

MAP OF BINYAMINA (48)



ISRAEL ANTIQUITIES AUTHORITY

ARCHAEOLOGICAL SURVEY OF ISRAEL

MAP OF BINYAMINA (48)

YA'AQOV OLAMI
SHLOMO SENDER
ELDAD OREN



Archaeological Survey of Israel
Publications of the Israel Antiquities Authority

Editor-in-chief: Zvi Gal

Series editors: Y. Kuris, Lori Lender

English translation: Lori Lender

Cover: Caesarea (Site 102); on the English side—aerial view from 1944; on the Hebrew side—
aerial view from 1991 (Ofek Aerial Photography Ltd), on behalf of the Caesarea Development
Association.

Typesetting, layout and production: Ann Abuhav

Preparation of illustrations: Natalia Zak

Printing: Keterpress Enterprises, Jerusalem

Copyright © The Israel Antiquities Authority
The Archaeological Survey of Israel
Jerusalem, 2005

ISBN 965-406-183-X

Contents

Editors' Foreword	7*
Preface	8*
Introduction	9*
Index of Site Names	11*
Index of Sites Listed by Period	13*
List of Illustrations	14*
The Sites	17*
References	48*
Maps According to Periods	51*
Hebrew Text	1-68

Editors' Foreword

The Map of Binyamina, scale 1:20,000 (Sheet 14–21, Old Israel Grid; Sheet 19–71, New Israel Grid), is recorded as Paragraph 48 in *Reshumot—Yalqut Ha-Pirsumim* No. 1091 (1964). During 1971–1972 a systematic archaeological survey was conducted of the map area by a team headed by the late Y. Olami on behalf of the Archaeological Survey of Israel and the Israel Antiquities Authority (formerly the Department of Antiquities and Museums). In 1996, the map area was resurveyed by S. Sender and E. Oren on behalf of the Israel Antiquities Authority, and data concerning ancient sites in the area was updated preceding the report's submission for publication (see below, 'Preface').

Compilation of Material

A file for each site in the Survey archives of the Israel Antiquities Authority includes a detailed report by the survey team members, plans, photographs and a register of the finds kept in the Authority's stores. This volume presents a summary of the file records: site descriptions—including the character of the site and its location; a description of the remains; diagnostic finds; and illustrations. These are accompanied by an introduction, indices (an index of sites arranged alphabetically; an index of sites listed chronologically), a bibliography, chronological maps, a general map, and an English version keyed to the illustrated Hebrew text.

The first line of each numbered entry includes the site's serial number, in geographical order from north to south and from west to east, arranged in squares of one square kilometer; this is followed by the site's file number (from left to right), consisting of the third digits of the longitudinal and latitudinal coordinates of the site's map reference, separated by a dash; a slash is followed by the site's serial number in the designated square. Map references provided on the same line are those of the Old Israel Grid (designated OIG), followed by the New Israel Grid (NIG).

At the heading of each entry is the site's declared name (or names), or names related to other declared names (site names, place names or names of geographical features). The primary source of site names is the Registry of Monuments and Historic Sites, published in *Reshumot—Yalqut Ha-Pirsumim* (No. 1091, May 18, 1964, with emendations and supplements updated to 2003), and the map 'Hadera', scale 1:50,000 (1992), published by the Survey of Israel. Other sources for site names are the British Survey of Western Palestine (Conder and Kitchener 1881–1883)—marked S; documentation from the report by Graf von Mülinen (1908)—marked Mül; and the maps 'Caesarea', scale 1:20,000 (1932, updated to 1942) and 'Zikhron Ya'aqov', scale 1:100,00 (1947), as well as documentation from the time of the British Mandate period included in *Geographical List of the Records Files, 1918–1948* (published by the Department of Antiquities and Museums, 1976)—marked M.

Preface

The area of the Map of Binyamina (48) was surveyed during 1972–1973 by a survey team headed by the late Y. Olami.* Participating in the survey were A. Berman, the late Y. Park, A. Zemer and Y. Peleg. Olami presented the preliminary survey report, including a description of the sites, to the Archaeological Survey of Israel in 1979. The report presented here is based on Y. Olami's report and includes updates and reevaluations, resting on the results of the survey undertaken in 1996 by S. Sender and E. Oren.

