the bedrock-quarried recesses, their orientation and the few bone fragments in L2002, suggest interpreting them as burials. They are well integrated within the enclosure, which may be viewed as part of a mausoleum. The dating of this structure is ambiguous. Although some potsherds were discovered in the layer covering the burials, such as a Late Roman C bowl (Fig. 8:1) and a Byzantine cooking-pot (Fig. 8:2), they were mixed with more recent material of Medieval times (Slip Painted Ware) and Ottoman-period ceramics, including a glazed bowl (Fig. 8:3), unglazed bowls (Fig. 8:4-10), jars (Fig. 8:11,12) and a handle with a thumb rest (Fig. 8:13).

The contribution of this salvage excavation is limited. The exposure of Area 10 proved that the electric pylon will not damage archeological remains. The hewn graves discovered in Area 20 were not fully investigated, precluding any conclusions with regard to their function and dating (Fig. 9). The late date offered here is based on the presence of Ottoman potsherds, as well as the ancient architectural elements within the walls of the enclosure. These had apparently originated from a necropolis previously excavated at Senir, a few hundred meters higher on the slope, toward the northeast. The proximity of the ancient site of Banias should also be considered as a likely source.


1. Location map.


[^4]
3. Area 10, plan.

4. Area 10, probe, looking east.

5. Area 20, plan and section.

6. Profiled block reused in W200.

7. Area 20, L2002 and L2004 in the northeastern square.

8. Pottery.

9. Area 20 , general view at the end of the excavation, looking east.

## Sha'alvim*



1. Location map of complexes.

2. Complex 2, water cistern, plan.

3. Complex 3, hewn cistern, plan.

4. Complex 3, pottery

5. Complex 4, water cistern, plan.

Giora Parnos
5/2/2007
During March-April 2005 a trial excavation was conducted south and west of Sha'alvim (Permit No. A4414*; map ref. NIG 1952-91/6408-35; OIG 1452-91/1408-35), prior to development work on the Tel Aviv-Jerusalem railroad line. The excavation, on behalf of the Antiquities Authority, was directed by the late G. Parnos, with the assistance of E. Bachar (administration), A. Hajian and N. Zak (surveying and drafting) and C. Hersch (pottery drawing).

A preliminary survey along the planned route of the railway line, conducted by A. Re'em and L. Yihye, recorded different complexes that were excavated or documented. These included the wall of an animal pen, stone clearance heaps (Fig. 1:1) and three rock-hewn cisterns (Fig. 1:2-4).

## Complex 1

The complex comprised the wall of an animal pen and two stone clearance heaps (Fig. 2) on the lower southern slope of rising ground, c. 700 m south of Horbat Nekhes. Two adjacent squares were opened at the northern end of the complex and a probe was cut by a bulldozer next to its southern end. The wall of the animal pen (W102; length c. 25 m ), oriented north-south, was built of large fieldstones in a single row and preserved 1-2 courses high. Two clearances heaps, composed of large stones, were to the west of W102. The elongated northern heap (L108; length 11 m , width 5 m ), oriented north-south, consisted of different-sized stones that were randomly piled. To the south was a round heap (L107; c. 7 m wide) also built of large and very large stones. A few potsherds, dating to the Early Roman and Byzantine periods, were found. The complex is indicative of agricultural activity in the region; however, it cannot be dated due to meager ceramic finds and the absence of stratigraphy.

## Complex 2

A bell-shaped water cistern (max. width c. 5 m , depth c. 5.25 m ; Fig. 3) with a circular opening (diam. 1.05 m ) was hewn in the southern end of the a moderate slope, c. 60 m east of Complex 1. A layer of white plaster (c. 2 cm thick) was applied to its walls and floor. A uniform layer (c. 2.5 m thick) of very dark brown alluvium and medium- and large-sized stones had accumulated inside the cistern. A sounding in the accumulation, reaching the floor of the cistern next to the eastern wall, was excavated. The ceramic finds were mixed and included potsherds from the Byzantine and Ottoman periods. No architectural remains were discovered in the vicinity of the cistern, which seems to have been hewn in an open area and used for agricultural purposes.

## Complex 3

A rock-hewn bell-shaped cistern (max. width c. 3.7 m, depth c. 2.3 m ; Fig. 4) was discovered c. 12 m south of the water cistern in Complex 2. Its aperture in the ceiling was square (width 1 m ) and its corners were rounded. The walls and floor of the cistern were not plastered. Two elongated recesses (width c. 0.4 m ) in the ceiling were located near the aperture. A similar recess was discerned in the floor beneath one of the recesses in the ceiling. These recesses may have been intended for a wall that did not survive and partitioned the cistern, perhaps implying that the cistern had once been used as an underground storehouse. A loose grayish-brown accumulation that contained stones of different sizes was piled up toward the aperture. The eastern half of the cistern was excavated, yielding fragments of pottery vessels from the Roman period (second century CE), including cooking pots (Fig. 5:1, 2), jars (Fig. 5:3-5) and jugs (Fig. 5:6, 7).

## Complex 4

A water cistern in the shape of a truncated cone (max. width 5 m , depth at least 4.2 m ; Fig. 6) was discovered c. 1 km southwest of Tel Sha'alvim and c. 3.5 km east of Complexes 2 and 3. Its rectilinear opening (width 1.2 m ) was cut in a flat ceiling. The walls were coated with white plaster (c. 5 cm thick), applied over a layer of non-ribbed potsherds that were bonded with gray cement. A small heap of modern debris accumulated at the bottom of the cistern to a height of 3.6 m below the ceiling. The cistern was not excavated and could not be dated.


1. Location map of complexes.

2. Complex 1, plan.

3. Complex 2, water cistern, plan.

4. Complex 3, hewn cistern, plan.


[^5]
6. Complex 4, water cistern, plan.

## Shavē Ziyyon*

Yoav Lerer
9/5/2007
During August 2003 an excavation was conducted along the northern bank of Nahal Bet Ha-'Emeq (Permit No. A-3972*; map ref. NIG 20820-1/76564-5; OIG $15820-1 / 26564-5$ ), in the wake of developing the Shavē Ziyyon sewage system and the rehabilitation of the Nahal Bet Ha-'Emeq drainage, as well as east of the excavation conducted in the previous year (HA-ESI 118). The excavation, on behalf of the Antiquities Authority, was directed by Y. Lerer, with the assistance of R. Abu-Raya, E. Stern, N. Getzov, A. Shapiro, V. Essman and V. Pirsky (surveying) and H. Smithline (photography).

An area, c. 100 m east of Area $A$ in the former excavation, was opened.
A kurkar surface ( $5 \times 60 \mathrm{~m}$ ), with remains of two stone quarries, was exposed. Rectangular stones $(0.4 \times 0.6 \mathrm{~m})$ were cut in one quarry ( $4 \times 4 \mathrm{~m}, 0.2-0.4 \mathrm{~m}$ deep) and a somewhat different size of stones ( $0.3 \times 0.8 \mathrm{~m}$ ) were quarried and in the other ( $4.0 \times 4.3 \mathrm{~m}, 0.1-0.3 \mathrm{~m}$ deep); several potsherds dating to the Byzantine period were found.

## Shavē Ziyyon, North



1. Pottery.

2. Area B, winepress, plan and section.

3. Winepress, looking west.

Dina Avshalom-Gorni
28/11/2007
During May 2003 an excavation was conducted in southern Nahariyya, south of the 'En Sara neighborhood, in the northern part of Khirbat el-Mallaha (Permit No. A-3909*; map ref. NIG 207994/766143; OIG $157994 / 266143$ ), in the wake of development. The excavation, on behalf of the Antiquities Authority and financed by the Nahariyya Municipality, was directed by D. Avshalom-Gorni (drafting and photography), with the assistance of N. Getzov (surveying and photography), Y. Ya'aqoby (administration), H. Tahan (drawing) and workers from the Ministry of Labor.

The excavation was conducted north of the Nahal Bet Ha-‘Emeq mouth, on a kurkar hill next to the seashore. Burial caves had been exposed on the western slope of the hill in the past and on the southern slope were sections of mosiacs, remains of walls and masonry stones, as well as the remains of two rock-hewn pools. The site continues south of Nahal Bet Ha'Emeq, within the grounds of Moshav Shave Ziyyon, where a church was exposed (IAA Reports 14:10).

Two areas were opened, 20 m apart.
Area A. A hewn rectangular shaft ( $1.5 \times 2.1 \mathrm{~m}$, depth 0.9 m ), oriented northeast-southwest, which contained numerous fragments of pottery vessels dating to the Hellenistic period (Loci 105, 108), was exposed. The finds included bowls and kraters (13\%; Fig. 1:1-5), cooking pots (41\%; Fig. $1: 6,7$ ), frying pans and lids ( $20 \%$; Fig. $1: 8-11$ ), juglet (Fig. 1:12), locally produced jars with twisted handles in Phoenician tradition ( $24 \%$; Fig. 1:13) and the base of an imported amphora (Fig. $1: 15$ ), as well as stands ( $2 \%$; Fig. $1: 16$ ) and an oven fragment (Fig. 1:14). The assemblage is characteristic of deposits from the end of the Hellenistic period in the north of the country and it did not contain any imported vessels, other than the single fragment of an amphora base. The vessels seem to have been discarded in the shaft, whose quarrying was never completed and its purpose is unclear.

Area B. The remains of a winepress (14 sq m; Figs. 2, 3) were uncovered. Part of the treading floor was exposed on the eastern side of the winepress. Only a small part of the floor, paved with a white mosaic, was preserved. Part of a vat was positioned in the middle of the floor where a press used to squeeze the grapes. A plastered filtration vat (L106) was revealed west of the treading floor. Its bottom was made of white mosaic and a through-hole in its western wall led to the collecting vat (L103; $2.5 \times 3.0 \mathrm{~m}$ ). Only the eastern part of the vat was excavated and several layers of plaster had been applied to its walls during the course of its use. The floor of the vat was a mosaic of white tesserae and in the northwestern corner steps were partially exposed that descended from the upper edge of the vat to its bottom. A ramp paved with white tesserae was exposed around the collecting and filtration vats. All that remained of the walls that surrounded the collecting vat were the rock-hewn foundations.
The artifacts from Area B dated to the Byzantine period and included imported bowls red slipped and well-fired $(8 \%$; Fig. $1: 17,18)$ that dated to the beginning of the sixth century CE, as well as two groups of barrel-shaped jars. The first has a high neck, molded rim and curved shoulder ( $60 \%$; Fig. $1: 19-21$ ) and is widespread in the Galilee, dating to the fourth-fifth centuries CE. The second has a short neck, plain rim and drooping shoulders (32\%; Fig. 1:22, 23). These jars are made of clay that contains coarse sand and dark brown temper that is darker than the color of the clay. They are more characteristic of the southern Byzantine sites, such as Caesarea and are rarely found in Byzantine sites in the Galilee. A lamp $(1: 24)$ of the Byzantine period was also found. Since this was a winepress no other forms of vessels were found in the assemblage, such as bowls and kraters or cooking vessels and jugs of indigenous clay that are characteristic of settlement sites. Based on the finds, the final use of the installation is dated to the beginning of the sixth centuries CE.

North of the winepress a wall (W102) built on top of bedrock, parallel to the northern wall (W111) of the collecting vat, was exposed. The wall, preserved two courses high, was probably part of another building that was not excavated. The area between Walls 102 and 111 (L104) was filled with dark red soil mixed with numerous potsherds, mostly jars from the fifth century CE, similar to the jar from the assemblage in Area B (Fig. 1:22).

This winepress is of the linear type, whereby the treading floor, filtration vat and collecting vat are positioned in a file. A similar winepress is known from Horbat Masref (Map of Akhziv (1) and Map of Hanita (2):71*) and these winepresses prevail in the Galilee during the Byzantine period.


2. Area B, winepress, plan and section.

3. Winepress, looking west.

## Tahunat et Tabkha

Moshe Hartal and Howard Smithline
16/10/2007


1. Assyrian bowl

During July, September and October 2003, two seasons of salvage excavations were conducted at the foot of Tahunat et Tabkha, south of She'ar Yashuv (Permit No. A- 3952; map ref. NIG 26025/79160; OIG $21025 / 29160$ ), prior to the digging of a drainage channel. The excavation, on behalf of the Antiquities Authority and financed by the Mevo'ot Hermon Regional Council, was directed by M. Hartal in the first season and by $H$. Smithline in the second season, with the assistance of Y. Ya'aqoby (administration) and V. Essman and V. Pirsky (surveying).

Two squares, revealing six strata, were opened.
Stratum 1. Beneath surface was a layer of gray soil and potsherds that dated to the Middle Bronze Age, Iron Age, Hellenistic period and the Middle Ages, with no building remains, other than a concentration of stones that may have been the remains of a wall in the northern corner of the excavation.
Stratum 2. Part of a courtyard that had a tabun lined with jar fragments was excavated. The courtyard's northern side was missing and to its north was stone collapse. The ceramic finds in the courtyard and the potsherds that lined the tabun dated the stratum to the Hellenistic period (third century $B C E$ ).
Stratum 3. Potsherds from the Persian period (fifth-fourth centuries BCE) were found without any building remains. They included fragments of bowls, cooking pots, jars and lamps. Noteworthy among them was a bronze seal and the head of a ceramic male figurine.
Stratum 4. Potsherds dating to the time of the Assyrian conquest of the Kingdom of Israel (eighthseventh centuries BCE), without any building remains, were found. A small Assyrian bowl (Fig. 1) was among the finds.
Stratum 5. A wall build of large stones (width 1 m ) and an earthen pavement next to it dating to Iron II (ninth-eighth centuries BCE) were exposed. Numerous cooking-pot fragments were found.
Stratum 6. A bedrock surface was exposed in the eastern square. It was covered with travertine that extended across the area south of the excavation. The surface was severed in the north by a rock-cutting, at least 3 m deep, at whose bottom was a thick layer of clay. This seems to have been part of a water reservoir. A channel that conveyed water to the reservoir was hewn along the bedrock surface. Potsherds dating to Middle Bronze II were recovered from the fill in the reservoir, which was sealed with a thick layer of travertine that had accumulated from water flowing over it and upon which the wall from Stratum 5 was built.
The excavation, undertaken in an area east of the tell, probably lies beyond the limits of the settlement. During Middle Bronze II, bedrock was hewn in preparation for a water reservoir of unknown dimensions, whose depth exceeded 3 m . The reservoir was sealed after it was no longer used. A layer of travertine was deposited by water that flowed over the surface prior to Iron II, at which time a wall, whose function could not be determined, was built on top of the reservoir. During the period of the Assyrian conquest and in the Persian period no construction took place in this area and the pottery vessels found here had probably originated from the layers on the tell. During the Hellenistic period a courtyard with a tabun was built, yet the remains of the building to which it belonged were not discerned within the limited excavation area.


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1. Assyrian bowl.

## Tal Shahar*

Ianir Milevski
7/1/2007
During April 2002 a trial excavation was conducted at Tal Shahar, c. 700 m north of Nahal Soreq (Permit No. A-3628*; map ref. NIG 19045-50/6331-3; OIG 14045-50/1331-3), prior to the renovation of the railroad track. The excavation, on behalf of the Antiquities Authority and financed by the Israel Railroad Authority, was directed by I. Milevski, with the assistance of H. Lavi (administration), J. Seligman, Z. Greenhut and D. Weiss (Jerusalem District) and laborers from Rahat.

Three squares ( $4 \times 4 \mathrm{~m}$ ) were opened 10 m apart and four probe trenches (c. $1 \times 4 \mathrm{~m}$ ) were dug by a backhoe close to the squares. A layer of gray-dark brown alluvium, containing potsherds from the Early, Intermediate and Middle Bronze Ages and the Roman-Byzantine periods, as well as several flint implements, was discovered in the squares. Potsherds and flint implements were found above a surface layer that overlaid the alluvium layer. The middle and western parts of the excavation were covered with modern refuse.
A layer of alluvium was exposed in the probe trenches at a depth of c. 1 m . It overlaid a layer of sterile reddish clay soil at a depth of c. 3.0-3.5 m. Bedrock was uncovered below the clay layer in one of the trenches.
No remains of a building, settlement or occupation layer were discovered. The potsherds and flint implements were probably swept from the surrounding sites unto the alluvium layer.

## Tamra*

## Yotam Tepper

16/8/2007


1. Location of current and previous excavations in the village.

2. The building, plan.

3. General view of excavation, looking west.

4. Stone artifacts.

5. Pottery.

During September 2003 a salvage excavation was conducted along the southeastern slope of the village of Tamra ez-Zo'abi in the Jezreel Valley (Permit No. A-3986*; map ref. NIG 23830/72675; OIG 18830/22675), prior to private construction. The excavation, on behalf of the Antiquities Authority, was directed by Y. Tepper (photography), with the assistance of I. Dadush (administration), V. Essman and V. Pirsky (surveying), D. Avshalom-Gorni (ceramics), Y. Gorin-Rosen (glass) and H. Tahan (drawing).

The houses of the modern village of Tamra, east of Giv'at Ha-More, were constructed along a basalt spur and its slopes. The core of the village is built around a gentle ravine at whose bottom flows the spring of 'Ein et-Tahta. Nine archaeological excavations (Fig. 1) were conducted along the eastern slope of the village, exposing dwellings, streets and installations that dated to the Byzantine and Early Islamic periods, as well as finds from the Persian, Roman and Crusader-Mamluk periods (HA-ESI 109:95*; 113:30*-33*). Previous excavations next to the spring, at the bottom of the slope, exposed remains from Iron Age I, II and from the Hellenistic, Roman, Byzantine and Early Islamic periods (HA-ESI 117).

The excavation ( 50 sq m ) revealed a square building with two rooms that is dated to the sixth century CE. Two phases were discerned in the structure. Probes conducted after the conclusion of the excavation ascertained that the building extended beyond the limits of the excavation area and at least another room could be reconstructed to the west, as well as one to the east. It can reasonably be assumed that the building also continued to the north. The walls of another dwelling were exposed to the east.

The Early Phase. The building was constructed on top of the natural basalt bedrock ( 297.25 m above sea level; Figs. 2, 3). Two rooms were exposed; a western (Loci 103, 108; $2.5 \times 3.4 \mathrm{~m}$ ) and eastern (L115; $3.45 \times 4.20 \mathrm{~m}$ ) rooms that shared a common opening in W106 and another one was in the southern wall (W120) of the eastern room. Flat basalt paving stones, placed on the smoothed natural bedrock, were overlaid with dark earth, which contained potsherds and fragments of glass vessels, dating to the sixth century CE. The walls (width 0.75 m ) of the rooms were built of medium and large basalt blocks, mostly roughly hewn, with small basalt pieces and earth between them. The walls were set on bedrock without a foundation trench. The bottom courses of the southern (W105, W120) and eastern (W114) walls were built of large stones. The eastern, western and southern walls were preserved two courses high ( $0.3-0.5 \mathrm{~m}$ ). The northern wall (W101; at least 7.75 m long) was preserved six courses high (max. 0.96 m ) and had a built pilaster in its western part, which could not be fully understood under the constraints of the excavation. Next to W114 of Room 115 was a low stone shelf (W116) that probably served as a shelf or a bench.

The Late Phase. The building was renovated during the course of the sixth century CE. The passage in W106 was blocked with large basalt stones that were partly dressed and in secondary use. A layer of earth was deposited to a height of 0.3 m above bedrock in the western room (L103). A floor of flat basalt stones overlaid this layer. A similar situation was discerned in the eastern room (L115) where many stones were placed at a uniform level, but in disarray. The later floor covered the shelf/bench (W116), negating its use and the opening in the southern wall (W120) was also sealed. One of the stones was a broken basalt millstone of the Olynthus mill that was probably used in the early phase of the building and incorporated in its construction as a masonry stone in the later phase (Fig. 4:1).
Seventy-six rims were collected, $80 \%$ of them dated to the sixth century CE. Some were found in Room 115 from the early phase (Fig. 5:1, 2,4) and some were on Floor 103 of the later phase (Fig. $5: 5,6,8$ ). Imported bowls ( $41 \%$ ) are red slipped (Fig. 5:1-8) and the rest are locally manufactured vessels, including cooking pots (Fig. 5:9-13), some decorated with white-painted runs (Fig. 5:11) and wavy incisions on the neck (Fig. 5:12), bag-shaped jars (Fig. 5:14) and a single lamp fragment (Fig. $5: 18$ ). A few of the rims ( $17 \%$ ) dated to the seventh-eighth centuries CE and were all found in the upper soil layer, among them jars (Fig. 5:15,16) and a cup (Fig. 5:17). A few potsherds (3\%) dated to the first-fourth centuries CE and a single fragment was from Iron Age I.
The glass assemblage (not drawn) included bases of wine goblets with hollow rings, fragments of bottle rims and bases--all dating to the Byzantine period. A basalt grinding tool was also found (Fig. 4:2).

Compared with the multi-period artifacts that were found in other excavations near the spring of the Tamra village, the building exposed in the current excavation is a single-period dwelling that was constructed on bedrock. This building supplements our accumulated knowledge on the settlement distribution along the fringes of the Jezre'el Valley and in the lower eastern Galilee during the Byzantine period. The large quantity of imported vessels is probably related to the settlement expansion in this period, when Christianity became established in the region.


1. Location of current and previous excavations in the village.


[^6]
3. General view of excavation, looking west.

4. Stone artifacts.



1

movin.



5. Pottery.

## Tamra

## Leea Porat

16/12/2007


1. Area A, plan.

2. Area A, stone floor (L11).

3. Area B, plan.

4. Area B, tabun (L27).

5. Columns, looking
north.

During July 2002 and January 2003, two salvage excavations were conducted on the eastern slope of the Tamra village in the Jzre'el valley (Permit Nos. A-3683*, A-3812*; map ref. NIG 2380-9/7263-9; OIG 1880-9/2263-9), in the wake of damage caused to antiquities. The excavations, on behalf of the Antiquities Authority, were directed by L. Porat, with the assistance of V. Essman, A. Hajian and V. Pirsky (surveying and drafting), D. Syon (photography), E.J. Stern (ceramic consultation), Y. Gorin-Rosen (glass) and H. Tahan (pottery drawing).

Two areas were opened on the eastern slope of the hill where Tamra is situated. Three strata were discerned in Area A and a single stratum was revealed in Area B, c. 8 m north of Area A.

Seven salvage excavations had been conducted at Tamra in the past (HA-ESI 109:95*; 113:30*33*), exposing remains from the Roman, Byzantine, Early Islamic and Mamluk periods (HA-ESI 119: Fig. 1).

Area A (3.5 $\times 7.5 \mathrm{~m}$; depth 1.2 m ; Fig. 1)
Stratum III. Three stones of a north-south aligned wall (W21), which was built of basalt ashlars and set on bedrock, were found. The wall was overlain by another wall (W15). Fragments of pottery vessels and a few fragments of glass vessels, dating to the Umayyad period, were recovered from the fill (L18) alongside W21. A small juglet (Fig. 2:2) was found near the eastern face of W15.
Stratum II. The eastern part of a building (height 1.2 m ) was exposed. It consisted of an eastern wall ( W 12 ; width 0.93 m ) that was severed in the south and three walls (W13, W15, W20; width $0.65-0.70 \mathrm{~m}$ ), which abutted on its western side and formed two small rooms, a northern (L16) and a southern one (L22). Room 16 had an entrance (width 0.6 m ) in the eastern W12. Its floor sealed W21 of the earlier Stratum III. The floor in both rooms consisted of basalt ashlars and hard, light colored soil. Pottery vessels, including a cooking pot (Fig. 2:1) and a few glass fragments that dated to the Umayyad period were found.
Stratum I. It seems the walls $(12,13,15,20)$ of the previous stratum continued to be used and another wall (W17) was built. It is unclear whether the walls were raised higher in this stratum. Walls 12,13 and 17 formed a northern room (L11) that had an entrance, equipped with a stone threshold (width 1 m ) and a flat basalt-ashlar floor (Fig. 3). To the north of the floor was a bellshaped water cistern (L23) that was not excavated. The damaged floor precluded the determination whether it abutted the edge of the cistern or the cistern's stonecutters damaged it.
A lamp (Fig. 2:3), dating to the Abbasid period together with the other pottery vessels, was found, in situ, on the stone floor. The middle room (L14) had a hard, light colored soil floor and the remains of a stone floor were found in the western part of the southern room (L19).