The limited scope of the renewed survey precluded the development of extensive research. In addition, a number of prominent sites underwent archaeological excavation in the years following the initial survey. Therefore, a thorough discussion of these sites was deemed unnecessary. Included among these sites are Caesarea (Holum and Raban 1993) and its aqueducts (Porath 2002a, b), Tel Mevorakh (Stern 1993), Me'arat Kebara (Shick 1993), Tel Burga (Kochavi, Beck and Gophna 1979) and Ramat Ha-Nadiv (Hirschfeld 2000). The aim of this volume is to bring to light the survey data documented in the past, supplemented by updates.

We would like to thank J. Peleg, who offered his knowledge and counsel concerning the water systems and to R. and A. Angert and Y. Porath, for their assistance in identifying the ceramics. The photographs included in this report were taken by Y. Olami, S. Sender and E. Oren. Olami drew the flint tools and the plans, which, together with the period maps, were prepared for publication by N. Zak. J. Rudmann drew the pottery and C. Hersch and L. Barda prepared the pottery plates. The general map was prepared and produced for publication by L. Barda.

Shlomo Sender and Eldad Oren

* Preliminary reports of this survey: Archaeological Survey of Israel—The Karmel Area, *HA* 30 (1969): 13–14; 31–32 (1969):12–13.

Introduction

Geographical Overview

The area of the Map of Binyamina (48) extends along the Mediterranean coast, south of the Map of Dor. During recent years intensive land development and agricultural activity, for example, the development of large expanses for use as fish ponds, which presently extend over large portions of the map area to the north and west of Qibbuḥ Ma'agan Mikha'el, has brought about extensive change. The Tel Aviv—Haifa Highway, paved in the 1970s close to the *kurkar* ridge, significantly changed the landscape and damaged a large number of archaeological sites.

The map area basically comprises two topographical units: the *kurkar* ridges and flat coastal strip situated in the western portion of the map area; and the spurs of Rekhes Ha-Karmel (Carmel Ridge), composed chiefly of rock of Upper Cenomanian age and rounded hills consisting of Turonian and Senonian formations, to the east. The area features *hamra*, particularly in the region of Caesarea, and alluvial soils in the environs of Binyamina, which were irrigated by streams (Naḥal Tanninim, Naḥal 'Ada and Naḥal Barqan) that drain the hilly region to the east. Human activity focused mainly in the region adjacent to the *kurkar* ridge, as it did in the area within the Map of Dor. It is reasonable to assume that the marshes located to the west of the ridge (Kevara Marshes) impeded activity.

Archaeological Overview

The Lower Paleolithic to the Chalcolithic Periods

Two Lower Paleolithic sites were documented and yielded chiefly hand tools (Sites 89, 115). Middle Paleolithic remains were found in Me'arat Kevara (Kebara Cave; Site 11) and at five additional sites (4, 35, 70, 83, 89). Me'arat Kevara (Site 11) revealed Upper Paleolithic and Epipaleolithic remains as well. Epipaleolithic flint implements were found at seven additional sites (5, 7, 20, 35, 51, 83, 121), where numerous cupmarks were also documented.

Four Neolithic sites (35, 48, 54, 121) were recorded, featuring notched arrowheads. Merely one site (89) was identified with the Chalcolithic period, based on flint tools characteristic of the period.

The Early Bronze to the Late Bronze Age

The Early Bronze Age is represented at merely one site (89), at Tel Burga, which became the major fortified town in the region during Middle Bronze II. MB II remains were discovered at Sites 14, 64 (Tel Mevorakh) and 68 (Ḥotem Ha-Karmel). The site at

Hotem Ha-Karmel also revealed remains of an extensive cemetery from the Intermediate Bronze Age. The Late Bronze Age is represented by the temple at Tel Mevorakh.

The Iron Age to the Hellenistic Period

Iron Age remains were recorded at five sites (13, 14, 17, 64, 89) and Persian finds were documented at seven (Sites 10, 17, 45, 64, 89, 90, 110). Tel Mevorakh (Site 64) was the dominant settlement during both these periods. Seven sites (17, 30, 45, 53, 64, 90, 102) yielded Hellenistic remains, in addition to Caesarea (Site 104), which was founded in the Hellenistic period.

The Roman, Byzantine and Early Islamic Periods

The Roman period is represented at 89 sites—a considerable increase compared to the preceding periods. The major site during this time span was at Caesarea, which persisted into the Byzantine (86 sites), Early Islamic (19 sites) and later periods. Smaller settlements, dominated by a substantial number of farmsteads, as well as roads, remains of bridges, quarries, installations and tombs, were also documented.

The Later Periods

Seven sites (1, 26, 64, 65, 91, 99, 102) were ascribed to the Middle Ages, as well as Caesarea (Site 102), which played a dominant role in Crusader times; the majority of Medieval sites persisted into the Ottoman period (Sites 19, 26, 65, 69, 72, 102). Among the Ottoman remains the dam at Gesher Tanninim (Site 19) and the khan at Kefar Shumi (Site 72) are worthy of special mention.

Index of Site Names

Abu Hamad, Kh.	107	‘Egem, H.	90
Abu Hammâd, Tell	107	‘Eleq, H.	26
Abu Shusha, Kh.	92	‘Ein Umm el ‘Alaq	25
‘Ajama, Kh. el	90	‘En Zur	25
‘Ajami, Kh. el	90	‘Enot Shumi	42
‘Aqqav, H.	39	‘Enot Timsah	23
Abu Shusha, Kh.	92	Esh Sheikh el Utak	116
		Esh Sheikh el Utaq	116
		Esh Sheikh Mansûr el Aqqâb	39
Bablûn, Kh.	107	Gesher Tanninim	19
Bârak, Tell	64		
Bavlon, H.	107	Hafayir	42
Be’er Hanna	114	Har Zikhrona	6 7
Bet Hanyana	63 65 66	Hîdot, H.	112
Binyamina	81–83 85 86	Hotem Ha-Karmel	67 68
Binyamina (west)	80	Hudeidûn, Kh.	112
Biq‘at Ha-Nadiv	73		
Bir es Sufsâf	114	Î Yonim	18
Bureij, el	89		
Bureij, Kh. Tell el	89	Jâbir, Kh.	14
Bureika	16	Jazîrat el Hamâm	18
Bureika, Kh.	46	Jisr ez Zarqa	33 34 61
Bureikeh	16	Jisr ez Zerka	33 34 61
Burga, Tel	89	Jisr ez Zarqa (north)	36
Burj, Kh. el	106	Jisr ez Zerka (north)	36
		Jisr ez Zarqa (west)	59
		Jisr ez Zerka (west)	59
Caesarea	102		
Caesarea (east)	103	Kaisarieh	102
Charashi, Kh. el	74	Kaisarieh (east)	103
		Kefar Shumi	72
Dafayis, Kh. ed	91	Kebâra, Kh.	10
Dafâis, Kh. ed	91	Kebârah, Kh.	10
Dhahrat et Tahûna	20	Kevara, H.	10
Defes, H.	91	Khirba, el	46
Dôdehân, Tell ed	91	Kitû esh Shômariya	35
Dodâhan, Kh. Tell ed	91		
Dudahan, Kh. ed	91		
Duda’im, Tel	99		
Dufies, Kh. ed	91		