Area B (depth 1.2 m; Fig. 4)
Remains of a two-room building were found in a single square. The first room had three walls that were founded directly on bedrock (W22, W23, W24; height 1.2 m , width $0.64-0.67 \mathrm{~m}$ ) and a floor (L21) that consisted of basalt ashlars and hard, light colored soil. A small tabun (L27; diam. 0.35) was supported by several stones and a small marble column was found on top of the floor, near the eastern wall (W24; Fig. 5). Close to the western wall (W22) was an installation that comprised four stones; two rested on top of the floor and two were leaning on the wall. To the east of the first room, part of the second room (L25) that had a stone floor at the same elevation as that of the western room was excavated.
Adjacent to and north of W23 were several flat stones, 0.6 m above the level of the rooms' floors; these were probably part of a courtyard pavement.
A few fragmentary pottery vessels (cooking bowls, juglets, glazed bowls), dating to the Abbasid period, were found
In the wake of work by mechanical equipment, an east-west probe trench was excavated 6 m north of the excavation area. The fill in the trench contained three column fragments (diam. 0.3-0.4 m, length 0.3-0.7 m; Fig. 6).


2. Pottery.

3. Area A, stone floor (L11).

4. Area B, plan.

5. Area B, tabun (L27).

6. Columns, looking north.

## Tel 'Eran

Yehuda Dagan and Emanuel Eisenberg
11/7/2007
During August-September 2002 a salvage excavation was conducted at Tel 'Eran, south of Qibbuz Regavim (Permit No. A-3624; map ref. NIG 202405/713606; OIG 152405/213606), following the discovery of ancient remains while working on the Cross Israel Highway. The excavation, on behalf of the Antiquities Authority and financed by the Cross Israel Highway Ltd., was conducted by Y. Dagan and E. Eisenberg (photography), with the assistance of S. Ya'aqov-Jam (administration), V. Essman and V. Pirsky (Surveying) and Z. Horowitz. Laborers from Or 'Akiva and Umm el-Fahm participated in the excavation.

Tel 'Eran, located on a spur that descends south toward Nahal Barkan, extends across an area of 3-4 dunams. Large olive trees are planted on it and unirrigated crops are grown along its slopes. R. Givon conducted an excavation on the western part of the tell in 1962, when a channel was being dug for the national water carrier. Givon exposed tombs from the Chalcolithic period, a building from Iron Age I-II and fragments of pottery vessels from other periods (R. Givon, Tel 'Eran/Khirbet Umm Turos, in Y. Ne'eman ed., Menashe Region III, 1970, pp. 1-5).

Most of the excavation was conducted on the eastern slope of the tell, in an agricultural area that slopes gently to the south and east. Seventeen squares were opened in a row, running from north to south; at a later stage more excavation areas were added to the east. Mechanical equipment was used to dig east-west probe trenches in the low part of the area, revealing a high water table that in all likelihood precluded any kind of settlement in this area, which was prone to annual flooding.

Bedrock overlaid with numerous potsherds that were probably swept there from the tell, located to the west, was exposed below surface (depth $0.3-0.5 \mathrm{~m}$ ). Most of the sixty other excavations squares were only partially dug and bedrock was found beneath a thin layer of terra rosa soil. Ancient pits cut into bedrock, which contained potsherds from the Early and Middle Bronze Ages, were discovered in several places.

A limited area ( $4 \times 8 \mathrm{~m}$ ) was excavated in the strip of squares along the edge of the tell, revealing building remains and many potsherds from the Pottery Neolithic, Chalcolithic and Middle Bronze Age II, as well as a few fragments from Iron Age II.

It seems that most of the settlement extended sparsely across the spur of the tell and not along the eastern slope. Although the available water and farmland drew settlers to the area throughout many periods, the settlement did not develop beyond the boundaries of the limestone hill.

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## Tel Aviv - the Qirya

Rona Avissar
11/7/2007


1. Plan.

2. Pottery.

During January-February 2003 a salvage excavation was conducted at the Qirya in Tel Aviv (License No. B268/2003; map ref. NIG 180205-25/664230-90; OIG 130205-25/164230-90). The excavation, on behalf of the Department of Archaeology and the Land of Israel Studies of Bar-Ilan University, was directed by R. Avissar, with the assistance of D. Castel (pottery restoration), Y. Rodman (drawing) and M. Hershkowitz (pottery reading).
The Antiquities Authority exposed an area, west of the Qalqa Building Bridge on Petah Tiqwa Road in Tel Aviv. In the wake of discovering several anomalies, development work was suspended until a salvage excavation could take place.

Eighty elements of various sizes (anomalies that were defined as excavation areas), which were mostly found to be natural depressions in bedrock (Fig. 1), were excavated. The excavation in those spots ended with the exposure of kurkar bedrock or a layer devoid of finds.
The fill that had been swept from surface into several pits contained potsherds that included fragments from the modern era (nineteenth-twentieth centuries CE), as well as from the Mamluk, Roman and Hellenistic periods.
The remains of a stone wall, built atop bedrock, were discovered in Area 42. The wall was severed by a modern concrete wall that retained a roadbed portion of the Petah Tiqwa Road. Numerous fragments of pottery vessels were discovered on bedrock surface, including a Megarian bowl (Fig. 2:1) and a flask (Fig. 2:2) from the second century BCE.
Area 25 was apparently used as a water cistern, which was excavated to a depth of 2.8 m from surface. Several human bones, which were sent for re-burial by the Ministry of Religious Affairs, as well as bones and teeth of animals, were discovered in the fill.


Page 830 of 963

1. Plan.

2. Pottery.

## Tel Aviv, Ramat Aviv*



1. Map location.

2. Area A, plan and section.

3. Area A, Walls 107, 112, looking northwest.

4. Area B, plan and sections.

5. Area $B$, a hewn pit.

Angelina Dagot
24/12/2007
During May-June 2004, an excavation was conducted at the intersection of Levi Eshkol and S.Y. Agnon Streets in Ramat Aviv (Permit No. A-4168*; map ref. NIG 18024/66774; OIG 13024/16774), after antiquities were discovered while inspecting infrastructure work. The excavation, on behalf of the Antiquities Authority, was directed by A. Dagot, with the assistance of E. Bachar (administration), A. Hajian (surveying), T. Sagiv (field photography), M. Shuiskaya-Arnov (drawing and surveying), M. Sadeh (archaeozoology), D.T. Ariel (stamp impression), P. Gendelman (pottery consultation) and A. Buchennino.

The site is located on the western kurkar ridge of the coastal plain, c. 600 m west of Tell Qasile and c. 1 km east of Tell Qudadi. Nine excavations were conducted at the site between 1995 and 2004, exposing remains from Middle Bronze II and the Hellenistic Roman, Byzantine, Mamluk and Ottoman periods (Fig. 1).

## Two excavation areas were opened, 90 m apart.

Area A (Fig. 2)
Two squares were opened. A dressed limestone block (L120; $0.7 \times 0.7 \mathrm{~m}$ ) and collapse that consisted of medium-sized fieldstones (L122) to its east were found in Square I. A sounding in the northwestern corner of the square ( $1 \times 1 \mathrm{~m}$ ) was excavated; three levels (Loci 102, 104, 118), which contained concentrations of jar fragments from the Roman period (Fig. 3:3), were discovered.
Two construction phases were identified in Square II ( $2.5 \times 5.0 \mathrm{~m}$ ). In the early phase, a wall (W114; $0.3 \times 0.6 \mathrm{~m}$ ) of fieldstones without bonding material was preserved a single course high. In the later phase, two walls (W107, W112; Fig. 4) that formed the corner of a building were built of dressed limestone ( $0.3 \times 0.6 \mathrm{~m}$ ) and medium-sized fieldstones. The eastern face of W107 was not preserved and therefore, it was impossible to ascertain its original width.

Apart from the Roman-period pottery, a few potsherds from Middle Bronze II (not illustrated) and the Hellenistic period were found, including bowls (Fig. 3:1,2) and a jar (Fig. 3:4). The hamra soil fill (L105) west of W107 contained a stamped Rhodian amphora handle that bears the name DIka [io]s (Fig. 3:5)--a well-known potter who worked between the years 260-210 BCE.

## Area B

Pits excavated in soft kurkar bedrock were documented in five points (A- E; Fig. 5).
Point A was an elliptical pit (diam. 1.9 m ; depth of 0.65 m ; Fig. 6) filled with brown hamra soil that contained animal bones and a few potsherds, which ranged in date from the Hellenistic period until the modern era.
Points B-D were circular pits (B-- diam. 1.3 m , depth 1.6 m ; C-- diam. 1 m , depth 1.64 m ; D-diam. 1.2 m , depth 1.5 m ), in which three fill layers were discerned. The upper layer consisted of brown hamra soil; the middle layer was dark burnt matrix that contained a large quantity of organic material and animal bones, and the bottom layer was brown hamra soil.
Point E was a rectangular pit ( $1.0 \times 1.5 \mathrm{~m}$; depth 0.3 m ).
The ceramics recovered from the pits included a jar (Fig. 7:1) from Middle Bronze II, a jar (Fig. 7:2) from the Byzantine period, a jar (Fig. 7:3) from the Early Islamic period, a cooking pot (Fig. $7: 4$ ) from the Mamluk period and a pipe (Fig. 7:5) from the Ottoman period, as well as a very large amount of animal bones, mostly sheep, goat, pig, donkey and cattle.


1. Map location.

2. Area A, plan and section.

3. Area A, pottery.

4. Area A, Walls 107, 112, looking northwest.





5. Area B, plan and sections.

6. Area $B$, a hewn pit.

7. Area B, pottery.

## Tel Hazor - 2006



1. Area A, aerial photograph: Area A-5 (lower left), Area A-4 (center), Area A-2 (right).

2. Area $A-5$, the main hall of the architectural complex, looking southeast.

3. Area M, aerial photograph.

Amnon Ben-Tor
22/1/2007
During July-August 2006 the seventeenth season of excavation at Tel Hazor was scheduled to take place. Due to the war breaking out in the north the excavation was curtailed after two weeks (License No. G$16 / 2006$ ). In September, fieldwork was completed in Area A-5 and several conservation measures were implemented before the beginning of the rainy season. The 'Selz Foundation Excavations at Hazor in Memory of Yigael Yadin', on behalf of the Hebrew University and under the auspices of the Israel Exploration Society, were conducted by an expedition headed by A. Ben-Tor that included D. Ben-Ami (supervision Area A-4), S. Kisilevitz (supervision Area A-2), D. Zigler and V. Avrutis (supervision Area A-5), S. Zuckerman, A. Davidovich and B. Drake (supervision Area M), J. Rosenberg (surveying), O. Cohen and I Strand (conservation), M. Cimadevilla (photography), A. Madvig-Struer (office and find registration) and S. Yadid and I. Strand (administration). Students and volunteers from several countries participated in the excavation, among them a group from the Associates for Biblical Research from the United States (led by G. Franz), a group of students from Romania (led by T. Aldea), as well as volunteers from the United States, Canada and Europe and archaeology students from the Hebrew University in Jerusalem.

Area A-2 (Fig. 1). The aim in this area was to remove the layer of fallen mud bricks (more than 1 m thick) that had accumulated on the pebble pavement north of the palace and to ascertain how it related to the palace. The excavation was suspended c. 0.2 m above the floor and will be completed during the 2007 season.

Area A-4. Excavations were conducted in the northern and southern parts of the area, below the wall foundations of the earlier palace, which extended beneath the courtyard east of the Late Bronze Age palace (HA-ESI 117). It became clear that the walls of the earlier, Middle Bronze Age palace were founded on top of building walls from the Early Bronze Age.

Area A-5 (Fig. 2). The excavation in this area began in 1999 (HA-ESI 111) and was completed this year. The southwestern hall, which is one of three (or four?) large halls that constituted an architectural complex, was entirely cleared. About half of another hall to the north, separated from the southwestern hall by a thick wall was also excavated. The corner of yet another hall, to the east of the northern hall and some traces that point to the presence of a fourth hall were detected east of the southwestern hall.
The walls of the southwestern hall $(6 \times 10 \mathrm{~m})$ were built in a uniform manner and consisted of a stone foundation (height c. 1.5 m ), which was set directly on natural bedrock in the south and west, and a mud-brick superstructure whose walls were composed of dark brown mud bricks or mud-brick material (average width c. 3 m , average preserved height c. 4 m ) and lined on the interior and exterior with light colored and dark brown mud bricks. The stone foundation and the mud-brick superstructure were coated with a layer of plaster. The western wall was preserved to a height of 5 m ! The northern wall was built inside a bedrock-hewn foundation trench. The eastern wall was founded on top of a low fill deposited atop natural bedrock.
A mud-brick narrow wall set atop a stone foundation in the eastern side of the hall defined a narrow compartment $(1.5 \times 8.5 \mathrm{~m})$. Two mud-brick low benches were installed along the northern and southern ends of this compartment. A tiny clay tablet inscribed in cuneiform Akkadian that has not yet been deciphered was found on the floor of the compartment. This tablet is almost identical to the one discovered during the 2000 season (IEJ 55, 2005).
No entrance was discerned in the four walls of the hall or in the compartment to its east; therefore, it seems the entire complex was subterranean.
The floor of the hall was a layer of plaster deposited on bedrock and made smooth throughout most of the hall's area. Natural pockets in bedrock were filled with soil mixed with an abundance of ceramic finds dating to Early Bronze Age III. During the 2003 season, these soil-filled pockets produced a Jemdet Nasr-type cylinder seal and a clay figurine of a four-legged animal.
Building remains and a pit were discerned above the tops of the complex walls in the west, north and east. Potsherds from Late Bronze Age I were found in the pit and Late Bronze Age II fragments were collected from sections of a stone-built installation and a pebble surface. These potsherds, together with the characteristic mud-brick construction of the walls, date the establishment of the complex, at the latest, to the beginning of the Late Bronze Age, and perhaps even somewhat earlier, to the time of 'Greater Hazor' in the seventeenth-sixteenth centuries BCE.
As had been reported in previous seasons, the halls were filled in during the eighth century BCE and dwellings were erected atop the fill (HA-ESI 115:3*-4*; 116:3*-4*). The fill material contained thousands of potsherds from the eighth century BCE found on the floor and near the mud-brick walls of the halls.
The function of the complex has not yet been ascertained and it is unclear how the mud-brick walls survived to a height of c .5 m for close to a thousand years--from the time of their construction to when the complex was filled in the eighth century BCE.

Area M (Fig. 3). The area was expanded to the south and extended from the slope of the upper city in the north to several meters north of the Solomonic Gate in the south. The purpose of the excavation was to re-examine the Iron Age stratigraphy at the site and subsequently, clarify the plan and nature of the Late Bronze Age monumental structure situated beneath the Iron Age strata The building south of the Bama Complex (HA-ESI 110:4*-5*) is still buried below the Iron Age strata and so far, only its northern part was exposed. It has been suggested that this was the administrative palace of Late Bronze Age Hazor, although this cannot be confirmed until the entire building is uncovered.
The area was excavated to a depth of c. 1 m and two significant discoveries were made. A room that was part of a large building, which extended southward beyond the excavation area, was exposed just below surface; it will be excavated next season. North of the room and contemporary with it were several installations and work surfaces. The ceramic finds definitely dated them to the Persian period, which until now was mostly represented at Hazor by tombs.
Below the large building and to its north, walls, a large pebble-paved courtyard and several installations were exposed, overlaying the tops of stone columns, so very characteristic of the Iron Age construction at Hazor, which belonged to a building whose northern part had been excavated in
the 1990s and whose destruction was attributed to the Assyrian conquest of Hazor (Yadin's Stratum $\mathrm{V})$. The pottery associated with the pebble-paved courtyard, or with the wall sections and the installations above the tops of columns, was from the Iron Age and therefore, the remains should be dated to the Assyrian period (Yadin's Stratum III) or to the Israelite settlement following the destruction of Hazor by Tiglath Pileser III (Yadin's Stratum IV). We are inclined to accept the second possibility at this early stage. The architectural remains ascribed to these two periods (Strata III-IV), which have so far been uncovered at Hazor, are meager; hence those recently discovered in Area $M$ are of particular significance.

Restoration and Conservation. Work had begun before the beginning of the season. It continued during the season and achieved several goals. The walls of the Solomonic Gate were raised significantly; debris, accumulating over the years along the eastern façade of the casemate walls, was removed; the wall of basalt orthostats, separating the palace courtyard from the corridor to the throne room, was restored; wooden doorjambs were installed in the entrance to the throne room and the eastern wall of the palace was stabilized by supporting wooden beams that were incorporated within it. The work was carried out with funding provided by several foundations, among them the Selz Foundation (USA), the Reginald and Esme Benjamin Foundation (Australia) and the Hecht Fund (Israel).


1. Area A, aerial photograph: Area A-5 (lower left), Area A-4 (center), Area A-2 (right).

2. Area A-5, the main hall of the architectural complex, looking southeast.

3. Area M, aerial photograph.

## Tel Hazor - 2007



1. Area A-2, paved courtyard north of the Late Bronze Palace, looking south.

2. Area $M$ at end of season; eighth-century BCE structures and below them, tops of columns, looking west.

Amnon Ben-Tor and Sharon Zuckerman
8/11/2007
During June-August 2007, the eighteenth season of excavations was conducted at Hazor (License No. G23/2007). The 'Selz Foundation Excavations at Hazor in Memory of Yigael Yadin' were carried out in the Hazor National Park on behalf of the Hebrew University and with the assistance of the Israel Exploration Society. The expedition was headed by A. Ben-Tor and included V. Euvrutis (supervision Area A-2/3), assisted by D. Wineblatt, S. Zuckerman (supervision Area M), assisted by S. Bachar and R. Lavie, D. Porotzky and V. Pirsky (surveying), O. Cohen (conservation), assisted by I. Strand, M. Cimadevilla (photography), D. Sandhouse (office and finds registration) and S. Yadid (administration). A group of students from the Southern Adventist University in the United States (led by M. Hazel) participated in the excavation, as well as volunteers from the United States, Canada, Europe and students of archaeology from the Hebrew University of Jerusalem.

Area A-2. The goal of the excavation was to complete the removal of the mud-brick collapse layer that had accumulated on the pebble-paved courtyard north of the palace and to examine the connection between the floor and the Late Bronze Age palace (Fig. 1). The later phase exposed in the area was represented by several pits from Iron I that were dug into the pebble pavement. The courtyard consisted of alternating layers of various sized pebbles and plaster. The later phase of the Bronze Age in the area was represented by a Late Bronze II pit that contained complete pottery vessels characteristic of the period. Overlaying the pebble floor itself was a meager assemblage of potsherds, figurines and small fragments of faience and bone objects that appears to be relatively earlier than the contents of the pit. The straight cut of the pebble floor, c. 1 m from the wall of the northern foundation of the late palace, apparently represented the foundation trench of the palace. The trench itself contained ash, clay bricks, a very large quantity of bones, as well as a considerable amount of pottery fragments that dated from the end of Middle Bronze II until the beginning of Late Bronze I. Noteworthy among the finds in the trench was a model of a liver that bears an inscription, which upon initial examination seems to date to the Early Babylonian period. In the eastern part of the area, the excavation went down below the level of the paved courtyard. In previous seasons, a few remains that dated to Middle Bronze II were exposed here, whereas in the current season a section of a building, dating to the Intermediate Bronze Age, whose thin walls were built of stones, was uncovered. Two phases were discerned in this area and a large number of pottery vessels, some of them intact, including 'Megiddo'-type vessels, were found. An intact jar whose rim was incorporated in the level of the early floor was also discovered. A large quantity of Early Bronze Age potsherds was uncovered below this level. In previous seasons, a stratum of buildings and potsherds, which dated to the Intermediate Bronze Age, was exposed nearby.

Area A-3. The high western part of the area was excavated after work had been suspended there for several seasons. Stone walls appeared just below surface, preserved to a considerable height. They belonged to dwellings that were partially exposed in previous seasons and now, it will be possible to complete their plans. A large quantity of potsherds was discovered on the floors of the buildings. A preliminary examination of the fragments ascribed them to a slightly earlier phase than the one exposed on the floors from the end of the Iron Age in the adjacent Area M. The bottom part of an Egyptian statue, bearing an inscription, was incorporated as a masonry stone in one of the walls from the Iron Age. It is a benediction-type statue whose exact date in the Bronze Age stil needs to be determined.

Area M. The area, already enlarged in the 2006 season, was expanded this season to the south by adding row of three squares. The continuation of the buildings from the Persian period, which had been discovered in the previous season, was exposed in the southern part of the area. The plan of the settlement at this stage included a retaining wall, oriented east-west, which was abutted by the walls of other rooms. A cubicle was incorporated in the retaining wall and several Persian jars were exposed on its floor. The courtyards of the buildings, whose walls were built of particularly large stones, contained several installations, in whose construction dressed basalt slabs in secondary use were incorporated. These finds were similar to the 'farmhouses' identified by the Yadin expedition in Area G, in the 1950s.
Below this stratum (probably Stratum II of the Yadin expedition) was a large pavement, which extended across most of the eastern part of the area and abutted a massive wall that delimited it on the east. The opening of a bell-shaped pit lined with stone (depth c. 1.8 m ) was set in this pavement. Incorporated in its upper course was the end of a gutter that consisted of three roughly hewn basalt sections, fitted together. The pit was not plastered and its function is unclear.
Upon removal of the pavement, thin walls of Iron Age dwellings that delimited several paved courtyards and residential rooms were exposed throughout the area (Fig. 2). Tabuns and other installations were also recorded. At least three phases, attributed to the end of the Iron Age based on the ceramics, were identified in these buildings. It should be noted that the destruction phase was only discerned in the northwestern part of the area; it continued the phase that had been observed in the same area in previous seasons and was attributed to the campaign of TiglathPileser III (732 BCE).
The tops of at least four rows of dressed limestone columns, sometimes engaged in walls, which were characteristic of Iron Age construction, were identified below the residential buildings throughout the area. Based on the length of the column rows, oriented east-west, it is reasonable to assume that these were public buildings, probably storehouses or stables, attributed to the ninth century BCE.

Restoration and Conservation. The work focused on reconstructing the long wall that delineated the northern side of the palace courtyard. The walls of the palace core eastern façade were in danger of collapse and also received thorough treatment. The southern part of the retaining wall, which bordered the palace courtyard on the east, was built to prevent the courtyard's collapse into the area on the east (Area A-4). The railroad tracks and tuff fill that were set in place several years ago in an attempt to create a 'promenade' around the casemate wall were removed and the southern walls of the gate were supported with stone construction. Likewise, the line indicating the
boundary of conservation work was added throughout Area A. The work benefited from funding provided by several foundations, among them the Antiqua Foundation (Geneva), Rosen Foundation (New York), the Reginald and Esme Benjamin Foundation (Australia) and the Hecht Fund (Israel).


1. Area A-2, paved courtyard north of the Late Bronze Palace, looking south.

2. Area $M$ at end of season; eighth-century BCE structures and below them, tops of columns, looking west

## Tel Hazor - 2007



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1. Area A-2, paved courtyard north of the Late Bronze Palace, looking south.

2. Area $M$ at end of season; eighth-century BCE structures and below them, tops of columns, looking west

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## Tel Kabri*



1. Hard sediment with embedded rounded stones and pebbles, looking south.

2. North section at the end of excavation.

3. East section at the end of excavation.

4. Backhoe excavation of the underlying alluvium, looking south.

5. Ceramic finds

Howard Smithline
14/2/2007
During November 2004, a small excavation was conducted at the foot of Tel Kabri (Permit No. A-4271*; map ref. NIG 21310-2/76810-2; OIG 16310-2/26810-2), preceding the laying down of a telephone cable. The excavation, on behalf of the Antiquities Authority and partially financed by the Cellcom company, was directed and photographed by H. Smithline, with the assistance of L. Porat (pottery restoration), H. Tahan (pottery drawing), A. Berman (numismatics) and A. Shapiro (GPS).