Ma'agan Mikha'el	9 20	Qisariya	102
Ma'agan Mikha'el (north)	2	Qisariya (east)	103
Ma'agan Mikha'el (west)	8	Qisārya	102
Malat, Tell el	30	Qisārya (east)	103
Mallah, H.	78		
Mallaḥa, el	78	Ramat Ha-Nadiv	24 28 40 41
Mallahe, el	78		70 71
Mansūr el Aqqāb	39	Raseiseh, Kh.	45
Maqbarat el Witaq	116	Roḡez, H.	45
Ma'yan Zevi	5 12	Ruseisa, Kh.	45
Ma'yan Zevi (west)	4	Ruseisi, Kh.	45
Me'arat Kevara	11		
Melāt, el	30	Şaharij, Kh. eṣ	122
Mevorakh, Tel	64	Sarris, Tell es	1
Mubārak, Tell	64	Sarris, Tell es (east)	3
Mugharat Kabāra	11	Sawāwin, Kh.	46
		Sedot Yam	108 109
Naḥal 'Ada	21 37 38 60	Sedot Yam (east)	120
	62 79 100	Sedot Yam (south)	117
	101	Sedot Yam (southeast)	118 119
Naḥal 'Ada (south)	110 111 113	Sharish, Tel	1
Naḥal Mishmarot	115 124	Sharish, Tel (east)	3
Naḥal Senunit	29 47	Shuna, Kh. esh	72
Naḥal Tanninim	31 32 44	Sufsāfa, Kh.	114
	48–58 75 84	Suwweida, es	17
	87 88		
Naḥal Zur	43	Tāhūnet Abu Nūr	69
		Tanninim, Tel	30
Or 'Aqiva	105		
Or 'Aqiva (east)	98	Umm el 'Alaqa	26
Or 'Aqiva (north)	97	Umm el 'Alaqa, Kh.	26
Or 'Aqiva (south)	121		
		Zaf, H.	114
Pardes Hanna–Karkur	123	Zeituna, Kh.	22
(northwest)		Zikhron Ya'aqov	13
		Zikhron Ya'aqov, Newē Sharet	14
Qesari, H.	102	Zikhron Ya'aqov, Newē Sharet	15
Qesari, H. (east)	103	(east)	
Qesarya	95 104	Zorim, H.	46
Qesarya (east)	96	Zur, Tel	27
Qesarya (west)	76 77 93 94		

Index of Sites Listed by Period

<i>Period</i>	<i>Site Numbers</i>	<i>Total Number of Sites</i>
Lower Paleolithic	89 115	2
Middle Paleolithic	4 11 35 70 83 89	6
Upper Paleolithic	11	1
Neolithic	35 48 54 121	4
Chalcolithic	89	1
Early Bronze	40 89	2
Middle Bronze I	68	1
Middle Bronze II	14 64 68 89	4
Late Bronze	64 68	2
Iron*	14 17 89	3
Iron I	64	1
Iron II	64 68	2
Persian	10 17 45 64 89 90 110	7
Hellenistic	17 30 45 53 64 90 102	7
Roman*	3 5 8 9 12–19 22 24–28 30–32 34–39 41–43 45 48–53 56–68 71–81 84 86–89 92–96 98 100 102–107 110 111 113 114 116 117 119 120 122 124	89
Early Roman	2	1
Late Roman	55 85	2
Byzantine	1 3 5 6 9 10–19 22–26 28–39 41–46 48 51 52 55 57–62 64 65–68 71–75 77–80 82 84 86–89 92–94 97 99 101 102 106 107 109 112–114 116 118 119 122 123	86
Early Islamic	1 10 14 19 26 39 52 53 89–91 97 102 106 107 109 114 116 117	19
Crusader	26 64 91 99 102	5
Mamluk	1 26 64 65 91 99 102	7
Ottoman	19 26 65 69 72 102	6
Sites lacking diagnostic finds	21 47 108	3

*No precise identification.

List of Illustrations

<i>Site/Fig.</i>	<i>Description</i>	<i>Page (Hebrew Text)</i>
3.1.	Kevara Dam.	15
3.2.	Entrance to the structure adjoining Kevara Dam.	16
9.1.	The burial-cave entrance.	17
9.2.	Plan of a rock-hewn burial complex—three chambers, containing <i>kokhim</i> .	18
10.	Winepress.	18
14.1.	Remains of an oil press.	19
14.2.	The ancient quarry south of the settlement remains.	19
15.1.	Ancient quarries.	20
15.2.	Ancient quarries.	20
15.3.	Hewing marks in an ancient quarry.	21
15.4.	Severance channels in an ancient quarry	21
17.1.	The fortress, outer wall.	21
17.2.	Dyeing installation?	22
17.3, 4.	Jar found at the site; detail of puncture marks made by a dagger (above, left).	22
17.5.	A juglet, found at the site.	22
17.6.	Pottery, Persian: 1 bowl; 2 krater; 3–6 jars.	22
17.7.	Pottery and other finds, Roman: 1 bowl; 2 krater; 3, 4 jars; 5 stone bowl.	23
19.1.	Gesher Tanninim.	23
19.2.	Breach in Gesher Tanninim, apparently made to divert water to power a flour mill.	24
22.	Bowls, Byzantine.	25
26.	Remains of a vaulted structure.	26
28.1.	Remains of an oil press.	26
28.2.	Basalt grinding stone.	26
32.	Branch of the aqueduct.	28
33.1.	Outlet of the low aqueduct south of Gesher Tanninim.	28
33.2.	Rock carving near the low aqueduct.	29
33.3.	The low aqueduct.	29
35.1.	Ancient quarry.	30
35.2.	Burial cave in a quarry.	30
36.	Burial caves in a quarry	30
39.	Bell-shaped cistern.	31
42.	Remains of a dam.	32
43.	Remains of the aqueduct channel.	32
45.1.	Remains of an oil press.	33
45.2.	Fragment of a marble baptismal font.	33
45.3.	Carved ornamentation on the upper face of the baptismal font.	33