Kabri is situated in the northern coastal plain, 5 km east of Nahariya. This rambling multi-period site of c. 320 dunam has been extensively studied and excavated by A. Kempinski of Tel Aviv University. The tell is the highest point in the Kabri antiquities complex and until 1948 was occupied by the small village of et-Tell. The Tel Aviv University excavations explored part of the mound (Area E) where an Iron Age II fortress was uncovered. The current excavation area ( $4 \times 6 \mathrm{~m}$ ) lies c. 12 m below the top of the mound, on its steep northwestern slope where a narrow and relatively level step protrudes from the slope. The step continues to descend steeply to the north, down to the valley floor and, more gradually, to the west. It is oriented northeast-southwest and branches off from the old road to Nahariya that bisects the Kabri site from east to west and serves at present as an agricultural service road. The largest of the Kabri springs, 'En Shefa', is $100-150 \mathrm{~m}$ to the northeast.

The excavation uncovered accumulations and pockets of soil, as well as periods of flooding that spread collections of smooth and rounded stones and pebbles, presently embedded in a hard sediment, frequently in groups (Fig. 1). The sediment crust was sterile and void of ancient artifacts, as was the packed earth below. The occasional pockets of earth within the hard sediment contained pottery fragments. The flooding can be accredited to run-off from the nearby 'En Shefa'.

The accumulations of earth above the sediment, which contained randomly, distributed pottery fragments, spread down the steep northern slope and, less acutely, down the slope to the west (Figs. 2, 3). At least 3 m of sterile alluvial soil lay beneath the earth accumulations and sediment (Fig. 4). Due to the precarious position of the excavation on the edge of the steep slope and the reaching of sterile alluvium, the greatest depth was achieved by mechanical means, although bedrock was not attained. The topography of the steep northern slope is reminiscent of a rampart, yet no evidence attesting to construction, or layering of fill or any intentional interference with the natural topography, was uncovered. The possibility remains that the lowest 5 m of the slope, down to the valley floor, conceal rampart construction, but extensive fieldwork was precluded due to the limited nature of the excavation.
The pottery finds retrieved from the excavation reflect the ceramic profile of Area E at Tel Kabri, representing all its Iron Age phases. However, the finds clearly incline toward the ninth-eighth centuries BCE and include bowls (Fig. 5:1-7), cooking pots (Fig. 5:8-12), kraters (Fig. 5:13-16) and storage jars (Fig. 6:1-4), which are typical of Iron Age II assemblages that possess Phoenician influences in the north. Only a small number of finds may be dated to the latest phase of the fortress in the later half of the seventh century BCE, e.g., storage jars (Fig. 6:5, 6). An extremely worn black-on-red Phoenician ridge-necked juglet (not illustrated) was also found. Parallels to the ceramic repertoire may be found at Iron Age II sites, such as Horbat Rosh Zayit, Tel Keisan and Tel Dor.
The number of pre-Iron Age potsherds, mostly from the Early Bronze and Middle Bronze II periods that were the two major periods of Kabri's habitation, is veritably negligible, as was apparently the case in the excavation of Area $E$.

A few Hellenistic-period imported amphora fragments occasionally appeared. The surface matrix turned up a small amount of Ottoman-period potsherds that included some examples of Rashaya elFuhar ware.
A single Mamluk-period coin (IAA 100001) was found in the surface matrix. The coin is a fraction of a silver dirham, dating to the thirteenth century CE.
A broken basalt grinding stone may be enumerated among the finds.
This limited excavation adds little to our present knowledge of the history of et-Tell in the western portion of ancient Kabri. Perhaps its main contribution is the relatively large number of potsherds datable to the pre-fortress phase (E4), prior to the eighth century BCE, and the early fortress phase (E3; 734-660 BCE). The ceramic finds are probably remains of spill that derived from the tell and apparently reflect the large-scale construction and the heightened building activity on top of the mound.


1. Hard sediment with embedded rounded stones and pebbles, looking south.

2. North section at the end of excavation.

3. East section at the end of excavation.

4. Backhoe excavation of the underlying alluvium, looking south.


## Tel Kison (North)*



1. Location map.

2. Area A, section (western).

3. Pottery.

4. Head of a Persian figurine.

5. Coin No. 3.

Yotam Tepper
25/7/2007
During December 2002 a trial excavation and documentation of ancient remains was conducted north of Tel Kison (Tell Keisan) in the 'Akko Valley (Permit No. A-3797*; map ref. NIG 21445/75295; OIG 16445/25295) after damage to antiquities that was caused while digging trenches for a sewer line along the edge of the tell. The excavation, on behalf of the Antiquities Authority and financed by the Municipality of Tamra, was directed by Y. Tepper (surveying, drafting and field photography), with the assistance of Y. Ya'aqoby and Y. Dangor (administration), A. Shapiro (geology), L. Kupershmidt (metallurgical laboratory), D. Syon (numismatics), G. Finkielsztejn (amphorae), H. Tahan (drawing) and G. Finkielsztejn and T. Sagiv (studio photography).

The trenches were dug in modern farmland, from the foot of the tell northward, to a distance of 170 m (Fig. 1). An excavation area (Area A) was opened along the trenches, whereas other remains and finds were documented in the sections of two other areas ( $B, C$ ). The archaeological remains in the area farthest from the tell reflect the extent of the settlement's span and intensity beyond the topographic boundaries of Tel Kison.

## Area A

The excavation in this area $(3 \times 5 \mathrm{~m})$, c. 60 m from the tell, was suspended at a depth of c .3 m below surface; three layers were identified (Fig. 2).

Stratum 3. This stratum comprised several layers of soil. The bottom layer (L110; thickness c. 0.3 m ) yielded potsherds from the Early Chalcolithic period: a jar (Fig. 3:3) and from the Persian period: moratoria (Fig. 3:6) and jars (Fig. 3: 8, 10). The second dark layer (L109) contained a few finds and the third layer was a pottery horizon (L108) that included fragments of lamps from the Persian period (Fig. $3: 24,25$ ). The upper layer (L107) was an accumulation of gray earth with a few ceramic finds.

Stratum 2. This stratum was composed of two layers. The bottom one was a layer (L106) rich in potsherds from the Hellenistic period, including an amphora base from Knidos (Fig. 3:17) and two handles with stamped impressions (see catalogue of impressions below; Fig. 3:18, 19), as well as two coins of Antiochus III (198-187 BCE; see coin catalogue below, Nos. 1, 2) that were minted in 'Akko. The upper layer (L105) consisted of stone bedding and crushed chalk that was not set in prior to the Hellenistic period. The layer contained numerous potsherds dating to the Persian period and a wealth of finds from the Hellenistic period, including a jar (Fig. 3:21) and a krater (Fig. 3:22), as well as a bowl from the Roman period (Fig. 3:23). Large flat (average dimensions $0.20 \times 0.45 \times$ 0.60 m ) and medium (average dimensions $0.10 \times 0.15 \times 0.30 \mathrm{~m}$ ) pavement stones were placed atop the bedding.

Stratum 1. The upper stratum was an accumulation layer from the Crusader-Mamluk periods. Finds from the Ottoman period (Loci 101, 103), including a coin that dated to the reign of Abd alHamid II (1876-1909 CE) from the mint in Kushta (see coin catalogue below, No. 4), were discovered in the upper part of the stratum. Other finds recovered from this layer included potsherds, ranging in date from the Early Chalcolithic until the Ottoman periods, among them the base of an amphora, imported from Knidos and dating to the second century BCE (Fig. 3:16).

## Area B

Fragments of storage jars, cooking pots and basalt vessels, dating to three periods, were collected along the trench that was dug parallel to the tell. Most of the finds were from the Persian period, including fragments of mortaria (Fig. 3:5, 7), baggy-shaped jars (Fig. 3:9) and cooking pots (Fig. $3: 11$ ), as well as fragments of amphorae bases imported from Thassos and the northern Aegean Sea that dated to the fifth-third centuries BCE (Fig. 3: 12-14, see catalogue of impressions and amphora fragments). A few finds from the Iron Age and the Roman period were also found.
Five white horizontal levels (thickness $5-10 \mathrm{~cm}$ ), which were identified as floors of crushed chalk that extended from a depth of $0.6-0.7 \mathrm{~m}$ to 1.5 m below surface, were discerned in brown soil. Numerous fragments of pottery vessels on the floors evidenced a settlement in the Persian period. Visible to the west of these floors was a poorly constructed wall of small and medium-sized fieldstones, preserved three to four courses high. The top of the stones was 0.2 m below surface. The wall, which was at least 2 m wide, could be seen in the southern and northern sections of the trench to a distance of c. 25 m . Due to technical constraints it was impossible to date it. The archaeological remains extended c. 70 m east from the point where the trench turned and it is reasonable to assume that they continued even further, although at a lower level than the depth of the trench.

## Area C

An examination of the sections in the trench that extends perpendicular to Tel Kison, north of Area A, revealed an archaeological deposit at an elevation of 8.3-9.7 above sea level, sloping slightly northward. The color of the soil ranged from dark brown to black and it contained numerous potsherds and concentrations of small and medium-sized stones. The collected pottery fragments included potsherds from the Early Chalcolithic period: a pithos (Fig. 3:1) and a bowl (Fig. 3:2), a jar from the Early Bronze Age (Fig. 3:4) and fragments from the Intermediate Bronze and Iron Ages. Most of the finds, however, were from the Persian and Hellenistic periods. A few potsherds from the Byzantine, Crusader-Mamluk and Ottoman periods were found as well. Along the edge of the tell, M. Aviam found a fragment of a Persian figurine (Fig. 4) and a fragment of a bowl, bearing a stamped rosette.

Most of the finds from the Persian period were recovered 30 m from the edge of the tell. The majority of finds from the Hellenistic period were located $90-100 \mathrm{~m}$ from the tell and included a coin from the reign of Seleucus IV (187-175 BCE) that was struck in the mint of Antioch (?; see coin catalogue, No. 3; Fig. 5), the base of an amphora imported from Rhodes (Fig. 3:15) and a
stamped Rhodian handle dated to the years $152-142 / 1$ BCE (see catalogue of stamped impressions and fragments of amphorae; Fig. 3:20). Several potsherds from the Chalcolithic period and the Early and Late Bronze Ages were found 130-150 m from the tell. A few chunks of ceramic material fired at a high temperature (c. $750^{\circ}$ ) that were used as sling stones, weights or some other purpose, were found $160-170 \mathrm{~m}$ from the tell. Darker soil of a more uniform hue was located 180 m from the tell. The small quantity of ceramic finds at this distance shows the change in the levels and/or the intensity of the archaeological remains.

Catalogue of Stamped Impressions and Amphorae Fragments
Gerald Finkielsztejn
I. Stamped Impressions

| Basket/ <br> Figure No. | Locus | Decipherment | Origin | Dating |
| :---: | :---: | :---: | :---: | :---: |
| $1030$ <br> Fig. 3:18 | 106 | Eponym Ka入入ıрátп¢ I | Rhodes | 233-230 BCE |
| $1034$ <br> Fig. 3:19 | 106 | Eponym Тıиоклсібац | Rhodes | 224-220 BCE |
| $3011$ <br> Fig. 3:20 | 300 | Fabricant ' Hyaıoti $\omega$ v | Rhodes | 152-142/1 BCE |

II. Amphora Fragments

| Potsherds | Basket/Figure No. | Locus | Dimensions (cm) | Origins | Dating |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Base | $\begin{aligned} & 2001 / 2 \\ & \text { Fig. 3:12 } \end{aligned}$ | 200 | Diam. 5.7 <br> Height 2 | Northern Aegean Sea | 5th-4th centuries BCE |
| Base | 2001/1 <br> Fig. 3:14 | 200 | Diam. 5.7 <br> Height 3 | ? | 4th-3rd centuries BCE (?) |
| Base | $2001 / 3$ <br> Fig. 3:13 | 200 | Diam. 5.8 <br> Height 4.2 | Thassos (?) | 4th-3rd centuries BCE |
| Handle | 1024 | 106 | $\begin{aligned} & 1.5 \times 2.2 \\ & \text { Height } 15.5 \end{aligned}$ | Rhodes | 3rd century BCE |
| Base | $3002$ <br> Fig. 3:15 | 300 | $\begin{aligned} & \text { Diam. } 5.0 \\ & \text { Height } 5.3 \end{aligned}$ | Rhodes | 4th-3rd centuries BCE |
| Base | 1024 | 106 | Diam. 8 <br> Height 8.5 | Knidos | 2nd century BCE |
| Base | $1000$ <br> Fig. 3:16 | 100 | Diam. 7.2 <br> Height 8.5 | Knidos | 2nd century BCE |
| Base | $1024$ <br> Fig. 3:17 | 106 | Diam. 4.8 <br> Height 3.5 | Knidos | 2nd century BCE (?) |

## Coin Catalog

Danny Syon

1. Antiochus III, 'Akko-Ptolemais, 198-187 BCE.

Area A. Reg. No. 1026, L106, IAA102996.
Obverse: Head r., partly off-flan.
Reverse: [BA $\mathrm{I} \wedge \mathrm{E} \Omega \Sigma$ ] - ANTIOXOY Apollo leaning on bow and holding an arrow.
$\nVdash, \uparrow, 1.69 \mathrm{~g}, 11 \mathrm{~mm}$. Flan is smaller than die.
SC1, No. 1096.
2. Same.

Area A. Reg. No. 1033, L106, IAA102997.
$\nVdash, 10,1.58 \mathrm{~g}, 11 \mathrm{~mm}$. Flan is smaller than die.
3. Seleucus IV (187-175 BCE), Antioch (?).

Area C, Reg. No. 3010, L300, IAA 102998 (Fig. 5).
Obverse: Head of Artemis r. Control marks, if any, obliterated. Hole centered.
Reverse: $B A \Sigma I \wedge[E \Omega \Sigma]$ - $\Sigma E \wedge E Y[K O Y]$ Artemis stg. To front, holding long scepter or torch, leaning with her right hand on a stag. Control illegible.
Æ, $\uparrow, 5.11 \mathrm{~g}, 18 \mathrm{~mm}$.
SNG Israel 1, Nos. 905-912.
4. 'Abd el-Hamid II (1876-1909 CE), Constantinople.

Area A, Reg. No. 1004, L100, IAA 102995.
Obverse: Traces of tughra.
Reverse: Around: عز نصرة ضرب في قسطنطينيه
In center: $\Delta$ Below: 1rar
Æ, 5 para, $2.15 \mathrm{~g}, 22 \mathrm{~mm}$.
Pere 1968, No. 994.


2. Area A, section (western).



## Tel Malot (east)*



1. Square $A$, plan and sections.

2. Square A, view of eastern balk.

3. Square A, limestone pebble layer halfway through fill (L103).

4. Square A, pottery and basalt vessels.

Edwin C.M. van den Brink
7/2/2007
During January-February 2006, trial excavations were conducted in a low-lying area of agricultural fields, c. 150 m southeast of Tel Malot (Permit No. A-4689*; map ref. NIG 187876/641019; OIG 137876/141019; c. 78 m above sea level), prior to setting a gas pipeline. The excavation, on behalf of the Antiquities Authority and financed by the Netivē Gaz Company, was directed by E.C.M. van den Brink, with the assistance of S. Ya'aqov-Jam and E. Bachar (administration), A. Hajian (surveying), E. Belashov (drafting), M. ShuiskayaArnov (pottery drawing), H. Khalaily (flints), H.K. Mienis (archaeomalacology) and F. Volynsky and M. Ajami.

Two archaeological deposits, c. 15 m from each other and 2 m below surface, were noted in a probe trench, inspected by A. Kohn-Tavor. The trial excavation was aimed at establishing the nature and extent of these two spots.

Prior to the excavation, 1.5 m topsoil over an area ( $5 \times 15 \mathrm{~m}$ ) parallel to and adjoining the probe trench was removed with the aid of mechanical equipment. Two $4 \times 4 \mathrm{~m}$ soundings (Squares A and C ) were opened at both extremes of the probe trench.

Square A (Fig. 1)
Three strata were recognized (Fig. 2). Topsoil (L100; thickness c. 1.5 m ) consisted of a sterile dark, clayey alluvial soil layer (Stratum 1). It sealed the remains of two pits (L107, L108), in close proximity to each other (Stratum 2). The pits were cut into an archaeologically sterile layer of husmas (hamra sand soil with lime aggregates; L109; Stratum 3) that consisted of a brownreddish, clayey soil, rich in calcium carbonate that crystallized through capillary interaction with the subsoil water table, thus giving the soil its mottled appearance. The complete outline of Pit 107 (max. depth 1.8 m ; exposed area $0.8 \times 1.7 \mathrm{~m}$ ) and Pit 108 (depth $1.4 \mathrm{~m} ; 0.7 \times 3.1 \mathrm{~m}$ ) remains unknown, since large parts of both extend beyond the square limits.
The top of both pits was initially excavated as a single unit (L103), since the dark grayish soil fill, although contrasting with the surrounding brown-reddish husmas, was homogeneous all over the excavated area and assumed to be a ditch. While excavating the last c .0 .7 m of this fill it became clear that there were two separate pits. About halfway through the fill of both pits a single layer of small to medium-sized limestone pebbles was observed (Fig. 3). The pebble layer gave the impression of a floor or a living surface, although a deposition by natural agents during a single event, e.g., heavy rains, seems more likely.

Sparse finds were retrieved from the fill and the pits, mainly potsherds, few basalt vessel fragments and some flints. Animal bones were notably absent, yet a few shell fragments were found. The pottery included small V-shaped bowls (Fig. 4:1, 8), medium- and large-sized V-shaped bowls (Fig. 4:2-4), a fenestrated bowl (not illustrated), a holemouth jar (Fig. 4:7), short-necked jars (Fig. 4:5, 6 ) and bases of medium to large-sized bowls or jars (Fig. 4:9-12).

The assemblage fits within a late phase of the late Chalcolithic period. It is too small for any certain statement, yet the presence of a few large bowls, tempered with gray grits and having a typical grayish-creamy color of the interior and exterior walls (Fig. 4:2,4,12), is very reminiscent of bowls from a similar fabric that derived from Strata 5 and 6 at Modi'in, Buchman Compound, dated by ${ }^{14} \mathrm{C}$ analyses to the last quarter of the fifth millennium BCE. The apparent absence of combed pottery at Tel Malot, which is typical of a rather late phase within the Late Chalcolithic period, e.g., at Shoham (IAA Reports 27:55, 169-170), seems to corroborate the late fifth millennium date for the material deposited in the two pits.

Fragments of two basalt bowls, including a rim (Fig. 4:13) and a base (Fig. 4:14) are sufficiently diagnostic to be dated to the late Chalcolithic period.

## Flints

H. Khalaily

The flint assemblage consists of 68 items, mostly waste products, as well as three tools and only three cores. Flakes are predominant in the waste ( $71 \%$ ) and blades comprise $8 \%$ of the waste. Two types of flints were used for this industry. A dark-gray flint of the Senonian formation was the most commonly knapped and a few objects were knapped from a gray and brown flint of pebble origin. The latter group is distinguished by semi-translucent gray or brown color, which probably derived from small pebbles available in Nahal Shaham, a tributary of Nahal Ha-Ela (personal observation). The three ad hoc tools in the assemblage are two retouched flakes and a single perforator. The absence of formal and diagnostic types makes it difficult to establish their chrono-cultural horizon.

## Shells

## H.K. Mienis

Two shell fragments were discovered in Sq A, L103. One was a part of the ventral margin of Glycymeris insubrica (Brocchi 1814), a common bivalve from the Mediterranean Sea. The second fragment was the completely disintegrated part of the ventral margin of Chambardia rubens arcuata (Cailliaud 1823), a common freshwater mussel from the Nile river in Egypt. Both are well known from other Chalcolithic sites in Israel.

## Square C

A lens of grayish soil (thickness 0.3 m ), not unlike the fill in the pits of Sq A, was exposed down to the underlying, sterile husmas soil. It contained no specific features, but a handful of diagnostic potsherds, dating to Iron Age II and the Byzantine period. Chalcolithic material was conspicuously absent.

Although no architectural remains were found in the current excavation, the material recovered from the fill of the two pits in Sq A points to nearby settlement activities and contributes, in a
modest way, to the general framework of Chalcolithic settlement built-up around Tel Malot in particular, and to the list of Chalcolithic sites where the Nilotic shell Chambardia rubens arcuata had been discerned, in general. Earlier excavations in the same area of Tel Malot (HA-ESI 112:70*_ 71*; A-3585; A-3641) have yielded a stratum with three superimposed occupational levels and pits, similar to the ones found in our excavation, all dating to the Chalcolithic period. It seems likely that the two partially excavated pits belonged to the same settlement horizon.


1. Square A, plan and sections.

2. Square A, view of eastern balk.

3. Square A, limestone pebble layer halfway through fill (L103).


## Tel Malot



1. Plan.

2. Winepress, looking east.

3. Well, looking north.

Giora Parnos
24/12/2007
During June-July 2002 a salvage excavation was conducted along the eastern fringes of Tel Malot (Permit No. A-3641; map ref. NIG 18742-50/64034-46; OIG 13742-50/14034-46), prior to working on the railroad track from Tel Aviv to Jerusalem. The excavation, on behalf of the Antiquities Authority, was directed by G. Parnos, with the assistance of D. Sklar and O. Segal (area supervision), R. Abu Khalaf and H. Lavi (administration), V. Essman, A. Hajian, V. Pirsky, T. Kornfeld and I. Berin (surveying and drafting), T. Sagiv (photography), I. Bukengolts (pottery restoration), N. Ze'evi (pottery drawing), L. Kupershmidt (metallurgical laboratory), D.T. Ariel (numismatics) and R. Kehati (archaeozology).

Two excavation areas (A, B; Fig. 1), c. 20 m apart, were opened along the railroad track (ESI 12:49-50; HA-ESI 112:70*-71*; they were adjacent to Area B2 of S. Wexler-Bdolah's excavation). Building remains, installations, pits and tombs from the Neolithic, Middle Bronze Age, Late Bronze Age, Byzantine and Early Islamic periods were exposed.

Area A
Squares D3-D5. A deposit of brown soil (L10), overlaying clean sand and dating to the Pottery Neolithic period, contained small stones, potsherds, flint items and bones. Part of a Pottery Neolithic period clay-built tomb (L13), whose western part was severed by the railroad track, was exposed in the northern part of this deposit. The brown soil deposit was overlaid with layers of soil fill in different colors (L11; thickness c. 2 m ), bearing fragments of pottery vessels from the Byzantine period. The fill was retained on the east by a carelessly built wall.

Squares G6, G7. The discovered building remains had two phases (L1). Ascribed to the early phase was the northeastern corner of a room, abutted on the east by a crushed chalk floor and on the north by a stone pavement, dating to the sixth century CE on account of the ceramic finds above the floors that included a complete jar embedded in the floor. A wall, ascribed to the later phase and dated to the seventh century CE, was abutted on the north by a level of small stones.

Squares C13-C16. Fragmentary remains of walls and floors that had two building phases were exposed (L3). A corner of a building, abutted on the north by an earthen floor, was attributed to the early phase, which was dated to the fifth century CE based on the ceramic artifacts above the floor. An east-west oriented wall, which was abutted on the north by a level of small stones, was attributed to the later phase, dating to the sixth century CE.

Squares C18, C19. Remains of a winepress were discovered in clean sandy soil (L2; Fig. 2). The wall that enclosed the winepress was built of one or two rows of pebbles with a core of two rows of medium fieldstones. The winepress comprised a treading floor ( $1.91 \times 2.15 \mathrm{~m}$ ), with a deep settling pit in its center and two collecting vats ( $1.91 \times 2.15 \mathrm{~m}, 2.19 \times 2.38$; depth c .1 m ), to the north and south of the floor. The walls of the collecting vats were coated with light red hydraulic plaster and their floors were paved with coarse white mosaics that had evidently been repaired in the past. Two steps descended from the treading floor to each of the collecting vats, in whose centers deep settling pits were cut. The base of a jar was incorporated within the bottom of the settling pit in the northern collecting vat. The collecting vats contained ceramic finds from the Byzantine until the Abbasid periods.

## Area B

The area was c. 20 m from the Nahal 'Ekron channel. A strip of six squares (B23-B29) was opened and ancient remains were excavated only in the three southern squares. Chalk bedrock in this area was overlain with a layer of clean husmas soil (thickness c. 2 m ) and ground water occurred at the interface between them. The husmas layer was a few centimeters below surface in the northern part of the area and c. 1.2 m below surface in the southern part.

Squares B27-B29. Two pits (Loci 7, 8) dug in the husmas layer contained a fill of small stones, flint tools and coarse fragments of pottery, dating to the Neolithic period. Remains of a building or large installation (L12), which included a curved wall built of fieldstones and a soil level that abutted it, also dated to the Neolithic period. The bottom part of a Middle Bronze Age pottery kiln (L5) was exposed north of Pit 7. The kiln had an elongated stoking chamber and a circular combustion chamber (diam. 2 m ) with three supports of clay bricks that were built against its walls.
South of the kiln was a circular well (L4; diam. 2.15 m , depth 2.1 m ; Fig. 3) dug into the husmas layer down to chalk bedrock. Ground water was discerned at the bottom of the well. The fill removed from the well included mixed pottery vessels that dated to the Middle and Late Bronze Ages. It therefore seems that the well was no longer used in the Late Bronze Age. A rectangular structure (L6), to the south of the installation (L12), was on top of a wall from the Neolithic period. The structure's walls were built of rubble and coated with plaster. Near them were fragments of a human skull that indicated the structure was apparently a tomb that had been plundered in antiquity. The ceramic finds in the fill around and within the structure were dated to the Byzantine and Abbasid periods. A tomb covered with roughly hewn stones (L9; not excavated) was discerned east of L6, very close to surface. The tomb was oriented east-west, as customary of a Muslim burial.


1. Plan.

2. Winepress, looking east.

3. Well, looking north.

## Tel Qana

Edwin C.M. van den Brink
20/12/2007


1. The excavation area, Tel Qana in the rear, looking west.

2. Late Bronze II cist tomb, looking west.

3. Winepress L105 after excavation, looking north.

4. Winepress L108 after excavation, looking east

During the end of June and the beginning of July 2007, a trial excavation was conducted in an agricultural plot, east of Tel Qana (Tell el-Mukhmar; Permit No. A-5160; map ref. NIG 189793-961/670624-749; OIG 139793-961/170624-749). The excavation, on behalf of the Antiquities Authority and financed by the Yarqon Park Authority, was directed by E.C.M. van den Brink (photography), with the assistance of S. Ya'aqov-Jam and E. Bachar (administration), A. Hajian, T. Melzin, R. Mishayev and N. Zak (surveying and drafting), T. Sagiv (field photography) and Y. Nagar (anthropology).

Prior to the excavation, the area (c. $50 \times 120 \mathrm{~m}$ ) was trenched by mechanical equipment under the inspection of D. Masarwa and eleven potential archaeological probes were discovered. Seven of them situated in the northern half of the field and located immediately east of Tel Qana, were examined in the excavation (Fig. 1).
The seven probes were divided between four in the west, closest to the tell and three in the east, further away from the tell. A distinct difference was noted between the east and west probes, which can be ascribed to structural differences in the paleo-landscape, that is an alluvial natural depression, possibly created by an ancient river to the east of the tell and the presence of a hamra hillock farther away from the depression.

## The western probes

Four probes, less than 5-25 m east of Tel Qana's eastern edge, which is submerged under the alluvium, were cut into light brown alluvial/colluvial soils. The initial assumption was that the actual tell continued eastward below the present-day alluvium. However, apart from a continuous living surface that was indicated by the horizontal deposition of many Middle Bronze II potsherds mixed with a few pottery fragments from the Iron Age and the Persian-Hellenistic periods at a level of c. $0.6-0.8 \mathrm{~m}$ below the present surface (at c. 16 m asl ) and encountered in all four probes, as well as the presence of a single pit dug from the same general level as the living surface, no other features, either above or below this living surface, were found in the four probes. The sole exception was an isolated tabun in one of the probes, c. 0.5 m below the living surface. The accumulated soils sealing the level of this continuous living surface were archeologically sterile, as were all soils below the living surface, excavated down to a maximum depth of c. 3 m below the present surface, notwithstanding occasional potsherds, mainly of MB II date. It would seem that this living surface indicated the original surface east of the tell at the time of MB II occupation at the site. Since no datable materials were found in association with the tabun, its date remains unclear. Yet, its very presence points to an occupational episode that possibly pre-dated MB II at this spot.

## The eastern probes

These probes were excavated within a hamra hillock that was covered with a top layer of light brown alluvial/colluvial sterile soil (thickness 0.2 m in the east; c. 1 m in the west), similar to the one that filled up the apparent depression between the tell and the hamra hillock in the west.
A cist tomb that contained an apparent warrior burial, dating to Late Bronze II, was exposed in one of the probes (Fig. 2). The stone-lined pit (c. $1 \times 3 \mathrm{~m}$ ), whose interior walls and floor had been plastered, was cut into the hamra soil. The remains of a single, primary male burial were deposited in the cist, extended in a supine position, head in the west and feet to the east and accompanied by a number of burial offerings that were placed to the right side of the deceased, resting against the inner south wall of the tomb. The funerary gifts included two shaft spearheads and a single arrowhead, all made of bronze, as well as three ceramic oil lamps with diagnostic pinched lip, three bowls, two flasks and a juglet, all apparently of local production. The morphologies of the bronze weapons and the pottery vessels point to a date within Late Bronze II. The relatively large size of the tomb in comparison to the actual human interment and the carefully stone-lined, plastered walls and floor demonstrate perhaps a special status of the deceased, whose east-west orientation could reflect Egyptian influence on the mortuary behavior in this part of the Coastal Plain at this time.

Remains of two plastered pits were uncovered (Figs. 3, 4) in two separate probes, c. 5 m apart from each other. The pits are assumed to be winepress installations and each had a depression in the floor. The roughly circular pits (diam. c. 2 m , depth c. 0.5 m ) were cut into the hamra soil. Their walls were entirely lined with smooth, fist-sized wadi pebbles, coated with several superimposed layers of non-hydraulic white plaster that was also applied to their bottom, presumably used as a treading floor, as well as to the depression that functioned as a sump. Winepress 105 had as many as eleven separate layers of plaster (thickness c. 1 cm ) applied to its interior. The sump in Winepress L105 was situated in the center of the floor (Fig. 3), while in Winepress L108 it was off-center (Fig. 4). The multiple replastering of both installations seems to indicate either their intensity and prolonged usage or the low quality of the untempered, nonhydraulic plaster that was not waterproof. A macroscopic examination of the plaster showed it was very similar to the plaster used in the Late Bronze Age tomb. Petrographic analyses of the various plaster samples should provide further clues to this matter.
The date of the two installations is difficult, since no pottery or other datable finds were retrieved from their fills, except for two EB I potsherds and a fragmentary Canaanite flint sickle blade that should undoubtedly be considered intrusive. The lower parts of two medium-sized storage jars were found in situ c. 1 m east of one of the winepresses. Installations similar in construction, style and size had previously been discovered at Tell Qasile (HA-ESI 113:44*) and Rishon Le-Ziyyon (ESI 20:66*-67*, dating to Iron II.

Archaeological excavations had never been undertaken at Tel Qana or at its margins prior to the present fieldwork. The tell was surveyed in the late 1970s by R. Gophna and E. Ayalon (Map of Herzliyya [69], 1998, Site 97). Surface finds collected during that survey included potsherds from the Early, Middle and Late Bronze Ages, Iron I-II, as well as the Persian, Roman and Byzantine periods. The current excavation revealed for the first time in situ findings from Middle Bronze II These sediments were most likely deposited in the past by the meandering Nahal Qana and its tributary Nahal Hadar, which is still flowing today to the east and south of the site. Farther away from the eastern fringe of the tell, these alluvial deposits/sediments become thinner and the underlying hamra soils become more prominent. Apparently, a depression once existed between the eastern fringes of the tell and the hamra hillock in the east, which was gradually covered with an alluvial layer.


1. The excavation area, Tel Qana in the rear, looking west.

2. Late Bronze II cist tomb, looking west

3. Winepress L105 after excavation, looking north

4. Winepress L108 after excavation, looking east.

## Tel Rehov



1. Area C, the northeastern part at the end of the 2005 season, looking south.

2. Area $D$ at the end of the 2005 season, looking east.

3. Area J, general view, looking south; in foreground, a floor from the Early Islamic period; in rear, a room from the eighth century BCE .

During June-July 2003 and 2005 the sixth and seventh seasons of excavation were conducted at Tel Rehov (License Nos. G-5/2003, G-25/2005; map ref. NIG 2470/7070; OIG 1970/2070). The excavations, on behalf of the Institute of Archaeology of the Hebrew University in Jerusalem and sponsored by J. Camp, were directed by A. Mazar. Assisting in the 2003 season were N. Yahalom (Area B supervision), N. Panitz-Cohen (Area C supervision), G. Rosenberg (surveying), J. Camp (photography), D. Edelman, D. Benton, L. Wilson, W. Wilson, R. Levitan, E. Steinback, L. Frankel, S. Camp and C. Szenkar. Participating in the 2005 season were D. Edelman and M. Schiffer (Area B supervision), N. Panitz-Cohen (Area C supervision), U. Davidovich, E. Steinback and Y. Rotem (Area D supervision), N. Yahalom (Area J supervision), G. Rosenberg (surveying), T. Efroni (photography), L. Wilson (registration), H. Ashkenazi, D. Benton, J. and B. Grutz, N. Marom, A. Swoft, S. Sheffer, C. Szenkar, J. Camp, S. Camp and O. Cannon. Additional assistance was provided by O. Mazar (pottery restoration), R. Solar and Y. Rudman (drawing and graphics), G. Rosenberg (drafting) and N. Applbaum (computing).

The excavation focused on Areas B and C in 2003 and in 2005, Areas B, C, D and J were excavated (HA-ESI 114:38*-40*).

## Area B

The exposure of buildings from Stratum B-5 (late tenth century BCE) was completed in 2003. It was ascertained that remains of four buildings, probably residential, were excavated, although large sections of them lay beyond the excavated area. The eastern and western buildings were destroyed in a mighty conflagration. Part of another large building was discovered in the southern part of the excavation area. Two construction phases were discerned in the center of the excavation area; during the first phase of Stratum B-5 it was an opened area, while in a later phase a new building was established in this area, of which the foundations of a large rectangular space were preserved.

The excavation in 2005 was limited to the western part of the area, which had been excavated in previous seasons. The goal was to dismantle the building remains of Stratum B-5 and expose the remains from Stratum B-6 (= Stratum VI in the general stratigraphic sequence), both dating to Iron Age IIA. Mud-brick walls of Stratum B-6 were exposed below the building foundations of Stratum B5 , attesting to the continuity of town planning between these two strata. The occupation debris overlying the floors of Stratum B-6 contained ceramic finds that distinguished this level, i.e., burnished, red-slipped potsherds alongside a small number of pottery fragments with a painted decoration in the tradition of Iron Age I.

## Area C

The excavation in 2003 focused on the northeastern part of Area $C$ and the area was expanded 5 m to the north (Fig. 1). Building F--the large residential building whose excavation had begun in 2001 --was completely exposed. The building was erected in Stratum $\mathrm{C}-1 \mathrm{~b}(=\mathrm{V})$ and continued to exist, with slight modifications to its plan, in Stratum C-1a (=IV). It included an entrance corridor that led to a large central hall with a single room in its back. A row of four small rooms with benches along their walls was in the western side of the building. An extremely well-preserved milling installation discovered in the small northern room consisted of a raised surface with a plastered parapet, surrounding a large slanting lower grinding stone. Nearby were fragments of a ceramic altar decorated with images of naked goddesses, similar to the complete altar that had been discovered in previous seasons in Stratum $\mathrm{C}-1 \mathrm{~b}$, as well as a rich assemblage of pottery vessels. Sections of other residential buildings from Stratum C-1a were excavated to the north, east and west of Building F and probes were excavated to clarify the nature of Stratum $\mathrm{C}-2(=\mathrm{VI})$.
The excavation of Area C in 2005 was concentrated in three secondary areas:
The northeastern part of the area was enlarged by 7 m to the east. Sections of three residential buildings from Stratum C-1a (=IV) were exposed in the eastern part. The buildings were constructed from mud bricks without stone foundations, although stone floors were found in several places. Like other buildings in this stratum, the rooms exposed in the current season had been violently destroyed in a blaze. Some of the rooms contained large numbers of restorable pottery vessels, characteristic of the rich ceramic assemblage of this stratum, whose destruction is ascribed to the Aramean conquest of the ninth century BCE. Soundings conducted below the floors of Stratum C-1a clarified that the houses were probably erected in the earlier Stratum C-1b and continued to be used, with slight changes, in the next stratum. The residential quarter exposed in this section is well-planned: walls are parallel and straight; houses are densely built, touching upon each other, with double walls between them.
The excavation in the middle of the northeastern corner of Area C deepened to Stratum C-1b (=V), aiming to expose the remains of Stratum $\mathrm{C}-2(=\mathrm{VI})$, the earliest of Iron Age IIA strata at Tel Rehov (tenth century BCE). The exposed parts of several buildings had shown that the city was wellplanned and densely built-up in this stratum as well. The construction consisted of mud bricks without stone foundations. The orientation of the walls was similar to that of the next stratum, but the layout of the buildings was different. This city was not violently destroyed; hence the finds were meager and consisted mainly of red-slipped and burnished potsherds, appearing aside fragments of painted vessels. A tabun, preserved to the height of its rim and lined with slipped and burnished potsherds, was discovered in one of the courtyards. Adjacent to it was a clay jar engraved with two identical three-letter words written in Proto-Canaanite script.
In the southeastern corner of Area C , the continuation of Building H from Stratum $\mathrm{C}-1 \mathrm{~b}(=\mathrm{V})$ were excavated, after dismantling the remains of Building $L$ from Stratum $C-1 a$. The former building consisted of several large spaces covered with a burnt layer and mud-brick collapse (height c. 1 m ). A beehive was discovered in the eastern part of the building. The hive comprised a row of horizontal cylindrical-shaped containers made of coarse unfired clay; one side of the cylinders was blocked with a wall that had a perforation in its center, whereas the other side was left open. Eight such containers (diam. 0.4 m , length $0.8-0.9 \mathrm{~m}$ ) were uncovered to date. The identification of the cylinders as beehives was based on anthropological comparisons from the Middle East and the Eastern Mediterranean basin, as well as on a scientific analysis, conducted by D. Namdar of the

Kimmel Center of the Weizmann Institute of Science, who could identify molecules of beeswax in the clay walls of the cylinders.

The building is dated to the tenth century BCE , based on ${ }^{14} \mathrm{C}$ samples that were analyzed in the laboratories of Groningen University (by J. van der Plicht and H. Bruins) and recently published (Mazar A., Bruins H., Panitz-Cohen N. and van der Plicht J. 2005. Ladder of Time at Tel Rehov: Stratigraphy, Archaeological Context, Pottery and Radiocarbon Dates. In T. Levy and T. Higham, eds. The Bible and Radiocarbon Dating: Archaeology, Text and Science. London. Pp. 193255). These beehives are the only ones known so far in Middle Eastern archaeology.

## Area D

The enlargement of the stratigraphic section on the western slope of the lower tell to a width of 10 $m$ had begun in 2000. In the 2005 season, the excavation continued in the five squares of the widened section and further remains from all the strata that had previously been discovered: Strata D-11 (Late Bronze Age) to D-1 (Iron Age 2A; Fig. 2), were exposed.
The earliest remain in the section was a layer of organic material that contained unidentified potsherds (a parallel trench that was excavated in earier seasons contained potsherds from the end of the Middle Bronze Age). The layer was covered with a thick deposit of travertine that probably accumulated within a body of water over a considerable period of time. An occupation layer from the Late Bronze Age, which was devoid of any building remains, overlaid this deposit. The earliest building remains in the enlarged part of the section were from the twelfth century BCE (Strata D-7 and D-6).
Two finely plastered square installations, built of mud bricks and used in some industrial capacity, were discovered in Stratum D-6. Stratum D-5 yielded only scant finds and its designation as an independent stratum should perhaps be abolished. In Stratum D-4 (eleventh century BCE), a street crossed the area from north to south; a building east of the street contained a large room and three small rooms to its east. In Strata D-3, several circular flat pits were uncovered, similar to those exposed in this stratum during previous seasons. The pits disappeared toward the center of the area and no such pits or other remains were recovered from this stratum in the northern part of the area. Fragmentary building remains from Strata D-2 and D-1 (composed of several sub-phases), dating to Iron Age IIA, were discovered in the upper part of the area. Although the finds from Area D were meager, the excavation of this area confirmed the sequence of an urban occupation throughout Iron Age I and IIA.

## Area J

This new excavation area was opened in 2005 in the southeastern corner of the upper tell, to clarify the stratigraphy in this part of the mound (Fig. 3). Five squares were excavated, two in the upper part of the tell and three along the southern slope. The goal was to discover the continuation of the Iron Age II city wall, which was revealed in Area B and to detect possible earlier fortifications on the slope of the tell. It turned out that no Iron Age fortifications appeared in this part of the tell; Iron Age houses reached the edge of the mound and their outer parts had been swept away down the slope.
Nine stratigraphic phases were discerned in the excavation:
The upper phase, J-1, comprised the remains of plaster floors, installations and occupation debris from the Early Islamic period. The second phase, J-2, included remains of two poorly preserved walls; the date of this phase remains unclear. A burial of a single individual was dug into the remains of the square room from Stratum J-3. A skull and parts of a skeleton were preserved and a pottery jug was found near the skull. The burial probably belonged to the period following the destruction of the Stratum J-3 city. Strata J-3 and J-4 date to Iron Age IIB (eighth century BCE). The earlier of these two strata yielded fragmentary floors and walls. In the later Stratum J-3, part of a building that included a small square room, a section of a courtyard with a large tabun and further segments of walls and floors, was exposed. No evidence of a violent destruction was found.

Three to four construction phases (J-5-J-8) could be ascribed to Iron Age IIA; the three earliest ones were evidenced in a probe of half a square in size. Sections of walls and floors could be attributed to each of the phases. Stratum J-5 waqs exposed in a larger area and included parts of two rooms, destroyed by a vast conflagration that paralleled the general destruction of the genera Stratum IV city.
A wall discovered at the bottom of a sounding was ascribed to Iron Age I.
The sixth and seventh seasons of excavation at Tel Rehov enhanced our knowledge about the development of the city from the Late Bronze Age until Iron Age IIA. It has been concluded that the city of 10 hectares existed as a built-up and well-planned urban center throughout the period from the twelfth to the ninth centuries BCE. Innumerable artifacts, including figurines, seals and cult vessels, enrich our understanding of the Iron Age culture in the region. The beehives from the tenth century BCE are a singular discovery as no such feature has been discovered in the Near East to date. The chronology of the period has been corroborated and reinforced by numerous ${ }^{14} \mathrm{C}$ dates.


1. Area C, the northeastern part at the end of the 2005 season, looking south

2. Area $D$ at the end of the 2005 season, looking east.

3. Area J, general view, looking south; in foreground, a floor from the Early Islamic period; in rear, a room from the eighth century BCE.

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## Tel Shelat*

Deborah A. Sklar-Parnes and Bat-Ami Artzi
27/6/2007
During May-June 2003 a salvage excavation was conducted south of Moshav Shilat (Permit No. A-3915*; map ref. NIG 202352-652/647000-341; OIG 152352-652/147000-341), in the wake of development work. The excavation, on behalf of the Antiquities Authority, was directed by D. Sklar-Parnes, with the assistance of B.A. Emmet-Artzi (area supervision), Y. Dangor (administration), T. Sagiv (field photography), V. Pirsky and V. Essman (surveying), E. Belashov (drafting) and laborers from East Jerusalem.

Prior to the excavation, several probe trenches dug by mechanical equipment during an antiquities inspection revealed flint implements dating to the Pre-Pottery Neolithic A period. The excavation concentrated on two features: the remains of a prehistoric site and three nearby cupmarks, as well as an adjacent limekiln.

The Prehistoric Site
Two squares ( $2 \times 2 \mathrm{~m}$ ) were excavated, revealing numerous scattered flint implements that seem to have originated from the adjacent site, c. 15 m west of the excavation, which was destroyed by the development work in the area.
Three cupmarks, hewn in a bedrock surface, were exposed 3 m north of the excavation. The largest cupmark was conical (diam. 0.31 m , depth 0.3 m : Fig. 1:A); a shallow cupmark (min. diam. 0.3 m , depth 0.1 m ; Fig. 1:B) was cut close by and near it was a third smaller cupmark (diam. 0.16 m , depth 0.08 m ; Fig. 1:C). The two larger cupmarks probably functioned as pressing installations.

The Limekiln (Fig. 2)
A circular limekiln (diam. 6.1 m ) was exposed 250 m north of the site. The lower part of its wall was bedrock hewn and the upper part was built of fieldstones, preserved seven courses high (1.4 $\mathrm{m})$. Burned stones and soil mixed with ash formed a ring of debris (width 1.6 m ) around the kiln. Layers of stones and fill in the kiln consisted of lime, soot, ash and modern finds. The kiln yielded no diagnostic finds that could date its construction.


1. Three cupmarks, plan and section.

2. The limekiln, plan and sections.

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1. Three cupmarks, plan and section.

2. The limekiln, plan and sections.

## Tel Sheva*

Ya'aqov Baumgarten
14/6/2007
During April-May 2001 an excavation was conducted near the entrance to the Bedouin settlement of Tel Sheva (Permit No.
A-3411*; map ref. NIG 18529-446/57258-89; OIG 13529-446/
07258-89), in the wake of infrastructure work. The excavation, on behalf of the Antiquities Authority and at the initiative of the Ministry of Housing and Construction, was directed by Y. Baumgarten, assisted by H. Lavi (administration) and V. Essman (surveying).
Two squares were opened c. 5 m apart. A meager stone wall, oriented east-west, was exposed in the eastern square. North of the wall was a concentration of stones and potsherds that probably collapsed from the wall, which apparently functioned as a farming terrace during the late Roman and Byzantine periods. The terrace was part of the agricultural hinterland of the tell and the ridge to its west (The New Encyclopedia of Archaeological Excavations in the Holy Land, Vol. 1:167-173).

Below the collapse level in both squares was a layer of loess, which contained potsherds from the Chalcolithic period, overlaying the natural loess. It seems this Chalcolithic level was part of an open area where activity was conducted outside the limits of the Chalcolithic settlement at Tel Sheva, located today within the Bedouin settlement of Tel Sheva (Permit No. A-2062). The Chalcolithic potsherds included fragments of storage vessels and churn handles. The later pottery vessels included fragments of jars and African Red Slip vessels, as well as fragments of glass vessels.

## Tel Shimron

## Nurit Feig

13/12/2007


1. Square A, plan and sections.

2. Square A, building remains from the Persian period, looking south.

3. Square $A$, section of Strata III, IV, looking north.

4. Square B, plan and section.

5. Square C, plan and sections.

During November-December 2004, a salvage excavation was conducted at Tel Shimron (Permit No. A-4284 map ref. NIG 21965-90/73415-65; OIG 16965-90/23415-65), prior to putting up electric poles along the Bet Zarzir-Nahalal Junction road. The excavation, on behalf of the Antiquities Authority and financed by the Electric Company, was directed by N. Feig, with the assistance of L. Porat (area supervision), H. Lavan (administration), A. Hajian and T. Kornfeld (surveying) and H. Smithline (photography).
Tel Shimron is located in the Yizra'el Valley, at the foot of the southwestern end of the Nazareth Range. Running west of the tell is the ancient road, linking Legio to Sepphoris and 'Akko and passing south of it is the modern road from Haifa to Nazareth. The tell and its surroundings extend over an area of c. 150 dunams. Excavations were conducted on and around the tell in the past (Map of Nahalal [28], 1982: Site 83; ESI 15:126-127; Wolf and Covello-Paran, pers. comm.). The tell has traditionally been identified with the biblical site of Shimron.