<i>Site/Fig.</i>	<i>Description</i>	<i>Page</i> <i>(Hebrew Text)</i>
45.4.	Finds, Byzantine: 1, 2 glass bowls; 3 base of a glass bowl; 4 handle bearing an imprinted inscription.	33
47.1.	The tunnel near Naḥal Senunit.	34
47.2.	Plan of one of the shafts, descending to the tunnel near Naḥal Senunit.	34
48.	Steps descending to the floor of a pit.	35
51.1.	The milestone.	36
51.2.	The well near the coast.	36
51.3.	Pottery, Roman: 1, 2 bowls; Byzantine: 3 casserole; 4 decorated fragment.	36
57.1.	Segment of the high aqueduct.	38
57.2.	Pattern incised in plaster on the side of the high aqueduct.	38
57.3.	Square opening in the vaulted ceiling of the low aqueduct.	38
58.	Pottery and other finds, Roman: 1 bowl; Byzantine: 2 bowl; 3 jug; 4 basalt bowl.	38
60.1.	Travertine accumulations on the high aqueduct.	40
60.2.	The aqueduct that bypassed the marshes.	40
60.3.	Supportives in the arch of the bypass aqueduct.	41
60.4.	Section of the bypass aqueduct.	41
60.5.	Plaster foundation on the side of the aqueduct channel; Byzantine potsherds were sunk into the plaster.	41
60.6.	View and section of the bypass aqueduct.	41
60.7.	Remains of an inscription carved on a fragmentary limestone slab affixed to the side of the high aqueduct near the point where the aqueducts meet (map ref. OIG 14260 21555, NIG 19260 71555).	42
61.	Ancient quarry.	42
62.1, 2.	Plans of burial caves, one (above, right) containing sarcophagi and the other (left)—a <i>kokhim</i> cave.	43
63.1, 2.	Latin inscriptions, carved on stone slabs, affixed to the side of the high aqueduct.	44
64.1.	Plan and section of the circular burial cave near Tel Mevorakh; view of the bull's head carved into the central supportive column.	45
64.2.	The mausoleum at the foot of the tell.	45
67.1, 2.	The double aqueduct—a section of the segment of the open channel running alongside the segment of ceramic pipes (right); a reconstruction of the ceramic angles (left).	47
67.3.	Ceramic angles, which diverted water, in the high aqueduct.	47
67.4.	Pipe, composed of ceramic rings, in the high aqueduct.	47
72.	The Ottoman-period khan, constructed on the remnants of the Roman theater.	49
74.1.	Pottery and other finds, Roman and Byzantine: 1–4 jars; 5 stone vessel.	50
74.2.	Cuttings in a prominent rock, in the northeastern portion of the site.	50

<i>Site/Fig.</i>	<i>Description</i>	<i>Page (Hebrew Text)</i>
77.	Segment of the high aqueduct.	51
89.1.	Lithic finds, Lower and Middle Paleolithic: 1 hand tool; 2, 4 Levallois cores; 3 backed retouched knife.	54
89.2.	Pottery and other finds, Middle Bronze II: 1 chalice; 2 cooking pot; 3 jug; 4, 5 jars; Persian: 6, 7 mortaria; 8 jar; 9 limestone seal.	55
90.	Pottery, Persian: 1–3 bowls; 4, 5 jars.	56
91.	Pottery, Byzantine: 1 bowl; 2 jar; Crusader: 3 bowl; Crusader–Mamluk: 4 bowl; 5 jug.	56
93.1.	Segment of the high aqueduct, north of Caesarea.	57
93.2.	View and section of the high aqueduct.	57
94.	Section of the low aqueduct, north of Caesarea.	57
99.	Remains of an oil press.	58
106.1.	The stronghold.	60
106.2.	The inscription, carved on a stone.	60
114.	Press bed from oil-extraction installation.	62
121.1.	Lithic finds, Epipaleolithic and Neolithic: 1 endscraper; 2 core.	63
121.2.	Lithic finds, Epipaleolithic and Neolithic: 1 endscraper; 2 burin; 3 retouched Levallois point; 4 retouched flake; 5 arrowhead fragment; 6, 11 borers; 8–10 arrowheads; 12 retouched blade; 13 bladelet.	64

The Sites

1. 2–9/1 14295 21940 19295 71940

Tel Sharish

Tell es Sarris (M)

Remains of a round tower (walls 0.8 m wide; entrance faces N) on the margins of the *kurkar* ridge running along the Mediterranean coast, about 1.0–1.2 km to its E. The tower was damaged by a *kurkar* quarry.

Pottery: Byzantine, Early Islamic and Mamluk.

2. 2–9/2 14281 21901 19281 71901

Ma‘agan Mikha‘el (north)

Columbarium and rock-hewn installations on the *kurkar* ridge, in an area of ancient quarries (currently N of Qibbuḏ Ma‘agan Mikha‘el, near the Tel Aviv–Haifa Highway; the installations were destroyed when the highway was constructed). An excavation (A. Siegelmann, 1966) exposed a complex of four square columbarium chambers (c. 2.7×2.7 m each), partially hewn in the *kurkar* and partially constructed of dressed stones. South of the columbarium—a rock-hewn courtyard and the corner of another columbarium. On a rock surface S of the courtyard—grinding stones from an oil press that apparently antedates the columbaria. The finds were attributed mainly to the Early Roman period (second half of the first century BCE–first half of the first century CE). Siegelmann 1970.

3. 3–9/1 14345 21925 19345 71925

Tel Sharish (east)

Tell es Sarris (M) (east)

Dam, from the Roman period, on a plain spreading to the E of the *kurkar* ridge, E of Tel Sharish. The dam runs a length of c. 900 m and is 3 m wide; it is constructed of a double wall of large stones and a fieldstone fill. In the dam’s center—remains of a structure (c. 8.0×11.5 m), built atop a convex passageway in the dam (width of passageway 1.7 m, height 2 m). Two entrances may be discerned, separated by a large, cone-shaped stone.

One of the drainage channels of Kevara Marsh runs along the N side of the dam. Remains of a road run along the N side of the channel; stones, removed from the dam, flank the road.

Pottery: Roman and Byzantine.

Conder and Kitchener 1881–1883, II:29.

4. 3–9/2 14370 21945 19370 71945

Ma‘yan Zevi (west)

Scatters of flint tools in a flat area, in a *hamra* layer below the marshy soil (today W of Ma‘yan Zevi).

Lithic finds: Middle Paleolithic.

Olami 1984:168, 170 (Site 188).

5. 4–9/1 14475 21985 19495 71985

Ma‘yan Zevi

Rock-hewn installations on slope descending W (presently near Ma‘yan Zevi). One of the installations consists of a shallow basin (1.0×1.5 m) and an adjacent depression (diam. 0.35 m, 0.6 m deep) linked by a hewn channel. Nearby—two cupmarks hewn in a rock surface (diam. and depth of each cupmark—0.2 m).

Finds: Epipaleolithic flint tools; Roman and Byzantine pottery.

6. 6–9/2 14665 21980 19665 71980

Har Zikhrona

Scatters of dressed building stones (mostly 0.5×0.7 m) and potsherds (area of c. 30×30 m) near the top of a spur that runs from Har Zikhrona.

Pottery: Byzantine.

7. 6–9/1 14695 21980 19695 71980

Har Zikhrona

Stone pile (diam. c. 10 m) on W slope of Har Zikhrona (spot height 163). In its center is a depression surrounded by stones (1.5 m high).