Four squares, three extending south to north (A-C) along the shoulder of the Bet Zarzir-Nahala Junction road and the fourth in the middle of the field, c. 200 m west of Square C, were opened.

Square A. Four layers were exposed on top of virgin soil (Fig. 1).
Stratum I. Remains of a building (public?) whose exterior wall (W5; width 1.2 m ) was oriented northeast-southwest and formed a corner with another wall (Fig. 2). Wall 5 was damaged by a tractor. Its foundations were quite massive and it extended 5.5 m long. Two walls (W4, W6; width 0.7 m ) abutted W5 at a right angle from the west. The occupation level that was partially revealed on the eastern side of W4 contained jars and bowls from the Persian period. Parallel to W4 was a well-built water channel (length 3.4 m ) that probably extended beneath the floors of the building. Stratum II. A well-tamped white chalk floor, which was cut by the walls of Stratum I and served as a base for the water channel, was exposed. Potsherds from the Early and Middle Bronze Ages were found on the floor.
Stratum III. A floor of large pebbles, devoid of any finds, was exposed in the eastern half of the square (Fig. 3).
Stratum IV. A layer (thickness c. 5 cm ) of small densely packed pebbles, devoid of any finds, was exposed. The two pebble layers (III, IV) point to an alluvial environment in the valley.

Square B (Fig. 4). A massive wall of ashlar stones (W202; 6.2 m long) was exposed. It stood a single course high and was oriented northwest-southeast. A layer of small stones bonded with tamped chalk abutted the top of the wall. Numerous potsherds dating to the Hellenistic and Roman periods were recovered from this surface and adjacent to its western side. Wall 202 was probably the remains of the Roman road that linked Legio to Sepphoris. The width of the 'road' remains in the excavation square did not exceed 1.2 m . The small dimensions of this section and other modern disturbances made it difficult to date the wall and determine its function.

Square C. Three strata were exposed (Fig. 5).
Stratum I. A massive wall (W302; 4.4 m long) oriented east-west was exposed in the southeastern part of the square. It was built of roughly hewn ashlar stones whose northern side was coated with a layer of plaster. A well-constructed floor of round pebbles (L363; diam. c. 10 cm ) abutted the wall from the south. It did not survive throughout the entire area because it was too close to surface. The meager amount of potsherds made dating the stratum difficult but it should probably be ascribed to the Roman period.
Stratum II. On the northwestern side of W302 was a layer of stones ( $20 \times 25 \mathrm{~cm}$ ), probably fill from the Roman period.
Stratum III. A layer of heavy, natural sterile brown soil that possibly belonged to the alluvium in the valley was exposed on the northeastern side of the square.

Square D. A layer of small stones $(0.8 \times 2.0 \mathrm{~m})$ whose nature is unclear was exposed in the middle of the square, which was not entirely excavated due to danger of collapse. Pottery vessels from the Chalcolithic period, the Early and Middle Bronze Ages and the Roman period were found in the fill overlying the stones.

Flint implements were discovered throughout the excavation areas.


1. Square A, plan and sections.

2. Square A, building remains from the Persian period, looking south.

3. Square A, section of Strata III, IV, looking north.

4. Square B, plan and section.

[^7]
## Tell Beit Mirsim



1. Area C, plan of church.

2. Area C, the crypt under the church, looking south.

Miki Ein Gedy and Karni Golan
14/1/2007
During October-November 2004 a salvage excavation was conducted along the planned route of the separation fence, between Sheqef and Shomriya, at the foot of Tell Beit Mirsim (Permit No. A-4269; map ref. NIG 19142-319/5950-73; OIG 14142-319/0950-73) and at the sites of Khirbat en-Nusrani, Giv'at Mirsham (North), Horbat Benaya, Tell Beit Mirsim and Khirbat Abu Mulassam. The excavation, on behalf of the Antiquities Authority and Ben-Gurion University and financed by the Ministry of Defense, was directed by M. Ein Gedi, with the assistance of K. Golan and D. Eisenberg-Dagan (area supervision), H. Lavi and R. Abu Khalaf (administration), A. Hajian and T. Kornfeld (surveying and drafting), P. Kaminski and H. Soklovsky (drawing), A. Fogal (photography) and P. Fabian (data concerning church at Kh. Abu Khaff).

The route of the separation fence, which passes along the southern fringes of Tell Beit Mirsim, was the cause for the current excavation. The site was excavated by W.F.Albright during the 1920s and 30s and settlement layers from the Early, Middle and Late Canaanite periods and the Israelite period were exposed. Owing to the importance of the site it was necessary to carry out an excavation along the southern edge of the tell and on the saddle between the tell and the village of Beit Mirsim (Areas A and B). Other areas were opened along the hills east and west of the tell ( $D, E, H$ ) and within the remains of an ancient church (Area C), due to the damage caused to it by the IDF.

Area A
The area is located on the southern and eastern slopes of the tell. Nine half squares $(2.5 \times 5.0 \mathrm{~m})$, spread across a rather extensive area, were opened, some of them adjacent to the many robber pits on the tell. The pits and hollows in the ground were cleaned by a backhoe. No architectural remains were found, save a row of stones that appeared to be the covering of a tomb. While excavating the tomb $(0.40 \times 0.75 \times 1.80 \mathrm{~m})$ a few fragments of bones were discovered. Several potsherds, dating from the Iron Age to the Byzantine period, were collected. The paucity of finds was surprising given the area's proximity to the tell.

## Area B

The area is located on the southern slopes of the tell, west of Area A. Ten half squares $(2.5 \times 5.0$ $\mathrm{m})$, opened along the planned route, were excavated down to virgin soil or bedrock, which were overlaid with soft, light colored fill mixed with potsherds that apparently, were mostly swept down from the top of the tell. No buildings were exposed, except for a wall stump of undressed fieldstones, probably a fence or partition (length 3 m , width 0.5 m ) that had no continuation Numerous fragments of pottery vessels from the Middle and Late Bronze Ages and a few Iron Age and Byzantine-period potsherds were found. It seems that the part of the tell above Area B was inhabited during these periods.

## Area C

The area extends across the northern foot of the hill where the village of Beit Mirsim is situated. Prior to the excavation, two limestone columns protruded from a small soil mound. The excavation revealed a church that dated to the later part of the Byzantine period (sixth-seventh centuries CE) as well as remains of walls from later periods (Fig. 1). The eastern part of the church was destroyed, most likely a result of building a farming terrace; the church's western part was damaged by work performed by the IDF.

The apse and the bema in the east of the church seem to have been completely destroyed. South of the presumed apse, short segments of plastered walls and mosaic pavements that were attributed to one of the church's auxiliary rooms were exposed. West of the presumed eastern apse were three ashlar stones, in situ, with a hewn channel in their upper part and recesses for two colonnettes, which were part of the chancel screen.

The middle part of the church was survived by remains of the northern wall's foundation and sections of the stylobates on which the columns that separated the nave from the northern and southern aisles stood. The two rows of stylobates (W34, W35) were built of dressed limestone slabs ( $0.55 \times 0.60 \mathrm{~m}$ ). A broken column and capital and two in situ columns were found on the southern stylobate.

Four courses of well-dressed ashlar-stone construction of the church's outer southern wall (W38) were exposed. Next to the interior side of the wall in the southern aisle was a staircase with eight steps that descended to an underground chamber, which was the church's crypt. It was accessed from the west and covered with a barrel vault (Fig. 2). The chamber was built of roughly hewn ashlar stones, some of them still bearing the remains of plaster. The rectangular chamber $(1.7 \times$ 3.5 m , height 2.4 m ) was oriented longitudinally, north-south. Oil lamps from the Ottoman period and a coke can from the modern era were found inside the crypt, indicating that the chamber was in use until recently. Another unit with an apse that faced south was exposed above the crypt. This was probably the baptisterium, built of ashlar stones in a semicircle and paved with dressed flagstones that bore remains of plaster.

West of the church's nave and aisles were the foundation remains of the eastern narthex wall (W45; c. 1.8 m ), where scant mosaic remains were also found. A large stone that was notched at both ends and probably served as an entrance threshold was exposed in the western wall of the narthex (W40). The church had apparently three entries, a main entrance and two side ones. The atrium was apparently located west of the wall. Due to the massive destruction caused to the western part of the church, the western wall of the atrium and the church was not found. The foundations of another wall, oriented east-west, were exposed west of the stone threshold; its relation to the church remains unclear.
Along the northern closing wall (W37), the scant foundation remains of at least two walls, oriented
north-south, abutted the outer face of the church wall. These were probably the remains of additional rooms.

Remains of columns, parts of a baptismal basin and several fragments of a chancel screen were discovered in and around the church. Most of the ceramic finds were from the end of the Byzantine period (sixth-seventh centuries CE) and the beginning of the Early Islamic period (seventh-eighth centuries CE). The mosaic remains consisted of two varieties in assorted patterns. One (size of the tesserae--1.0 $\times 1.7 \times 1.7 \mathrm{~cm}$ ) was used to decorate the floor of the two church aisles. These mosaic sections were in a poor state of preservation and it seems they were composed of geometric patterns; repairs that were probably carried out when the church was still in use were discerned. The tesserae of the second variety were smaller ( $0.5 \times 1.0 \times 1.0 \mathrm{~cm}$ ) and decorated the nave of the church. Although it was poorly preserved, a frame of a ribbon pattern was discerned, as well as a section with depicted lotus flowers and a medallion in its center, composed of grape tendrils with a variety of animals and probably a depiction of an open storage vessel as well. The style indicates that the mosaic should be dated to the second half of the sixth century CE.

Despite the partial preservation of the church, a few construction phases were noticeable. The curved southern wall of the baptisterium (W39) severed the southern wall of the church and therefore, it was probably added after the church structure was standing. However, it seems that the crypt, located beneath the baptisterium, should be dated to the time when the church was built.

A section of a diagonal wall (W33), aligned east- west, was in the nave in the middle of the church. The wall was erected directly on top of the mosaic pavement and it was ascribed to a later phase of the building, after the church was no longer in use. A tomb built up against the wall, near its eastern end, was exposed. This tomb and two others in the northern part of the church postdated it. The tombs were not excavated. Another wall (W41), perhaps contemporary with the later wall that had cut through the nave, was found exposed in the eastern part of the church. It was oriented north-south and continued the curved wall of the baptisterium. It seems that many of the wall's stones were in secondary use and originally belonged to the church structure. Two parts of a baptismal basin that was apparently situated in the southern part of the church, in the vicinity of the curved wall, were discovered inside the wall, close to each other. This unit apparently functioned as the church's baptisterium. A section of a short wall (W43) exposed near the southern aisle was probably a partition, abutting the later eastern wall.

In addition to the later walls, a wall (W31) that traversed the northern wing and the northern wall of the church was exposed. It extended in a north-south direction and was built of one row of stones in its southern part and of two rows of large fieldstones in its northern part. This wall seems to be even later--in addition to the pottery vessel fragments from the Byzantine, Early Islamic Crusader and Mamluk periods, later potsherds that dated until the nineteenth century were also found.

The church structure was a basilica, composed of a nave and two aisles. Auxiliary rooms probably existed on either side of the eastern apse, as well as in the northern part of the church. The floor of the church was decorated with two varieties of mosaics. The church, wherein two constructions phases were discerned, is dated to the end of the Byzantine period. The church structure and the crypt are attributed to the first phase and the baptisterium is assigned to the second phase. The main apse in the east, which was the center of worship and ritual in the church, was not located, nor was the wall that enclosed the church on the west. At least two later periods are represented by walls discovered inside the church structure, which at this point, cannot be dated.

## Area D

Three rock-cuttings, barren of finds, were examined on a hill east of the Beit Mirsim village and identified as natural.

## Area E

Numerous installations and burial caves were discerned on a hill southeast of Tell Beit Mirsim; those located below the route of the separation fence were examined and cleaned, including a drainage pit for a water cistern, several natural rock-cuttings, a complex winepress, openings to shafts that were not completely excavated, the entrance area to a Roman burial cave, a well that was still in use by the residents of the region and a cave dwelling that is probably modern.

## Area H

Prior to the excavation, numerous rock-cuttings, several installations and cave dwellings or burial caves were surveyed on a hill to the northeast of Tell Beit Mirsim. Those along the route of the separation fence were examined and cleaned, including a water cistern, two rock-hewn

The church with the crypt is the outstanding feature of the excavation. Its plan is similar to other churches excavated in the southern region of the country, although crypts inside church structures of this period are rare both in the Land of Israel and abroad. A nearby church with a similar crypt was exposed by D. Alon at Kh. Abu Khaff (Permit No. 962).


1. Area C, plan of church.

2. Area $C$, the crypt under the church, looking south.

## Tell Beit Mirsim



1. Area C, plan of church.

2. Area C, the crypt under the church, looking south.

Miki Ein Gedy and Karni Golan
14/1/2007
During October-November 2004 a salvage excavation was conducted along the planned route of the separation fence, between Sheqef and Shomriya, at the foot of Tell Beit Mirsim (Permit No. A-4269; map ref. NIG 19142-319/5950-73; OIG 14142-319/0950-73) and at the sites of Khirbat en-Nusrani, Giv'at Mirsham (North), Horbat Benaya, Tell Beit Mirsim and Khirbat Abu Mulassam. The excavation, on behalf of the Antiquities Authority and Ben-Gurion University and financed by the Ministry of Defense, was directed by M. Ein Gedi, with the assistance of K. Golan and D. Eisenberg-Dagan (area supervision), H. Lavi and R. Abu Khalaf (administration), A. Hajian and T. Kornfeld (surveying and drafting), P. Kaminski and H. Soklovsky (drawing), A. Fogal (photography) and P. Fabian (data concerning church at Kh. Abu Khaff).

The route of the separation fence, which passes along the southern fringes of Tell Beit Mirsim, was the cause for the current excavation. The site was excavated by W.F.Albright during the 1920s and 30s and settlement layers from the Early, Middle and Late Canaanite periods and the Israelite period were exposed. Owing to the importance of the site it was necessary to carry out an excavation along the southern edge of the tell and on the saddle between the tell and the village of Beit Mirsim (Areas A and B). Other areas were opened along the hills east and west of the tell ( $D, E, H$ ) and within the remains of an ancient church (Area C), due to the damage caused to it by the IDF.

Area A
The area is located on the southern and eastern slopes of the tell. Nine half squares $(2.5 \times 5.0 \mathrm{~m})$, spread across a rather extensive area, were opened, some of them adjacent to the many robber pits on the tell. The pits and hollows in the ground were cleaned by a backhoe. No architectural remains were found, save a row of stones that appeared to be the covering of a tomb. While excavating the tomb $(0.40 \times 0.75 \times 1.80 \mathrm{~m})$ a few fragments of bones were discovered. Several potsherds, dating from the Iron Age to the Byzantine period, were collected. The paucity of finds was surprising given the area's proximity to the tell.

## Area B

The area is located on the southern slopes of the tell, west of Area A. Ten half squares $(2.5 \times 5.0$ $\mathrm{m})$, opened along the planned route, were excavated down to virgin soil or bedrock, which were overlaid with soft, light colored fill mixed with potsherds that apparently, were mostly swept down from the top of the tell. No buildings were exposed, except for a wall stump of undressed fieldstones, probably a fence or partition (length 3 m , width 0.5 m ) that had no continuation Numerous fragments of pottery vessels from the Middle and Late Bronze Ages and a few Iron Age and Byzantine-period potsherds were found. It seems that the part of the tell above Area B was inhabited during these periods.

## Area C

The area extends across the northern foot of the hill where the village of Beit Mirsim is situated. Prior to the excavation, two limestone columns protruded from a small soil mound. The excavation revealed a church that dated to the later part of the Byzantine period (sixth-seventh centuries CE) as well as remains of walls from later periods (Fig. 1). The eastern part of the church was destroyed, most likely a result of building a farming terrace; the church's western part was damaged by work performed by the IDF.

The apse and the bema in the east of the church seem to have been completely destroyed. South of the presumed apse, short segments of plastered walls and mosaic pavements that were attributed to one of the church's auxiliary rooms were exposed. West of the presumed eastern apse were three ashlar stones, in situ, with a hewn channel in their upper part and recesses for two colonnettes, which were part of the chancel screen.

The middle part of the church was survived by remains of the northern wall's foundation and sections of the stylobates on which the columns that separated the nave from the northern and southern aisles stood. The two rows of stylobates (W34, W35) were built of dressed limestone slabs ( $0.55 \times 0.60 \mathrm{~m}$ ). A broken column and capital and two in situ columns were found on the southern stylobate.

Four courses of well-dressed ashlar-stone construction of the church's outer southern wall (W38) were exposed. Next to the interior side of the wall in the southern aisle was a staircase with eight steps that descended to an underground chamber, which was the church's crypt. It was accessed from the west and covered with a barrel vault (Fig. 2). The chamber was built of roughly hewn ashlar stones, some of them still bearing the remains of plaster. The rectangular chamber $(1.7 \times$ 3.5 m , height 2.4 m ) was oriented longitudinally, north-south. Oil lamps from the Ottoman period and a coke can from the modern era were found inside the crypt, indicating that the chamber was in use until recently. Another unit with an apse that faced south was exposed above the crypt. This was probably the baptisterium, built of ashlar stones in a semicircle and paved with dressed flagstones that bore remains of plaster.

West of the church's nave and aisles were the foundation remains of the eastern narthex wall (W45; c. 1.8 m ), where scant mosaic remains were also found. A large stone that was notched at both ends and probably served as an entrance threshold was exposed in the western wall of the narthex (W40). The church had apparently three entries, a main entrance and two side ones. The atrium was apparently located west of the wall. Due to the massive destruction caused to the western part of the church, the western wall of the atrium and the church was not found. The foundations of another wall, oriented east-west, were exposed west of the stone threshold; its relation to the church remains unclear.
Along the northern closing wall (W37), the scant foundation remains of at least two walls, oriented
north-south, abutted the outer face of the church wall. These were probably the remains of additional rooms.

Remains of columns, parts of a baptismal basin and several fragments of a chancel screen were discovered in and around the church. Most of the ceramic finds were from the end of the Byzantine period (sixth-seventh centuries CE) and the beginning of the Early Islamic period (seventh-eighth centuries CE). The mosaic remains consisted of two varieties in assorted patterns. One (size of the tesserae- $-1.0 \times 1.7 \times 1.7 \mathrm{~cm}$ ) was used to decorate the floor of the two church aisles. These mosaic sections were in a poor state of preservation and it seems they were composed of geometric patterns; repairs that were probably carried out when the church was still in use were discerned. The tesserae of the second variety were smaller $(0.5 \times 1.0 \times 1.0 \mathrm{~cm})$ and decorated the nave of the church. Although it was poorly preserved, a frame of a ribbon pattern was discerned, as well as a section with depicted lotus flowers and a medallion in its center, composed of grape tendrils with a variety of animals and probably a depiction of an open storage vessel as well. The style indicates that the mosaic should be dated to the second half of the sixth century CE.

Despite the partial preservation of the church, a few construction phases were noticeable. The curved southern wall of the baptisterium (W39) severed the southern wall of the church and therefore, it was probably added after the church structure was standing. However, it seems that the crypt, located beneath the baptisterium, should be dated to the time when the church was built.

A section of a diagonal wall (W33), aligned east- west, was in the nave in the middle of the church. The wall was erected directly on top of the mosaic pavement and it was ascribed to a later phase of the building, after the church was no longer in use. A tomb built up against the wall, near its eastern end, was exposed. This tomb and two others in the northern part of the church postdated it. The tombs were not excavated. Another wall (W41), perhaps contemporary with the later wall that had cut through the nave, was found exposed in the eastern part of the church. It was oriented north-south and continued the curved wall of the baptisterium. It seems that many of the wall's stones were in secondary use and originally belonged to the church structure. Two parts of a baptismal basin that was apparently situated in the southern part of the church, in the vicinity of the curved wall, were discovered inside the wall, close to each other. This unit apparently functioned as the church's baptisterium. A section of a short wall (W43) exposed near the southern aisle was probably a partition, abutting the later eastern wall.

In addition to the later walls, a wall (W31) that traversed the northern wing and the northern wall of the church was exposed. It extended in a north-south direction and was built of one row of stones in its southern part and of two rows of large fieldstones in its northern part. This wall seems to be even later--in addition to the pottery vessel fragments from the Byzantine, Early Islamic Crusader and Mamluk periods, later potsherds that dated until the nineteenth century were also found.

The church structure was a basilica, composed of a nave and two aisles. Auxiliary rooms probably existed on either side of the eastern apse, as well as in the northern part of the church. The floor of the church was decorated with two varieties of mosaics. The church, wherein two constructions phases were discerned, is dated to the end of the Byzantine period. The church structure and the crypt are attributed to the first phase and the baptisterium is assigned to the second phase. The main apse in the east, which was the center of worship and ritual in the church, was not located, nor was the wall that enclosed the church on the west. At least two later periods are represented by walls discovered inside the church structure, which at this point, cannot be dated.

## Area D

Three rock-cuttings, barren of finds, were examined on a hill east of the Beit Mirsim village and identified as natural.

## Area E

Numerous installations and burial caves were discerned on a hill southeast of Tell Beit Mirsim; those located below the route of the separation fence were examined and cleaned, including a drainage pit for a water cistern, several natural rock-cuttings, a complex winepress, openings to shafts that were not completely excavated, the entrance area to a Roman burial cave, a well that was still in use by the residents of the region and a cave dwelling that is probably modern.

Area H
Prior to the excavation, numerous rock-cuttings, several installations and cave dwellings or burial caves were surveyed on a hill to the northeast of Tell Beit Mirsim. Those along the route of the separation fence were examined and cleaned, including a water cistern, two rock-hewn

The church with the crypt is the outstanding feature of the excavation. Its plan is similar to other churches excavated in the southern region of the country, although crypts inside church structures of this period are rare both in the Land of Israel and abroad. A nearby church with a similar crypt was exposed by D. Alon at Kh. Abu Khaff (Permit No. 962).


1. Area C, plan of church.

2. Area $C$, the crypt under the church, looking south.

## Tell Jatt*

Eiad 'Awawdy
14/6/2007


1. Plan and sections.

During May 2001 a trial excavation was conducted on Tell Jatt (Permit No. A-3424*; map ref. NIG $204481-$ 503/700514-536; OIG 154481-503/200514-536), following the discovery of ancient remains. The excavation, on behalf of the Antiquities Authority and financed by 'A. el-Kader 'Isa Shamiya, was directed by E. 'Awawdy, with the assistance of A. Hajian (surveying) and S. Ya'aqov-Jam (administration).

The excavation was located along a terraced spur, descending from southeast to northwest ( $10 \times 15 \mathrm{~m}$ ), in the eastern part of the Jatt village, which is apparently the eastern fringes of Tell Jatt, based on previous excavations and surveys ('Atiqot 37:1-78).

A shallow stone quarry and a winepress were exposed (Fig. 1). At the northern end of the quarry (L10), three irregular stone masses ( $0.2 \times 0.2 \times 0.5 \mathrm{~m}$ ) indicated their dressing was incomplete. The winepress consisted of a treading floor and a collecting vat. The treading floor (L60) had survived by its foundation and a few sections of a coarse mosaic pavement. The floor sloped toward a channel in its northern part that connected the floor to the collecting vat. It seems that the western wall of the treading floor was originally built, but did not survive. The rectilinear collecting vat (L50; $1.5 \times 1.7 \mathrm{~m}$, depth 1.2 m ) was hewn in limestone bedrock and had a sump (L51; diam. 0.4 m , depth 0.36 m ) in its floor. It contained ribbed potsherds characteristic of the Byzantine period.
East of Collecting Vat 50 was a section of another bedrock-hewn and plastered collecting vat (L80) linked to the former by way of a hewn opening (diam. 0.1 m ). The eastern part of the winepress was not exposed as it lay beyond the limits of the excavation.

The alluvium fill inside the quarry contained potsherds that do not enable its dating.
The winepress points to agricultural activity and wine production in antiquity, in the region.


## Tell Qasile*


2. Pottery at the bottom of the pit, looking east.

3. Pottery.

Etan Ayalon
23/7/2007
During April and June 2001 a salvage excavation was conducted west of Tell Qasile on the grounds of the Eretz Israel Museum (Permit No. A-3408*; map ref. NIG 18065-70/66763-7; OIG 13065-70/16763-7), following the discovery of remains during the course of development work. The excavation, on behalf of the Antiquities Authority and the Eretz Israel Museum, was directed by E. Ayalon, with the assistance of Z. Eisenstark, L. Fedrol-Kavitkovsky (photography), R. Mishayev (drafting, drawing of finds), R. Badhi and E. Ayash.
The remains were discovered in two adjacent locations.
The first location consisted of a circular pit, hewn in kurkar bedrock, which widened toward the bottom (diam. 0.9 m , depth 0.55 m ; Fig. 1). It contained pottery vessels from the eleventh-tenth centuries BCE (Fig. 2), including a complete bowl decorated with knobs below the rim (Fig. 3:1), as well as a beach-rock grindstone and fragments of mud bricks. Another pit (diam. 0.75 m ), which was preserved to a depth of 5 cm only and contained fragments of two red-slipped bowls (Fig. 3:2, $3)$, was discovered c. 1 m east of the first pit.

The walls of a large pit $(1.55 \times 1.90 \mathrm{~m}$, preserved depth 1.15 m$)$ were discerned in the section of an old trench in the second location. The upper and middle parts of the pit, hewn in kurkar bedrock, had been destroyed in the past. The pit contained fragments of pottery vessels from the eleventhtenth centuries BCE, including bowls (Fig. 3:4, 5), a cooking pot (Fig. 3:6), jars (Fig. 3:7, 8), jugs (Fig. 3:9-11) and a juglet (Fig. 3:12), as well as a few additional ceramic pbjects, such as a very thick basin rim (Fig. 3:13), a loom weight (Fig. 3:14) and a fragment of a conical plug cork, possibly from a potter's kiln.

The pits had probably been originally used for storage and once they were abandoned, most of the artifacts recovered from them had apparently been discarded inside. The artifacts imply the existence of potter's kilns in the vicinity.


1. Circular pit, plan and section.

2. Pottery at the bottom of the pit, looking east.

3. Pottery.

## Tiberias

Edna J. Stern
8/2/2007
During January-February 2002 a salvage excavation was conducted in a parking lot near the south beach hotels in Tiberias (Permit No. A-3584; map ref NIG 25118/74346; OIG 20118/24346), prior to the construction of a public restroom. The excavation, on behalf of the Antiquities Authority and financed by the Government Tourism Corporation, was directed by E.J. Stern, with the assistance of Y. Dangor (administration), A. Hajian (surveying and drafting), H. Smithline (photography), Y. Gorin-Rosen (glass), L. Porat (pottery restoration), Y. Alexandre and Y. Stepansky.

Remains of the city from the Roman to the Fatimid periods in the south of the excavated area were contiguous to the city remains from the Crusader to the Ottoman periods in the north. Therefore, the remains exposed in the excavation dated from the Roman period to the modern era. Previous excavations in this zone revealed antiquities from the Ayyubid, Crusader and Mamluk periods, which contribute greatly to our knowledge of the city from these periods (ESI 1:110; HA 61-62:9; 47:4; 16:15).

An area (c. $5 \times 5 \mathrm{~m}$ ), revealing at least five occupation layers, was exposed. The excavation was conducted under extreme conditions, in muddy soil that was frequently flooded; hence, floor levels could hardly be discerned.

Stratum 5 (Byzantine to Fatimid periods; fifth-eleventh centuries CE). Accumulations of potsherds were found in three loci, which could be excavated to a greater depth, below the later remains. A wall was discerned; it was not exposed to its full height and its date could not be ascertained.

Stratum 4 (Crusader period; twelfth century CE). The eastern wall of a building was exposed. It had an entrance that was later blocked during Stratum 2. The wall was constructed from two rows of basalt ashlars and a core of small fieldstones and bonding material. A floor was uncovered at the elevation of the entrance threshold, upon which fragments of pottery vessels were found.

Stratum 3 (the Crusader-Ayyubid-Mamluk periods; thirteenth century CE). The use of the building from Stratum 4 continued. Its floors were raised and two partition walls were added. One wall, whose southern face was coated with hydraulic plaster, was probably used to retain a water reservoir that extended south of the excavation area. A dark brown tamped earth floor that was overlaid with numerous pottery vessels, some of which were restored, as well as glass vessels and a fragment of a marble mortar, was identified north of one of the walls. On the southern side of this wall and the elevation of the floor was an accumulated layer that contained ashlar collapse and numerous fragments of pottery vessels, but no floor per se was discerned.

Stratum 2 (Mamluk period; fourteenth century CE). The building continued to be used and the entrance in the wall was blocked with ashlar stones. No distinct floor was recorded; however, the soil accumulations in this layer contained pottery vessels that were identical to the types found in the excavation of the sealed entrance.

Stratum 1 (Ottoman period to the British Mandate era; seventeenth-twentieth centuries CE). Residential levels dating to this period of time were removed by a backhoe prior to the excavation. Yet, in the western part of the square a wall that was built of small basalt ashlar stones and white bonding material survived. Based on the construction style of the wall and the remains of blue painted plaster, it should probably be dated to the seventeenth-twentieth centuries CE. A block of cast concrete, which had penetrated into the ancient building remains, was exposed. It seems the concrete had been poured after a small manual excavation was carried out, as no signs of mechanical equipment's work were apparent. The pouring of the concrete block was probably undertaken during the British Mandate era or the early years of the State of Israel.

Despite the limited scope of the excavation, the difficult working conditions and the later disturbance (the concrete block), exposure of the residential quarter of Tiberias in the twelfthfourteenth centuries CE is of significant importance. The pottery assemblages, especially those from the thirteenth century CE , in addition to the glass vessels and the stone mortar, contribute to our knowledge of the material culture in Tiberias during these periods.

## Tiberias*




1. Plan and sections

2. Pottery

3. Square B3, Early city wall, looking south; behind, city wall from Ottoman period.

4. Early city wall incorporated in Ottomanperiod wall, looking southwest.

5. Bayonet of an

Ottoman army rifle.

Yosef Stepansky
24/12/2007
During January-February 2003 an excavation was conducted along the southern city wall of Tiberias, in a section between Ha-Bonim and Ha-Galil Streets (Permit No. A-3814*; map ref. NIG 2510/7434; OIG 2010/2434; ESI 1:110), within the framework of a conservation and reconstruction project of this city wall segment, implemented by the Conservation Department of the Antiquities Authority and funded by the Government Tourist Corporation. The excavation, on behalf of the Antiquities Authority, was directed by Y. Stepansky, with the assistance of Y. Ya'aqoby (administration), V. Essman and V. Pirsky (surveying and drafting), H. Tahan (pottery drawing), L. Kupershmidt (metallurgical laboratory), R. Kool (numismatics), C. Amit (bayonet photography), E.J. Stern (ceramics advice) and R. Oren (technical assistance on behalf of the project coordinator).
The excavation was undertaken on both sides of the Ottoman-period city wall. Five squares were opened next to the wall (Fig. 1; total area of 35 sq m ), two on the outside (Squares D2, E2) and three inside (Squares B3, C3, E3). The foundations of the city wall from the Ottoman period and remains of an earlier wall that is apparently dated to the end of the Early Islamic period or the beginning of the Crusader period were exposed, as well as building remains from the Ottoman period. The excavation took place following the partial conservation and restoration of this section of the city wall.
The Excavation outside the City Wall. Soil fill in the two squares (D2 $-2.0 \times 2.5 \mathrm{~m}$; E2 $-2.5 \times$ 2.5 m ) contained potsherds from the Byzantine, Early Islamic, Crusader-Ayyubid (few), Early Ottoman (few) and Late Ottoman (eighteenth-nineteenth centuries CE; most of the finds) periods. The excavation reached a depth below surface of 1.6 m in D2 and c. 2.0 m in E2. A concentration of five masonry stones that probably derived from collapse was discovered in the soil fill of Square E2, which also contained the foundation of the city wall from the Ottoman period that was built of smal basalt fieldstones (Fig. 2). The ceramic artifacts discovered down to the depth of the foundation included glazed bowls (Fig. 3:20, 21) and a Rashaya el-Fukhar jar (Fig. 3:22), dating to the latter part of the Ottoman period (the eighteenth-nineteenth centuries CE). It therefore seems that the city wall was visible almost to the depth of its foundation at the end of the Ottoman period and apparently until the 1930s, as indicated by photographs taken at the beginning of the twentieth century. Over the course of the latter, probably about the time of the great flood that occurred on May 15, 1934, the area was covered by a layer of soil c. 2 m thick. A level of disarrayed stones (width 0.5 m ) that ran the length of the wall in Square E2, at the depth of the foundation, was exposed. A few potsherds that dated to no later than the Early Islamic period were discovered between the stones. This level of stones may be part of the infrastructure for the foundation of the city wall from the Ottoman period, although it is also likely that it belonged to the earlier construction complex, possibly from the Early Islamic or even the Crusader periods.

The Excavation inside the Wall. Remains of an earlier wall (width 2.2 m ), adjacent to the northern face of the city wall from the Ottoman period, were exposed in the squares (B3-3×4 m; C3 $-2.5 \times 2.5 \mathrm{~m}$; E3 $-2.5 \times 2.5 \mathrm{~m}$ ). It was aligned east-west and built of two rows of dressed basalt stones with a core of densely packed soil and stones and (Fig. 4). A section of the early city wall (W4; length 3 m ) was excavated in Square B3. Its northern side, probably the inside, was exposed to the level of the foundation ( 1.7 m below surface). The northern face of the wall consisted of five stone courses placed as headers (Fig. 5) and foundations that comprised small basalt stones. Only the top of what was probably the outer face of the city wall's southern side was exposed since the Ottoman-period wall was next to it (Fig. 6). A section from the top of the early wall was exposed in Square C3 (W5; length 2 m ). The construction of this wall section was similar to that of the wall in Square B3. Only several stones from the wall were discovered in Square E3. These were probably a small section of its northern face. The early wall was damaged here due to the construction of a north-south wall during the Ottoman period (below). Seven meters east of Square B3, a section of the early wall (length 5 m , preserved max. height 3.5 m ) that was preserved above surface and incorporated in the construction of the Ottoman-period wall (Fig. 7), was discerned. It was also built of two rows of stones with a core of soil and stones. It seems that the builders of the Ottoman-period city wall utilized the remains of the early wall in this section, which was preserved to a relatively considerable height, and incorporated it in the new wall for the purpose of thickening and reinforcement.
Local probes were conducted in the core of the wall in Square B3 and between the stones in its southern side in Square C3. These sealed loci contained potsherds dating to the Early Islamic period (ninth-eleventh centuries CE), particularly to the Fatimid period (eleventh century CE), including glazed bowls (Fig. 3:1-4), a cooking pot (Fig. 3:5), jars (Fig. 3:6-8) and a jug (Fig. 3:9). The single later potsherd was a fragment of a roof tile that is probably dating to the Ottoman period and was discovered between the stones of the southern side of the city wall in Square C3. It seems that this fragment penetrated this spot when the adjacent Ottoman-period city wall was built or repaired. An Umayyad fils from the years 697-750 CE was discovered in a non-sealed locus, in the soil fill above the top of the wall in Square C3. The coin does not indicate the time of the city-wall construction, yet it suggests that activity had taken place in the area prior to the wall's construction.
Based on the ceramic finds, it seems that the construction of the early wall should be dated to the end of the Early Islamic period (eleventh century CE) or the beginning of the Crusader period (twelfth century CE, after the Crusader conquest in 1099). However, the possibility that the early wall was built later, possibly in the sixteenth century CE, on land that lay vacant since the Early Islamic period and at the initiative of Dona Garcia Mendes and Don Joseph Nasi, mentioned in several historical sources as builders of Tiberias' city wall, should not be negated.
Nonetheless, the relatively numerous potsherds from the Early Islamic period, including bowls (Fig. 3:1-4), cooking pots (Fig. 3:5), jars (Fig. 3:6-8), a jug (Fig. 3:9) and lamps (Fig. 3:10, 11) and from the Crusader-Ayyubid periods (twelfth-thirteenth centuries CE), namely glazed bowls (Fig. $3: 12-14$ ), cooking pots and pans (Fig. 3:15, 16) and a jar (Fig. 3:17), contrary to the meager amount from the Mamluk and the beginning of the Ottoman periods throughout the entire excavation area, including glazed bowls (Fig. $3: 18,19$ ), lead us to conclude that the earlier date for
the construction of this city wall should be preferred. It seems that by the Mamluk period the early wall was no longer in use. A few potsherds from this period and a single coin of the Mamluk ruler Shaban II were discovered in the excavation. The coin was minted in Damascus in 1368 CE and came from the soil fill above the top of the early wall in Square C3, suggesting that some sort of activity, which was probably not related to the fortification, occurred in the region during this period. The city wall from the Ottoman period was probably built in the sixteenth century CE, at the time of Dona Garcia Mendes and Don Joseph Nasi, whereas in the eighteenth century CE, during the rule of Daher al-'Omar, it was renovated and strengthened.

In addition to the remains of the early city wall, building remains, dating to the Ottoman period, were uncovered in the squares on the inside of the wall. A stone pavement (L118) that abutted on the northern façade of the early wall was discovered in Square B3. It seems that the early wall was utilized during the course of the Ottoman period and probably served as a wall for a dwelling or part of another building complex.
Sections of walls and a pavement, ascribed to a structure that was built on top of the early wall, were discovered in Squares C3 and E3. It seems this building was in use until the beginning of the twentieth century CE, as indicated by sections of pavement and walls coated with a thick layer of blue plaster that was popular in Tiberias until the time of the British Mandate. A section of a northsouth oriented wall, which had damaged the early wall, was exposed in the western part of Square E3. Two construction phases were discerned in the wall, both dating to the Ottoman period. A bayonet that belonged to an Ottoman army rifle, dating to the end of the nineteenth or the beginning of the twentieth centuries CE (Fig. 8), was discovered in the soil fill east of the upper part of the wall (from its later phase), above a grayish white plaster floor (L107).


1. Plan and sections.



2. Square B3, early city wall, looking west.

3. Square B3, northern side of early city wall, looking south.

4. Square B3, Early city wall, looking south; behind, city wall from Ottoman period.

5. Early city wall incorporated in Ottoman-period wall, looking southwest.

6. Bayonet of an Ottoman army rifle.

## Tirat Karmel*



1. Byzantine winepress, Ottoman aqueduct and building, plan.

2. Byzantine winepress, looking east.

3. Collecting vat, looking west.

4. Pottery.

5. Doorjambs in collapse, looking west.

Orit Segal
11/9/2007
During April-May 2004 a salvage excavation was conducted on the northern bank of Nahal Galim, on Lot No. 15 in Tirat Karmel (Permit No. A-4150*; map ref. NIG 19850/74075; OIG 14850/24075), in the wake of preparing the area for construction. The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Housing and Construction, was directed by O. Segal, with the assistance of S. Ya'aqov-Jam (administration), O. Oren (area supervision), V. Essman and V. Pirsky (surveying), E. Belashov (drafting), T. Sagiv (field photography), C. Amit (studio photography), M. Shuiskaya-Arnov (pottery drawing) and L. Kupershmidt (metallurgical laboratory).

The author had excavated two other lots (Nos. 16, 17) in the past, east of the lot in which an aqueduct was located (HA-ESI 118). M. Eisenberg, on behalf of the University of Haifa (License Nos. B-258/2002, B-259/2002, B-261/2002), excavated in Lot 15 and exposed a small section of the aqueduct and a mosaic floor (Fig. 1, highlighted in gray). Recent buildings were excavated west of the current excavation area by R. Toueg, on behalf of the Institute for Maritime Studies of the University of Haifa (License No. G-122/1996).
The excavation area extended along three terraces located on the northern bank of Nahal Galim. On the upper terrace, a Byzantine winepress that had previously been partially uncovered by M. Eisenberg was excavated. On the middle terrace, other sections of the aqueduct were exposed and a stone clearance heap was examined on the lower terrace.

## The Byzantine Period

Winepress. The winepress consisted of a treading floor that had survived only by its northern part (L220; Figs. 1, 2), although the entire outline ( $5.1 \times 5.1 \mathrm{~m}$ ) could be reconstructed based on the complete exposure of this side. The floor was set on top of wadi pebbles and two technical phases could be discerned, indicating the winepress was used over a prolonged period. East of the treading floor was a square collecting vat (L215; $2.7 \times 2.7 \mathrm{~m}$, depth 1.7 m ) that had four steps (rise 0.35 m ; Figs. 1: Section $3-3 ; 2$ 3) leading to its bottom. The walls (width 1 m ) of the vat, built of smal stones bonded with a white conglomerate and surrounded by a white mosaic that was partially preserved, were coated with white plaster. Circular settling pits, installed along the northern and western edges of the collecting vat, had a ceramic drainage pipe leading into the vat. Another settling pit was set inside the vat's northeastern corner. The floor of the vat, the steps and the bottoms of the settling pits were paved with a white mosaic (Fig. 3). The fill from the collecting vat included a large quantity of cooking pot (Fig. 4:1) and jar (Fig. 4:2-4) fragments that dated to the Byzantine period. The settling pit inside the collecting vat contained a complete jug (Fig. 4:5) and a toggle pin (Fig 4:6) which are dated to the fifth-sixth centuries CE, when the winepress was no longer in use.

## The Ottoman Period

Aqueduct (Fig. 5). Another 24 m long section of the Ottoman aqueduct that is built of ceramic pipes was exposed. The aqueduct, which begins at 'Ein Qedem, c. 2 km to the east, is known from previous studies that also mention it began at 'Ein Qedem and terminated at a reservoir next to Kafr Tira (HA-ESI 118). The exposed section of the aqueduct is composed of 12 m in the middle terrace and another 12 m in a sharp bend to the southwest, which is the last surviving section of the aqueduct, as its continuation toward the pool had been destroyed long ago. The aqueduct was built atop a foundation of two rows of undressed limestone that flanked a ceramic pipe. The dating of the aqueduct is based on the architectural remains excavated nearby. The aqueduct in the middle terrace passed nearby and related to the southeastern corner of a building from the Ottoman period (Fig. 6). The terrace (W238) in this section abutted the eastern wall of the building and also covered the aqueduct. Some 6 m north of this point, which is the highest on the middle terrace, both the aqueduct (W237) and the elevated northern part of the building were founded atop retaining walls (W239, W240), which dated the aqueduct with certainty to the time of the building, that is, the Ottoman period (see below).

The Ottoman Building. The northern part of the building, excavated on the lower terrace, bordered the middle terrace and adjoined it. The construction of the building on the slope caused soil erosion and the collapse of its western part. The building consisted of a single room that was its residential area (L201; $5 \times 10 \mathrm{~m}$ ) and a front courtyard (L204; $2 \times 9 \mathrm{~m}$ ). The entrance was in the southeastern wall (W223) to whose southern part (W236) a row of stones was attached (W235), serving as an outer staircase that led to the roof of the building. The doorjambs, the socket stone and the lintel (Figs. 1: W242; 7) were found in a collapse in the entrance. A reconstruction of the entrance shows that it was 1.5 m wide and the doorjambs were 2.6 m high. All that survived of the building were the exterior walls and a plaster floor (L201), preserved to a width of more than 2 m , which abutted the northern wall (W221). The level of the entrance was 1 m lower than that of the floor and it is possible to reconstruct the interior partition of the building along two levels: a front entrance level (in Arabic: qa'a el-beit) with a tamped-earthen floor and a rear shelf-like higher level (maztabah) that had a plaster floor, which was founded on top of retaining walls (W239, W240). In traditional Arab construction the upper level served as the residential area for the family members and the front level was used to store tools and food. Four pillars (W224, W227, W233, W234), which may have supported a cross vault, were found in the western and eastern walls of the building. Cross vaults first appeared in the Roman period; however, the methods for building vaults that were brought to the Land of Israel by the Crusaders, using inferior bonding materials that consisted of a mixture of small fieldstones and cement, were adopted in vault construction as of the Middle Ages and later. It seems that in Tira the traditional building techniques of the Crusader period continued until the Ottoman period.
The artifacts recovered from the room were scarce and mostly included fragments of ceramic water pipes (Fig. 4:7-11) that can be attributed to the adjacent aqueduct.


1. Byzantine winepress, Ottoman aqueduct and building, plan.

2. Byzantine winepress, looking east.

3. Collecting vat, looking west.


4．Pottery．

5. Aqueduct, plan.

6. Aqueduct and southeastern corner of Ottoman building, looking north.

7. Doorjambs in collapse, looking west.

## Tirat Yehuda*

Archive report
Gerald Finkielsztejn
11/7/2007
Excavating a lot in Tirat Yehuda (en-Nebi Kifl; $10 \times 10 \mathrm{~m}$; Permit No. A-2998*; map ref. NIG $19340-95 / 65783-90$; OIG $14340-95 / 15783-90$ ) exposed a rounded rock (c. $0.5 \times 1.5 \mathrm{~m}$ ) and a few tiny worn potsherds.

## Wasset*

## Hendrik (Enno) Bron

1/11/2007


1. Square A1, plan and section.

2. Square A1, W102, looking south.

3. Square A2, plan and section.

4. Square A2, W109 looking south.

5. Square A2, Tabun 111, looking west.

During July-August 2006, a trial excavation was conducted at the site of Wasset (Permit No. A-4852*; map ref. NIG 2686-7/78273-6; OIG 2186-7/28273-6), in the wake of plans to develop a public park. The excavation, on behalf of the Antiquities Authority and funded by the JNF, was directed by H . Bron, with the assistance of Y. Ya'aqoby (administration), V. Pirsky (surveying), M. Hartal (photography and ceramic consultation), H. Tahan (pottery drawing) and workers from the Druze village of Buq'ata.

Probe trenches that were dug in the area slated for the park exposed antiquities, which called for a trial excavation. The excavation had begun by Y. Alexander who was forced to suspend fieldwork after one day due to the commencement of the Second Lebanon War. Excavation was resumed by the author and occasionally interrupted by the security situation in the region.

The site of Wasset in the northern Golan Height is situated on a basalt plateau, near a crossroad between Moshav Sha'al and Qibbuz Merom Golan. A small excavation was undertaken at the site in 2005 (Permit No. A-4646) and surveys on and around the site proved that it was inhabited as of the Early Bronze Age until its abandonment in 1967.

Two squares, $\mathrm{Sq} A 1$ in the north and $\mathrm{Sq} A 2,10 \mathrm{~m}$ to the south, were opened. Building remains from the Roman period that included walls, floors and a tabun, as well as pottery from the Early Bronze Age and the Hellenistic and Roman periods were discovered in both squares.