Nearby, to N—a basin and cupmarks hewn in a rock surface.

Some 180 m to N—another stone pile (diam. 8 m, 2 m high); resting on it was a basalt bowl.

Lithic finds: Epipaleolithic.

8. 1–8/1 14180 21850 19180 71850

Ma‘agan Mikha‘el (west)

Concentration of milestones from the Roman period in area of sand dunes, near the Mediterranean coast (currently an area of fish ponds W of Qibbuḏ Ma‘agan Mikha‘el).

The milestones were transferred to the antiquities collection of Qibbuḏ Ma‘agan Mikha‘el.

Avi-Yonah 1960:36.

9. 2–8/1 14270 21845 191270 71845

Ma‘agan Mikha‘el

Remains of five burial caves, hewn in the *kurkar* ridge running along the Mediterranean coast, about 1 km to its E. The caves were hewn in an area in which ancient quarries,

rock cuttings and rock-hewn installations, including remains of an oil press, were documented in the past. *Arcosolia* were cut into the walls of one of the caves and burial *kokhim* in the walls of the others. One of the *kokhim* caves consists of three square burial chambers (3.6×3.6 m, 2.5×2.5 m, 2.5×2.5 m), each containing six *kokhim*, fronted by a hewn courtyard (4.0×4.5 m); two chambers were hewn in the W side of the courtyard (a narrow passageway links the chambers) and the third is cut in the N side.

Pottery: Roman and Byzantine.

10. 4–8/1 14405 21855 191405 71855

Ḥ. Kevara

Kh. Kebārah (S)

Kh. Kabāra (M)

Scatters of pottery on foot of slope, N of Naḥal Kevara.

Pottery: Persian, Byzantine and Early Islamic.

11. 4–8/3 14425 21825 191425 71825

Me'arat Kevara

Mugharat Kabāra (M)

Remains from the Middle and Upper Paleolithic and the Epipaleolithic periods in a cave on the W slope of Ramat Ha-Nadiv. The cave is a large hall (c. 20×26 m) whose mouth opens to the NW.

The cave was discovered by M. Stekelis in 1929 and excavations were conducted there from 1930 on (D. Garrod, 1930; P. Turville-Petre, 1931; M. Stekelis, 1951–1957, 1964, 1965; O. Bar-Yosef and E. Tchernov, 1968; O. Bar-Yosef, B. Vandermeersch and B. Arensburg, 1982–1990). Many strata, some of them mixed, were observed; Natufian, Kebarian, Aurignacian and Mousterian layers were unearthed.

Olami 1984:170–172 (Site 189); Bar-Yosef and Vandermeersch 1991, 1992; Shick 1993 and the bibliography therein.

12. 5–8/1 14545 21870 19545 71870

Ma'yan Zevi

Ancient quarries (c. 20 dunams), apparently from the Roman and Byzantine periods, on slope (currently on the outskirts of Ma'yan Zevi). The quarrying created steps, on which chisel marks were observed.

13. 5–8/2 14580 21875 19580 71875

Zikhron Ya'aqov

Cairn field (c. 350×500 m) on slope (presently on the outskirts of Zikhron Ya'aqov): scores of cairns, and rock-hewn installations among them.

Pottery: Roman and Byzantine.

14. 6–8/1 14645 21850 19645 71850

Zikhron Ya‘aqov, Newē Sharet

Kh. Jābir (M)

Ancient settlement remains on slope (currently close to the Newē Sharet neighborhood, Zikhron Ya‘aqov). The site, which in the past extended over c. 3 dunams, was damaged by road work carried out nearby; stone column drums were found while removing earth during the road works. An oil-press crushing vat was recorded in the W portion of the site.

Pottery: MB II, Iron, Roman, Byzantine and Early Islamic.

Some 250 m S of the settlement—an ancient quarry (c. 4 dunams); diagonal chisel marks were observed.

15. 7–8/1 14750 21850 19750 71850

Zikhron Ya‘aqov, Newē Sharet (east)

Ancient quarries, apparently from the Roman and Byzantine periods, extending along c. 200 m on slope of hill (spot height 116; presently E of the Newē Sharet neighborhood, Zikhron Ya‘aqov). The rock precipices formed by quarrying activity reach a maximum height of c. 8 m.