Square A1. Three levels were exposed in this square (Fig. 1).
Level 1. A badly preserved wall (W112), oriented north-south, was uncovered within the surface layer. It consisted of two large stones and a door lintel in secondary use (length 1 m ) and was preserved 0.4 m high. Potsherds near and around W112 belonged mainly to the Rashaya el-Fukhar ware that came from South Lebanon and dated to the nineteenth-twentieth centuries CE. Wall 112 is therefore a remnant of the Syrian village that existed at the site until 1967.
Level 2. Wall 112 was set directly on top of Wall 102 and used part of it as foundation. Wall 102 (length 3.6 m , width 0.8 m ; Fig. 2) ran in a southwest-northeast direction through the center of the square. It was built c. 0.2 m above bedrock of medium-sized fieldstones, placed on their flat side to the north, thus creating a smooth exterior face.
Pottery recovered from both sides of W102 (L105, L106) dated its earliest use to the Early Roman period (bowl, Fig. 3:1). It continued to be in use until the late Roman period (base and rim fragments of jar, Fig 3:2). Due to the small area exposed it was impossible to determine its function.
Level 3. A dark colored layer above bedrock and below W102 contained pottery fragments from Early Bronze II (base of jar and body fragment, Fig. 3:3, 4), although no architectural remains from this period were discovered.

Square A2. Two different occupation layers were discerned in this square (Fig. 4).
Layer 1. An extensive floor (L107) that consisted of pebble-sized stones and abutted Wall 108 was exposed within the surface layer. The entire area was covered with modern debris together with an abundance of mixed potsherds, including rim and bases of bowls (Fig. 5:1-3) and a jar (Fig. 5:4), mainly of the late Roman period, but also fragments of a Persian/Hellenistic jar (Fig 5:5), which point to the span of occupation in this area. Floor 107 and W108 were the remains of the Syrian village that existed at the site until 1967.
Layer 2. Directly underneath Floor 107 were the remains of walls (W109, W110; Fig. 6), a floor and a tabun. It seems that this area represented the northwestern corner of an open courtyard whose floor (L113), composed of compact earth and small stones, survived only by a small fraction in the corner between W109 and W110.
The large tabun (L111; diam. 0.9 m , preserved height 0.4 m ; Fig. 7) was placed in the center of the exposed area. It was built of a hardened dark red mud layer set within a circle of stones. The upper part of the tabun was covered with numerous large flat potsherds that belonged to different types of vessels, including a base fragment of a late Roman bowl (Fig. 5:6). This might indicate that the tabun had to withstand high temperatures, which could imply an industrial use, although no refuse was found in or around it. Two flat stones on the east side of the tabun served as a working area.
All the pottery above Floor 113 and on the north side of W109 dated to the late Roman period and included bowls (Fig. 8:1-5), a cooking pot (Fig. 8:6), an amphora base (Fig. 8:7) and jugs (Fig $8: 8,9$ ), as well as a complete oil lamp (Fig. 8:10) and a basalt loom weight (Fig. 8:11).
Bedrock was not reached in this area and it seems plausible that earlier settlement remains are still present, as also implied by the pottery assemblage that contained potsherds from the Hellenistic and Early Roman periods.

The excavations at Wasset show that the site was occupied during Early Bronze II, although the exact location of the site from this period is still elusive. After a long gap, the site was reoccupied during the Hellenistic period, terminating at the late Roman period, similar to other sites on the northern Golan Height. No evidence to the effect that the site was settled during the Byzantine period was found.
A large part of the ceramic assemblage belonged to the Golan Ware pottery, which indicates that this area of the northern Golan was populated by the Yaturian people during the Early and late Roman periods. Further use of the site began during the Mamluk period and continued until recent times (1967).



1. Square A1, plan and section.

2. Square A1, W102, looking south.

3. Square A1, Early Bronze Age and Roman pottery.

4. Square $A 2$, plan and section.

5. Square A2, Hellenistic and Roman pottery.

6. Square A2, W109, looking south.

7. Square A2, Tabun 111, looking west

8. Square A2, late Roman pottery.

## Yaham*

Marwan Masarwa
14/6/2007


1. The excavation area.

2. Building, plan and sections.

During March 2003 a trial excavation was conducted at Kafr Yama (Permit No. A-3854*; map ref. NIG 203463-527/697364-420; OIG 153463-527/197364-420), in an area slated for the construction of a sheepfold in the agricultural school. The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Education, was directed by M. Masarwa, assisted by A. Hajian (surveying) and A. Salam Sa'id (photography).

A winepress, a building, a cupmark and a cave were discovered (Fig. 1).
The winepress was hewn in chalk bedrock and consisted of a large treading floor (L501; $4.18 \times$ 4.20 m ; Fig. 2) whose eastern side was damaged when it became part of a later quarry, after it was no longer in use. A pierced-through perforation in bedrock (diam. 8 cm ) on the northeastern side of the treading floor connected it to a settling pit (L502; diam. 0.87 m , depth 0.77 m ). A hewn channel (diam. 8 cm ) in the western side of the settling pit connected it to a rectangular collecting vat (L503; $2.05 \times 2.55 \mathrm{~m}$, depth 1.57 m ) whose walls and floors were coated with white plaster, preserved only along the bottom of the walls. A sump on its southern side (diam. 0.6 m , depth 0.3 m ) was paved with a white mosaic and cut in the floor of the collecting vat, which yielded Byzantine potsherds. The shape of the winepress is characteristic of the Byzantine period.

The rectangular structure ( $6.5 \times 7.5 \mathrm{~m}$; Fig. 3), which was found covered with a heap of stones of different sizes, is dated to the Ottoman period. Upon removal of the stone collapse, two levels of the building were exposed. The building was entered from the north by way of a main doorway, from which two steps $(0.40 \times 0.95 \mathrm{~m})$ descended to a lower level (Loci 506,510$)$ that was a sort of white-plastered courtyard ( $2.3 \times 2.4 \mathrm{~m}$ ). Two openings $(1 \times 1 \mathrm{~m})$, which formed a corridor flanked by plastered stone pilasters $(0.8 \times 0.9 \mathrm{~m}$, height 1.2 m$)$, were discovered in the western and eastern sides of the courtyard. Two threshold steps ( $0.4^{\prime} 0.9 \mathrm{~m}$, height 0.2 m ) that separated the floor of the corridor from that of the building were visible in the western opening. A step $(0.4 \times 0.9$ m , height 0.3 m ) in the eastern opening connected the corridor to the central courtyard. Two burnt spots (Loci 512,513 ) were exposed in the northeastern and northwestern corners of the courtyard. The upper level (L508; $2.5 \times 3.5 \mathrm{~m}$ ), which was paved with poor quality white plaster that abutted the walls of the building, was exposed in the southern part of the building. The plastered Wall 4, built of a single course ( 0.3 m high), separated the two levels of the building and was connected to the two southern pilasters of the opening on the lower level. Two stones were preserved of an opening ( 0.75 m wide) that was exposed on the southeastern side of the upper level. Its floor, coated with white plaster, was connected to Floor 508.
A few fragments of pottery vessels from several periods were found; however, the building is ascribed to the beginning of the nineteenth century CE based on two coins that were found on Floor 508; one of the coins bears the name of Mohammed 'Abd al-Hamid, the son of al-Hamid II (18761909 CE). The discovery of two horseshoes in the lower level seems to indicate that both people and animals occupied the building at the same time.

The bedrock-hewn cupmark (L504; diam. 0.7 m , depth 0.45 m ; Fig. 4) was exposed in an area slated for development to the southwest. It was probably used for collecting rainwater.

The bedrock-hewn round cave (L507; diam. 8 m ; Fig. 5) had a partially destroyed ceiling. A probe excavated inside the cave revealed only modern remains.


1. The excavation area.

2. Winepress, plan and sections.

3. Building, plan and sections.


1-1
4. Cupmark, plan and section.


1-1
5. Cave, plan and section.

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## Yattir Forest Reservoir*



1. Plan and section.

2. Pottery.

## Nir-Shimshon Paran

9/5/2007
During April 1999 a salvage excavation was conducted in the Yattir Forest (Permit No. A-3043*; bounds of the surveyed area map ref. NIG 20745-850/58360-410; OIG 15745-850/ 08360-410), in an area slated for the construction of a water reservoir and following a preliminary survey performed by J. Baumgarten and H. Lisitzin. The excavation, on behalf of the Antiquities Authority, was directed by N.S. Paran, with the assistance of H. Lavi (administration), V. Essman and V. Pirsky (surveying and drafting), S. Lavi (pottery restoration) and Y. Casaby (pottery drawing).

During the survey, two sites were discovered and excavated on the eastern slope of one of Nahal 'Anim's channels, along with a cave, the remains of farming terraces in the wadi channel and orchards on the surrounding mountain slopes.

## Farm

Some 5 km east of Horbat 'Anim (map ref. NIG 20815/58390; OIG 15815/08390), a farm that consisted of several elements, relating to each other, was discovered. Most of the walls were visible on surface and the maximum depth of the fill down to bedrock was c. 0.4 m .

Building. The farmhouse was rectangular ( $4.0 \times 13.5 \mathrm{~m}$ ) and composed of five rooms in a row (R1-5) located at the top of the slope, above the courtyard (below). The exterior walls (W1-4; 0.60.7 m wide), built of two rows of medium- to large-sized fieldstones with a core of soil and small stones, were preserved a maximum of four courses high ( 0.8 m ). The walls were mostly set on bedrock, which descended to the southeast; bedrock outcrops were visible in the courtyard. Another wall (W10), c. 0.6 m from W2 and parallel to it, faced the courtyard. Wall 10, founded on bedrock, comprised a single row of large fieldstones ( $0.3-0.5 \mathrm{~m}$ wide) and was preserved a single course high $(0.7 \mathrm{~m})$, which was 0.2 m below the height of W 2 and seems to have been its original height. It apparently retained W2 of the building against the bedrock slope. The floors of the building were c. 0.15 m lower than the tops of the walls and consisted of bedrock surfaces, as well as tamped soil. The top of Retaining W10 was slightly lower than the elevation of the floors.

Courtyard. The courtyard of the farm extended along a lower level, southeast of the building. Its irregular shape covered an area of c. 220 sq m , half was bedrock outcrop and the other half--a natural soil fill. The farmhouse bounded the courtyard on the northwest and along its perimeter was a curved wall (W7) built of a single row of large fieldstones ( $0.5-0.9 \mathrm{~m}$ ) and preserved a maximum of three courses high ( 0.9 m ). Many sections of the perimeter wall, especially those founded directly on bedrock, were completely washed away and the entry to the courtyard was not found Two other walls (W11, W12) were exposed in the southern corner of the courtyard; together with the courtyard wall they formed a closed animal pen (c. 11 sq m ). Three cupmarks (Loci 121-123; diam. $15-25 \mathrm{~cm}$, depth $12-15 \mathrm{~cm}$ ) were hewn in the bedrock outcrop of the courtyard, as well as three different-sized openings that led to the cave.

Cave. Two of the openings to the cave were in the ceiling and the main cranny was on the edge of the bedrock outcrop near the center of the courtyard. The cave, which was partially blocked with debris that penetrated in via the large opening in the ceiling ( $1.8 \times 2.5 \mathrm{~m}$ ), seems to have extended under most of the bedrock outcrop area in the courtyard, under part of the building and it may even have extended beyond the courtyard limits. The fill in the cave, which had not accumulated up to the ceiling, was c. 0.7 m above the floor; the cave's maximum height was originally c. 1.8 m .
Remains of walls, which were apparently built by Bedouins in the twentieth century CE to prevent the cave from filling up with debris, were discerned in the cave.

## The Finds

Most of the finds came from the rooms of the building and some were recovered from the courtyard; no artifacts were found in the cave. Fragments of pottery vessels that dated from the end of the Byzantine period or the beginning of the Early Islamic period (sixth-seventh centuries CE) included a flat bowl of Fine Byzantine Ware (Fig. 2:1), a deep bowl/cup of Fine Byzantine Ware (Fig. 2:2), a cooking krater (Fig. 2:3), jars (Fig. 2:4-6), among them one type of a late Gaza jar that probably continued until the end of the Umayyad period (Fig. 2:6) and two pilgrim flasks from the Early Islamic period that have a ribbed neck (Fig. 2:7, 8). Other finds consisted of two limestone basins, a fragment of a small basalt millstone and a basalt pestle.

## The Hewn Vat

A rock-hewn vat ( $1.15 \times 1.45 \mathrm{~m}, 0.9 \mathrm{~m}$ deep) filled with debris was discovered c .50 m northeast of the farm. The oval-shaped vat, whose use and date are unknown, had a step ( $0.15 \times 1.10 \mathrm{~m}$ ) cut c. 0.2 m below its northern rim.


1. Plan and section.


## Yattir Forest (A)*



1. Location map.

2. The building, plan and section.

3. The building's interior, looking south.

4. The terrace wall, plan.

5. The probe near the terrace wall, looking north.

Pirhiya Nahshoni
18/12/2007
During June 2005, an excavation was conducted at the Yattir Forest site (Permit No. A-4500*; map ref. NIG 19990/58505; OIG 14990/08505), following the discovery of archaeological remains during a preliminary survey performed by F. Sonntag along the route of the separation fence. The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Defense, was directed by P. Nahshoni, with the assistance of H. Lavi (administration), A. Hajian and T. Kornfeld (surveying), O. Ackerman (geomorphology), M. Haiman (GPS) and C. Hersch (pottery drawing).

The area of the site, located on a slope descending south to Nahal Eshtamo'a (Fig. 1), was covered with a nari crust. Remains of terraces and walls that delineated agricultural plots, particularly where the slope was gentle, were discerned. An ancient road at the top of the hill runs in a general east-west direction and a fertile valley, extending north of Nahal Eshtamo'a, is cultivated by local farmers.
A massive rectangular building, a terrace wall and a wall that delimited plots of an ancient orchard were discovered (Fig. 2).

Building ( $3.9 \times 5.3 \mathrm{~m}$; Fig. 3). The walls were founded directly on bedrock (W1-W4; thickness $0.75-0.80 \mathrm{~m})$. Their outer face was built of large stones $(0.4 \times 0.6 \times 0.7 \mathrm{~m})$, which were partly dressed and partly roughly hewn. The inner face consisted of small and medium stones, with mud as a bonding material.
The southern wall of the building (W1) was preserved to a maximum of 1.2 m high and the northern wall (W4) was survived only by its foundation course ( 0.5 m ). The lintel stone, preserved in situ, seems to indicate that the entrance to the building was in the east. Stones with chiseled grooves that possibly belonged to the entrance threshold were found in the collapse outside the building. The tamped-earth floor (L105; Fig. 4) was overlaid with potsherds that dated to the Late Roman period or the beginning of the Byzantine period, including a bowl (Fig. 5:1), a cooking pot (Fig. 5:2) and a jar (Fig. 5:3).

Terrace and Delimiting Wall. The terrace (W5; Fig. 6) began at the southwestern end of the building and extended west, delineating a farming terrace to its south. Two probe trenches were excavated (Fig. 7) along the southern side of the terrace, which was oriented east-west on top of natural bedrock. It was meant to prevent soil erosion and catch surface run-off. The terrace was built of large stones (average dimensions $0.5 \times 0.6 \times 0.6 \mathrm{~m}$ ) with smaller stones inserted among them. A layer of clay (thickness $0.5-0.8 \mathrm{~m}$ ) that accumulated south of the terrace, overlaid, above bedrock, potsherds from the Hellenistic and Roman periods (not illustrated).

A wall that delimited cultivation plots (W6; see Fig. 2) and was not excavated, ran the length of the slope in an east-west direction.

The scant finds in and around the building indicate it was not used for dwelling. The massive nature of the structure and its location in an agricultural area suggest it functioned as a guard tower. The terrace and the delimiting wall were apparently contemporary with the building.


1. Location map.

2. General plan.

3. The building, plan and section.

4. The building's interior, looking south.

5. Pottery.


6. The probe near the terrace wall, looking north.

## Yattir Forest (B)*



1. Cave 1, plan and section.

2. Cave 1, interior view.

3. Wall 1 in the forepart of Cave 1 , looking west.

4. Collapse (L106) in the entrance to Cave 1, looking west.

5. Cave 2, plan and section.

Pirhiya Nahshoni
18/12/2007
During June-July 2005, an excavation was conducted at the Yattir Forest site (Permit No. A-4501*; map ref. NIG 20003/58495; OIG 15003/08495), following the discovery of archaeological remains during a preliminary survey performed by F . Sonntag along the route of the separation fence. The excavation, on behalf of the Antiquities Authority and financed by the Ministry of Defense, was directed by P. Nahshoni, with the assistance of H. Lavi (administration), A. Hajian and T. Kornfeld (surveying), O. Ackerman (geomorphology) and M. Haiman (GPS).

The area of the site, located on a slope south of Nahal Eshtamo'a (HA-ESI 119: Fig. 1 in Nahal Yattir A), was covered with a layer of nari. Ancient stone quarries, remains of terraces and delineation walls of agricultural plots, particularly where the slope is gentle, were discerned. Natural caves hewn in the soft limestone bedrock below the crust of hard nari were noted, especially along the bottom part of the slope.
Two caves and a terrace wall were exposed.
Cave 1. This natural cave (length c. 4 m , width c. 8 m , max. height 1.7 m ; Fig. 1) had its entrance in the east. The cave's chamber (Fig. 2) was filled with alluvium and collapse (Loci 107, 108) and its floor (L110) was overlaid with concentrations of ash and fragments of a cooking pot from the Roman period (not illustrated). A wall in the front of the cave, oriented north-south, was built of small fieldstones bonded with mud ( W 2 ; length 1.1 m , width 0.5 m , height 0.45 m ). The wall indicates that the cave was used for storage and perhaps even, as a dwelling. A structure whose nature is unclear was built in the area east of the cave's entrance, at a later phase. Two of its walls (W1, W3; Fig. 3) and a stone collapse (L103, L106; Fig. 4) that blocked the cave's entrance had survived. The walls were built on top of a tamped level that comprised mud and small stones (L111). Potsherds dating to the Byzantine period were found in the stone collapse.

Cave 2. This small natural cave ( $1.5 \times 2.0 \mathrm{~m}$; Fig. 5 ), c. 15 m west of Cave 1, was filled with alluvium (L104) and its entrance faced north.

Terrace Wall. The wall (W4; Fig. 6), oriented east-west and set on the slope east of Cave 1, was meant to prevent soil erosion. It was built of large stones (average dimensions $0.5 \times 0.6 \times 0.6 \mathrm{~m}$ ) and preserved three-four courses high. Small stones were placed among the large stones of the wall's foundation to prevent soil erosion. The slope was extremely steep at this spot and the built wall was inclined southward (Fig. 7).

The site appears to have been used for agricultural purposes during the Roman and Byzantine periods. The construction date of W4 was not ascertained, but the evidence from Cave 1 and the adjacent site (HA-ESI 119: Fig. 1) indicate that it was apparently built in the Late Roman period, when Cave 1 was used as a temporary dwelling and possibly as a storage facility. The collapse of the cave's bedrock ceiling brought the use of the cave to a halt and resulted in the construction of the building at the entrance to the cave during the Byzantine period.


1. Cave 1, plan and section.

2. Cave 1 , interior view.

3. Wall 1 in the forepart of Cave 1, looking west.

4. Collapse (L106) in the entrance to Cave 1, looking west

5. Cave 2, plan and section

6. Probe trench near W4, plan and section


## Yaziz



1. Tomb B4, a scarab bearing the impression of a lion.

Sigal Golan
8/2/2007
During September-October 1998 fourteen tombs were excavated at Yaziz, c. 500 m west of Tel Malot (Permit Nos. A-2928; A-2946; map ref. NIG 18718-50/64028-108; OIG 13718-50/14028-108), after antiquities were damaged while a pipe was installed along the route of widening the railroad track. The excavation, on behalf of the Antiquities Authority, was directed by S. Golan, with the assistance of M. Ajami (area supervision), D. Porotzki (surveying), T. Sagiv and S. Mendrea (photography), V. Eshed (physical anthropology), M. Shuiskaya-Arnov (pottery drawing), M. Smilanski (drawing of flint implements), H. Khalaily (lithic finds), E. Yannai (pottery reading), and O. Shmueli (information about previous excavations).

Fourteen tombs from several periods were discovered. One tomb dated from Middle Bronze Age I, one from Middle Bronze Age IIA, two from Middle Bronze Age IIB, nine from the Late Bronze Age, containing imported Cypriot vessels and one tomb from Iron Age II. All the tombs were oval or rectangular pit graves, dug in hamra and sand. Some were lined with mud bricks and most contained a single interment and a few funerary offerings that included pottery vessels (up to fifteen vessels per tomb), metal artifacts, flint implements, scarabs and beads. The work undertaken to widen the railway route inflicted considerable damage to the finds and in some of the tombs only scant remains survived, consisting of potsherds or sections of mud-brick walls. In other instances the finds were discovered alongside the tomb after they had been removed by the mechanical equipment that disrupted it. Five of the tombs were preserved in their entirety and included a single interment and funerary offerings, in situ (Fig. 1).


1. Tomb B4, a scarab bearing the impression of a lion.

## The Yeruham Park*

Nir-Shimshon Paran
16/4/2007

2. Southern terrace, plan.

During April 2002 a trial excavation was conducted on farming terraces at the site in the Yeruham Park (Permit No. A-3690*; map ref. NIG 19385/54030; OIG 14385/04030), for the purpose of conservation. The excavation was directed by N.S. Paran, with the assistance of A. Klakhmann.

Two sections of the terraces (c. 2 m long) that could be seen on surface prior to the excavation, flanking the ravine, were excavated. The northern terrace consisted of two courses, preserved c. 0.4 m high; it was built of two rows of medium-sized fieldstones with a core of small stones and soil (Fig. 1). The southern terrace was 153 m away from the northern one and similarly built (Fig. 2). Its exterior (southern) and interior (northern) faces were preserved c. 0.35 m and c. 0.75 m high respectively. The excavation was devoid of any finds.


1. Northern terrace, plan


## Yotvata - 2006



1. The fort, plan of excavated areas and Bathhouse.

2. Areas 5000 and 6000 plan.

3. Area 5000 , view of niche (L5015), looking east.

4. Cold plunge bath (L1008), looking west.

Gwyn Davies and Jodi Magness
7/2/2007
During June 2006, a fourth season of excavations was conducted in the Late Roman fort at Yotvata (License No. G-2/2006; map ref. NIG 2043/4217; OIG 1543/9217). The excavation was directed by G. Davies, on behalf of Florida International University and J. Magness, on behalf of the University of North Carolina at Chapel Hill and was funded by the Elot Regional Council, with special thanks to D. Banet, the Toronto Jewish Community and the Foundation for Biblical Archaeology (Sheila Bishop). The excavation staff included R. Darby, C. Duncan, C. Fenwick, D. Nelson, A. Ratzlaff (area supervision), J.S. Bucko (surveying), A. Zadok (administration), J. Haberman (photography), E. Stegmaier (drawing), N. Elkins (numismatics) and M Robinson-Mohr (registration). It is with great regret that we report the untimely passing of D. Nelson in June 2006. We are grateful to the Elot Regional Council and Qibbuz Lotan for their support and assistance at that difficult time.

The excavation of Area 2000 was completed this season and two new areas were opened (1000, 9000; Fig. 1). Work had continued in three areas that were opened in previous seasons (5000, 6000, 7000).

## Area 2000

The pit (L2069; Fig. 2), which was discovered last season, was defined and excavated.
Work stopped (at elevation 74.9 m ) after the pit's fill had become entirely sterile. The pit appears to be a natural solution hollow that was widened during the Roman occupation, perhaps for use as a latrine.

## Area 5000

Work resumed inside the main, east gate to the fort (L5013) and to its north (L5012; Fig. 3). The gate consisted of a passage (L5005) through the fort wall (W517 to the north and W510 to the south). The first meter or so of this passage was constricted by opposing piers, which presumably supported an arch.
A large semicircular niche (L5015; width 1.4 m , depth 0.7 m ) was cut into the core of W517 (Fig. 4). The fill of the niche yielded a large Greek ostracon (at elevation 76.93 m ).

Excavations in front of the niche revealed a built, rectangular stone platform (L5025; $1.19 \times 1.61$ m ) that incorporated re-used Nabataean ashlars. A step was built into the middle of the platform's western front side. A series of four plastered floors, terminating with the lowest, earliest Roman floor (L5024; closing elevation 76.21-76.18 m) and covered with layers of ash, was in front of the platform and below L5012. Two piers or benches, the north one of stone and the south one of mud brick, were found next to W523 and W525, flanking the front of the platform on either side. Excavation in this area stopped at L5024, since further expansion of this area to the west was hindered by the standing British Mandatory police station.

Area 6000 (Fig. 3)
At the end of 2005, this area consisted of a square room bound on the east by the fort wall (W517), on the north by W524, on the west by W530 and on the south by W523. The continuation of the excavation in this area revealed a succession of three lime-flecked dirt floors with large burnt lenses that represented hearths, ending with floor L6034 (closing elevation 76.21 m ). Two doorways in W530 and W523 were excavated. The successive floors yielded rich assemblages of finds, including 25 coins, an intact pottery flask filled with seeds, an intact oil lamp and a bone needle.
A pit (L6042) was cut into the natural concretion in the center of the room, below the lowest Roman floor (L6034). On the east side the pit was connected to a stone-covered drain (L6040/L6043). Soil samples were taken from the pit and drain to determine their use, which may have been related to the stabling of horses, mules, or camels.

## Area 7000

Area 7000 was opened during the 2005 season in the southwest corner of the fort (Fig. 5).
The work in the single square, which was adjacent to the south fort's wall (W519) ended with the discovery of the make-up (L7021; elevation 76.89 m ) for the uppermost Roman floor in this area. At some point during this year the site was vandalized. Due to this contamination, the area was extended to the east by 1.5 m (L7022). A mud-brick partition wall (W535), perpendicular to W519, was discovered. It defined the eastern side of an area that appears to have been an open courtyard in the Roman occupation phase, with the other sides delineated by W519, the staircase on the west (W534), and W533 on the north.
Wall 535 was constructed from two distinct types of mud bricks: those of the upper courses were rectangular in shape, softer, with less lime in their composition, and the bricks of the lower courses were thick, square, and contained more lime. The lower brick courses were set on raised stone foundations and outlined the sides of a doorway.
In the southeast corner of the courtyard, an almost complete pottery flask was uncovered in association with a floor (L7026; closing elevation 76.76 m ). Another floor that consisted of a layer of thin, uneven plaster was found below it (L7027; closing elevation 76.74 m ). A large hearth (L7028) was in front of the doorway in W535 and appears to continue east through it. The hearth was associated with L7027 and the next floor below, which was a thin plastered surface (L7029; closing elevation 76.62 m ). Several small stake holes (diam. $2-3 \mathrm{~cm}$ ), perhaps related to a cooking installation, were visible along the hearth's eastern edge and inside it. Below L7029 was a layer of gravel, overlying the natural concretion on which the fort was built.
Area 7000 was extended northward, to the south balk of Area 8000 . The extension ( $2 \times 5 \mathrm{~m}$ ) along the inside of the fort's west wall (W518) revealed several walls. Wall 521 was perpendicular to W518 and had cut through the earlier W527. Another mud-brick wall, W540, was perpendicular to W518 and W527 and did not extend as far as the east balk. Area 7000 was also extended southward, beyond the collapsed stairs (W534) by the southwest corner tower and postern gate. Several large cut stones lined the postern gate entrance. The doorway to the southwest corner tower lined up directly with the lower stone steps in an east-west orientation.

Area $9000(4 \times 7 \mathrm{~m})$ is located along W518, south of the northwest corner tower. Excavation began on the west side of the area, working in terraced steps due to the sloping ground. Evidence of Bedouin occupation was found just below surface, as elsewhere in the fort. The tops of mud-brick walls began to appear at elevation 77.96 m and the area was subdivided accordingly. Wall 536 was a north-south wall east of W518; Wall 537 was an east-west wall perpendicular to W518 and W536 and Wall 538 abutted W518 and ran east-west along the south balk. The southwest section of Area 9000 (Loci 9014, 9020, 9021, 9024; closing elevation 77.21 m ) yielded a rich assemblage of pottery, including an intact flask, glass, animal bones, and coins, which apparently represented a dump.

Area 1000 (Bathhouse) (Figs. 8)
Earlier excavations by Z. Meshel in the bath house, to the north of the fort, brought to light portions of the caldarium and tepidarium. The goal of the renewed work is to clarify the plan of the bath house and conserve the site for public display (Fig. 7).
Three areas were opened: an area $(3.5 \times 5.0 \mathrm{~m})$ to the west of and partially overlapping the area of the caldarium; an area (length 8.5 m , width 6 m ) to the east of and partially overlapping the tepidarium and a third area (length 4.45 m , width 2.2 m ) that exposed the full extent of the tepidarium's south wall (W542).
Inserted through the west wall of the caldarium (W543) were the badly damaged remains of the praefurnium flue, clearly identifiable by its vaulted tile construction. On either side of the flue were the remains of the base for a hot tub. Immediately west of the praefurnium was a large, semicircular, plastered pit (L1011), filled with ash, apparently from the furnace.
Excavations east of the tepidarium revealed the inner face of the bath house north wall (W545), which was covered with a thick layer of white plaster. Six square piers constructed from mortared rubble were aligned east-west in two parallel rows. Two of the three piers in the north row were plastered on their north sides. A thickly plastered surface (L1008) covered the northern half of the area and continued up the inner face of W545. It seems likely that this area represented the cold plunge bath (Fig. 8). How far it extended southward is still unclear. However, the presence of thick plaster only on the north face of the two north piers may indicate that the cold plunge bath occupied only the area between those piers and W545. A plastered step led from the tepidarium to the cold plunge bath. The outer face of W542 was thickly plastered, perhaps indicating the presence of another cold plunge bath in this area.
Our excavations indicate that the bathhouse does not conform to the military reihentyp that consisted of a single row of rooms, but forms a larger complex, the excavation of which will continue in 2007.
Three major occupation phases occur in the Yotvata fort: Late Roman (first half of the fourth century); Early Islamic (late sixth or early seventh century to eighth century) and a recent phase (perhaps Ottoman). The late Roman phase has four successive occupation levels, which yielded dozens of identifiable bronze coins, dating, so far, to the third century and first half of the fourth century, with the exception of a single Nabataean coin of Aretas IV from Area 2000.
Perhaps the most important and intriguing find of the 2006 season were the semicircular niche and platform in Area 5000. The niche's orientation to the east and the fact that the Greek ostracon found in it appears to include a Chi-Rho symbol suggests that this room might have been used as a chapel. The identification of the Chi-Rho symbol was made by L. di Segni, who is studying the ostracon together with H. Cotton. The niche and platform were not originally part of this room, but were added in the second Roman phase.
The Early Islamic occupation phase included three levels, which could not always be distinguished in the course of excavation but were clearly visible in some of the balks. These levels consisted of relatively ephemeral remains of dirt floors, hearths and thin mud-brick walls. Some of the best evidence for the succession of Early Islamic levels can be seen in the south balk of Area 3000 and in the doorway of W530 in Area 6000.
The dating of the latest uppermost occupation phase has not yet been firmly established; it is hoped that radiocarbon samples will provide an answer to this question.


1. The fort, plan of excavated areas and Bathhouse.

2. Area 2000, plan.

3. Areas 5000 and 6000 , plan.

4. Area 5000, view of niche (L5015), looking east.

5. Areas 7000 and 8000 , plan.

6. Area 9000, plan.

7. Area 1000 , Bathhouse, plan.

8. Cold plunge bath (L1008), looking west.

## Yotvata - 2006



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Gwyn Davies and Jodi Magness
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3. Areas 5000 and 6000 , plan.

4. Area 5000, view of niche (L5015), looking east.

5. Areas 7000 and 8000 , plan.

6. Area 9000, plan.

7. Area 1000 , Bathhouse, plan.

8. Cold plunge bath (L1008), looking west.

## Zarnuqa*

Moshe Ajami
17/10/2007


1. Tomb 102, jar burials, looking west.

2. Tomb 102, close-up of jar burial, looking west.

3. Tomb 105, glass, metal and textile artifacts.

4. Tomb 106 prior to opening, looking south.

5. Tomb 109 prior to opening, looking east.

During January 2001 a trial excavation was conducted at the site of Zarnuqa in the Qiryat Moshe neighborhood of Rehovot (Permit No. A-3363*; map ref. NIG 180131-44/642918-3125; OIG 130131-44/142918-3125), following the discovery of ancient remains during the installation of a transformer station. The excavation, on behalf of the Antiquities Authority and financed by the Electric Company, was directed by M. Ajami, with the assistance of Y. Dangor (administration), T. Sagiv (photography), Y. Nagar (physical anthropology), E. Altmark (metallurgical laboratory), M. Shuiskaya-Arnov (pottery drawing), Y Gorin-Rosen (glass) and E. Yannai and M. Avissar (pottery).

Two areas, $A$ in the south ( $5 \times 5 \mathrm{~m}$ ) and $B$ in the north ( $2.5 \times 5.0 \mathrm{~m}$ ), were opened. Seven tombs at several levels, some below others, were exposed in Area A. The tombs are dated to the Late Ottoman period (sixteenth-nineteenth centuries CE) based on the ceramic finds. A modern wall and floor were discovered in Area B.

## Area A

Tomb 102. Three storage jars, partially embedded in a pavement of small round stones (diam. up to 10 cm ; Fig. 1), were exposed in the northwestern corner of the square. The northern jar contained grain (wheat?); the southern jar was empty (Fig. $3: 10$ ) and human bones were found in the eastern jar (Figs. 2; 3:11). The ceramic finds included bowls (Fig. 3:1, 3-7) and a jug (Fig. $3: 8$ ), dating to the Late Ottoman period (sixteenth-nineteenth centuries CE).
Tomb 105. The tomb (length 1.3 m , width 0.6 m ), build of fieldstones (average size $0.2 \times 0.2 \mathrm{~m}$ ) and covered with a gabled roof, was exposed in the southeastern corner of the square. The burial contained an individual whose original position was disturbed and a few animal bones (goat/sheep). Several glass beads, glass bracelets and a metal chain (Fig. 4) were discovered alongside the skull. Tomb 106. The tomb (length 2.2 m , width 0.6 m , depth 0.9 m ; Fig. 5), oriented northeastsouthwest in the center of the square, was built of fieldstones and had a gabled rectangular roof $(0.2 \times 0.2 \times 0.6 \mathrm{~m})$. Fragments of bones and a skull facing west were discovered.
Tomb 107. This unlined cist tomb $(0.30 \times 0.65 \mathrm{~m})$ was mostly destroyed by a modern ditch. Disturbed human bones and next to them, metal nails, a glass bracelet and animal bones (goat/sheep), were exposed.
Tomb 108. The cist tomb ( $0.35 \times 0.60 \mathrm{~m}$ ) contained the bones of an infant placed on its back in an east-west direction. The head was in the west facing south and alongside it were two glass bracelets and metal nails.
Tomb 109. This tomb, south of Tomb 106 , was built of fieldstones and had a gabled roof $(0.5 \times 2.0$ m ; Fig. 6). Like tomb 105, this burial was also disturbed and devoid of finds.
Tomb 110. This unlined cist tomb $(0.3 \times 0.6 \mathrm{~m})$ was located in the center of the western balk, below Tomb 102. The head of the deceased faced east. Fragments of a bowl (Fig. 3:2) and a jug (Fig. 3:9) were discovered in the tomb, yet they may have belonged to Tomb 102, dating to the Late Ottoman period.

## Area B

A segment of a wall, oriented east-west and built of two rows of fieldstones next to a row of mud bricks, was exposed. The wall was abutted by a floor, which based on the finds below it, is dated to the twentieth century CE.

## Anthropological Finds

Yossi Nagar
The direction and position of the deceased in the tombs represent a Muslim population. The bones that were well preserved had been examined in the field and not removed from the ground. The examination included an estimation of age and sex, as well as skull and post-cranial pathology. Seven individuals were found, among them six infants and one adult (see table). The multitude of infants in such a limited burial area is likely to indicate that the cemetery was planed and divided into distinct areas of interment.

| Tomb <br> No. | Manner of burial | Age estimate (in <br> years) | Comments |
| :--- | :--- | :--- | :--- |
| 102 | In a jar | $\mathrm{NB}-0.5$ | $5-6$ |
| 105 | $?$ | Disturbed primary <br> burial |  |
| 106 | Supine, east-west direction, head <br> in west | $20-30$ | Sex estimate uncertain |
| 107 | $?$ | $\mathrm{NB}-1$ | Bones were found in <br> balk |
| 108 | Supine, east-west direction, head in <br> west, facing south | $1-2$ | Disturbed primary <br> burial |
| 109 | $?$ | $0.5-1$ | Primary burial |
| 110 | Close to surface | $\mathrm{NB}-0.5$ |  |



1. Tomb 102, jar burials, looking west.

2. Tomb 102, close-up of jar burial, looking west.

3. Tombs 102, 110, pottery.

4. Tomb 105, glass, metal and textile artifacts.

5. Tomb 106 prior to opening, looking south.

6. Tomb 109 prior to opening, looking east.

## Zarnuqa*

Peter Fogel
18/12/2007
During April 2003 a trial excavation was conducted at the site of Zarnuqa, in the Qiryat Moshe neighborhood of Rehovot (Permit No. A-3891*; map ref. NIG 18015/64300; OIG $13015 / 14300$ ). The excavation, on behalf of the Antiquities Authority, was directed by P. Fogel, with the assistance of R. Abu Halaf (administration), A. Buchennino and P. Gendelman (dating of ceramic finds).

The site is located inside the village of Zarnuqa, on whose ruins a temporary immigrant camp was built in 1948. Previous excavations at the site revealed buildings and a winepress, dating to the Byzantine period (HA-ESI 114:71*).
Five squares were opened based on preliminary examinations.
Square I $(2.5 \times 2.5 \mathrm{~m})$. A burnt layer, which contained several bones of sheep and goats, was exposed at a depth of 0.7 m below surface, in the northern part of the square. The ceramic finds in the burnt layer were mixed and included fragments of pottery vessels from the Late Byzantine and the Ottoman periods. Several medium-sized fieldstones were discovered near the burnt layer.

Square II ( $2.5 \times 2.5 \mathrm{~m}$ ). A layer ( $1.4 \times 1.7 \mathrm{~m}$, depth 0.5 m ) of small and medium fieldstones without bonding material and oriented southeast-northwest was discovered. Mixed pottery fragments that ranged in date from the Late Byzantine period until the modern era were uncovered.

Square III ( $1.9 \times 3.0 \mathrm{~m}$ ). The foundations of a modern house were revealed in the northern and western balks of the square. Mixed, poorly preserved pottery fragments that dated to the Byzantine period and the nineteenth century CE were found next to the foundations. A concentration of fieldstones was discerned in the southern balk of the square.

Squares IV (1.4 $\times 2.9 \mathrm{~m}$ ) and $\mathbf{V}(1.4 \times 1.8 \mathrm{~m})$. These squares were opened after clusters of potsherds were discovered in the sections of the preliminary trial trenches. Mixed potsherds that dated from the Byzantine period until the modern era were found, but no architectural remains were discovered.

The ceramic finds consisted mostly of worn and mixed body fragments that dated to various periods. The character of the finds indicates that the site can be ascribed to the Ottoman period and probably to earlier periods as well.

## Zefat (al-Watta)

## Michael Cohen

18/3/2007
During September 2002 a trial excavation was conducted on the lower western slope of Zefat (Permit No. A3708; map ref. NIG 24639-41/763085-125; OIG 19639-41/263085-125) following plans for new construction in the Hagana neighborhood. The excavation, on behalf of the Antiquities Authority, was directed by M. Cohen (photography), with the assistance by Y. Ya'aqoby (administration), V. Essman and V. Pirsky (surveying), E.J. Stern (ceramic reading) and c. 20 laborers from the Qiryat Shemona and Zefat labor bureaus.

The excavation area was south-southwest of the Zefat fortress, c. 800 m as the crow flies and c. 685 m above sea level. According to ancient sources the neighborhood in this area was called alWatta (the lower). The remains of the Arab neighborhood, located here until 1948, could be discerned above surface and most of its buildings were ruinous and in a state of advanced collapse. The area was used as a neighborhood refuse dump, heaped with garbage and debris.

Two of the four opened squares were inside the later building remains and the other two were on surface. Remains of three buildings above bedrock were exposed in three of the squares, dating to the Mamluk period on account of ceramic and numismatic finds. An occupational sequence was noted in two of the three buildings, extending from the Mamluk through the Ottoman periods until the British Mandate times.
The excavation indicates that the neighborhood was established during the Mamluk period and continued to exist until the modern era.

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## Zefat, the Western Slope of Giv'at Ha-Mezuda*



1. Pottery.

2. North wall of trench, looking north.

Yosef Stepansky
17/4/2007
During October 2002 a small-scale archaeological excavation was conducted in Zefat, on the western slope of Giv'at Ha-Mezuda (Permit No. A-3748*; map ref. NIG 246490/763915; OIG 196490/263915), in the wake of development work and construction. The excavation, on behalf of the Antiquities Authority and financed by the Habad Alta Institute in Zefat, was directed by Y. Stepansky, with the assistance of L. Porat, N. Damoni and Y. Alexandre (antiquities inspection), Y. Ya'aqoby (administration), H. Tahan (pottery drawing) and Y.T. Sabah (technical assistance on behalf of the Alta Institute).

Development work carried out on Giv'at Ha-Mezuda and its slopes during the 1970s and 80s revealed potsherds from several periods on the hill itself and at its foot (ESI 5:93-94; IAA Reports 14:39, Site 322; Fig. 1:1). Burial caves, dating to the Middle and Late Bronze Ages (HA 33:12-13; 'Atiqot 29:1-29) were discovered and excavated in Wadi Hamra, c. 500 m east of the hill. During the 1990 s potsherds from the Roman period were found in the excavations at Khan al-Basha, at the foot of Giv'at Ha-Mezuda ('Atiqot 46:113-133) and other pottery fragments from the Bronze Age to the Byzantine period were discovered on Giv'at Ha-Mezuda during antiquity inspections, assisted by D. Rothschild (Fig. 1:2-6, 8-11, $16,20,21,25$ ).

The excavation in 2002 was conducted in a large, U-shaped probe trench ( $10 \times 20 \mathrm{~m}$ ) whose northern and southern walls rose 2.5-4.0 m high. The trench was cut by mechanical equipment on the lower western slope of the hill, next to the Alta Educational Institute (map ref. NIG 24650/76392; OIG 19650/26392). Deposits of stones and soil that contained pottery fragments, sloping at a $30^{\circ}$ angle with the gradient of the slope (Fig. 2), were visible in the field. The excavation was focused on the southern wall's section of the trench $(1.0 \times 2.5 \mathrm{~m})$, whose southwestern corner was excavated (Fig. 3) and potsherds were collected (Fig. 1:7, 12-15, 17-19, 22-24).
Part of an artificial debris (2.5-3.0 m thick), composed of a soil layer ( 1.5 m thick) and surmounted by a layer of tiny qirton stones ( 0.4 m thick), was exposed. Overlaying this layer was another thin layer of tiny qirton stones and crushed qirton stones ( 0.6 m thick). Building remains were nonexistent. Artificial debris (Fig. 4), whose composition was similar to that in the south wall, was discerned in the northern wall of the trench, which was not cleaned.

The pottery fragments recovered from the antiquities inspection and the current excavation attest to the continued occupation of Giv'at Ha-Mezuda from Middle Bronze Age I until the modern era (see Y. Stepansky, Zefat and the Surrounding Area in Antiquity, in A. Schiller and G. Barkay [eds.], Zefat and its Sites [Ariel 157-158], 2002, pp. 51-58 [Hebrew]). A relatively large number of potsherds, dating to Middle Bronze Age II were found: a bowl (Fig. 1:2), a krater (Fig. 1:3) and a jar (Fig. 1:4), as well as a few potsherds from Middle Bronze Age I, e.g., a cooking pot (Fig. 1:1) and the Late Bronze Age, e.g., a milk bowl (Fig. 1:5). Many pottery fragments from Iron Age I and II were collected, including cooking pots (Fig. $1: 6,8,9$ ), a pithos (Fig. 1:7) and jars (Fig. 1:10, 11). The potsherds from the Persian-Hellenistic periods, particularly Galilean Coarse Ware, included a pithos (Fig. 1:12), jars (Fig. 1:13, 14), a jar base (Fig. 1:15) and a notched handle (Fig. 1:16) and some fragments from the Hellenistic period, such as a bowl (Fig. 1:17), a cooking bowl (Fig. $1: 18$ ) and a jar (Fig. 1:19). A few potsherds from the Late Roman period consisted of a bowl (Fig. $1: 20$ ) and other potsherds from the Byzantine and Early Islamic periods were bowls (Fig. 1:21-23) and jars (Fig. 1:24, 25). A scant number of potsherds from the Crusader-Ayyubid periods and beginning of the Mamluk period were present, as well as a few animal bones (including pig bones) and remains of iron objects.

The excavation evinced that during the Crusader period or the beginning of the Mamluk period massive earthworks that damaged the ancient strata of the tell were conducted. It is possible that the debris was created in the wake of work on the moat at the top of the hill that was meant to protect the upper part of the Crusader-Mamluk fortress. Another possibility is that the debris was intended to serve as a defensive rampart for the fortress, lining the slope of the hill between the fortification system of the middle Crusader wall (at the level of Yiftah Brigade Street above the debris) and the outer Crusader fortification system that was probably somewhat lower than the debris; a few of its remains were probably found in the trench that was dug during the construction work in 2002 at the foot of Giv'at Ha-Mezuda (HA-ESI 117).

The historical and archaeological picture indicates an intensive settlement at the top of Giv'at HaMezuda, which was continually occupied from the beginning of the Middle Bronze Age until the Crusader period.


1. Pottery.

2. South side of trench, looking southeast.

3. The excavation area in the southwestern corner of the trench, looking southwest.

4. North wall of trench, looking north.

## Zikhron Ya'aqov*



1. Plan.

2. The quarry, looking northwest.

During March 2005 a salvage excavation was conducted in the Nevē Remez neighborhood of Zikhron Ya'aqov (Permit No. A-4392*; map ref. NIG 1958-9/2187-8; OIG 1458-9/7187-8). The excavation, on behalf of the Antiquities Authority and funded by Z. Ariav, was directed by A. Masarwa, assisted by A. Hajian (surveying and drafting) and T. Sagiv (field photography).

The site is located west of Khirbat Jabir and north of Ramat Ha-Nadiv, which overlooks the antiquities sites of Binyamina, Shuni, Tel Rozez and Horbat Zaf. Archaeological excavations undertaken at the site in the past (ESI 18, 19; HA-ESI 109-111) exposed stone quarries, cairns (regamim) and limekilns, dating to the Roman and Byzantine periods.

One square ( $6.5 \times 6.7 \mathrm{~m}$ ) was opened in terra rosa soil. Several fragments of pottery vessels from the Roman and Byzantine periods were found in the upper layer. A quarry ( $3.0 \times 4.4 \mathrm{~m}$ ) in the middle of the area that was dated to the Byzantine period based on the ceramic finds was discovered. The four layers of cut stones reached the bottom of the quarry ( 1.41 m deep) and it seems the stonecutters had hewn the rock down to the soft-stone layer that was no longer suitable for quarrying masonry stones.

The remains of severance channels, clearly visible at the bottom and sides of the quarry, as well as the negatives of stones in bedrock and stones that had not been detached, indicate the average size of the hewn stones $(0.3 \times 0.4 \times 0.7 \mathrm{~m})$. It is assumed that the stones were used for construction in nearby settlements, since in coastal sites, such as Shuni and Caesarea, only kurkar masonry stones were utilized. The very meager ceramic finds included fragments from the Roman and Byzantine periods.


1. Plan

2. The quarry, looking northwest.

[^0]:    3. Areas $B, C$, the quarries, plan.
[^1]:    2．Clay lamps．

[^2]:    3. Reservoir 2, looking southeast
[^3]:    2. Plan and sections.
[^4]:    2. The excavation, plan.
[^5]:    5. Complex 3, pottery.
[^6]:    2. The building, plan.
[^7]:    5. Square C, plan and sections.