In the W portion of the area (map ref. OIG 14739 21851, NIG 19739 71851)—a carved rectangular frame (0.35×0.45 m) around a worn inscription, hewn in the rock face, some 1.9 m above the quarry floor. To S, c. 2 m above the quarry floor—a cross and Roman numerals, carved into the rock face. Nearby—a large heap of quarried stones.

In the SW part of the quarry area (map ref. OIG 14710 21820, NIG 19710 71820)—circles carved into rock surfaces, each circle (average diam. 0.4 m) cut in half by a groove.

16. 8–8/1 14800 21825 19800 71825

Bueikeh (S)

Bureika (M)

Ancient settlement remains on prominent shoulder of spur, within the ruins of a deserted Arab village: rock-hewn burial caves and installations, and cupmarks.

Pottery: Roman and Byzantine.

17. 9–8/1 14940 21880 19940 71880

Es Suwweida (Mül)

Remains of a square fortress (c. 70×70 m) enclosed by a defense wall on a hilltop (spot height 161), commanding an expansive area. Towers are set at each of the fortress’s four corners. Mechanical equipment raised potsherds and exposed remnants of buildings from the Iron Age. In the surrounding area—rock cuttings, a limekiln and agricultural terraces.

Pottery: Persian, Hellenistic, Roman and Byzantine.

von Müllinen 1908:322.

18. 1–7/1 14110 21795 19110 71795

Î Yonim

Jazīrat el Hamām (M)

Cuttings in *kurkar*, and pottery scatters, on a group of tiny islands some 250–300 m from the Mediterranean coast.

Pottery: Roman and Byzantine.

A submerged ship was found in this area in 1985, c. 70 m from the coast, and the ship and its contents were excavated (A. Linder, 1987 on). The ship was constructed of pine wood around the middle of the first century BCE.

Linder 1993.

19. 2–7/1 14230 21720 19230 71720

Gesher Tanninim

Dam, spanning the breadth of the streambeds of Naḥal Tanninim and Naḥal ‘Ada. The dam, whose foundations are constructed of very large *kurkar* stones, runs N–S for a length of 197 m; the dam’s average width is 4.5 m (at several locations where the sides were reinforced—6 m) and its maximum height is c. 7 m. Several sluices were observed; these regulated the streams’ flow and facilitated the drainage of large Kevara Marsh, situated in the flat area to the E. The dam may have initially been a bridge, constructed over the streams at the end of the Roman period or in Byzantine times, and the lower sections of the sluices were later blocked in order to raise the water level; the water flow from these streams powered five flour mills to the W, apparently built in the Mamluk period.

Close to the present sluice in the dam is a rock-hewn channel (3 m wide) that tapers as it runs to a hewn installation (5.3×5.7 m) with four hewn protrusions.

Many rock cuttings of various kinds and two burial caves were found in the vicinity of the dam. One cave contains nine *kokhim* and the other—five. The caves were hewn at a lower level than that of the dam, and were probably flooded after the dam’s construction.

Pottery: Roman, Byzantine, Early Islamic and Ottoman.

Conder and Kitchener 1881–1883, II:13 (Jisr ez Zerka).

20. 2–7/5 14230 21750 19230 71750

Ma‘agan Mikha‘el

Dhahrat et Tahūna (M)

Scatters of flint implements and flakes on the *kurkar* ridge (presently in a built-up portion of Qibbuḥ Ma‘agan Mikha‘el). The artifacts were exposed after *ḥamra* layers, blanketing the underlying *kurkar*, were swept away.

Lithic finds: Epipaleolithic.

Prausnitz 1969; Olami 1984:171 (Site 190).

21. 2-7/2 14250 21705 19250 71705

Naḥal 'Ada

Remains of an ancient aqueduct running N-S for a length of c.100 m, near Naḥal 'Ada. The foundation (max. width 1.5 m) and the channel (average height 0.55 m) were constructed of small stones mortared with mud cement containing crushed potsherds. The channel's walls, whose lower portions are rounded, are plastered.

Nearby, to W, in a section created when the Tel Aviv-Haifa Highway was constructed, is a channel hewn in the *kurkar* (2.4 m wide, 1.4 m deep), running E-W. The channel may be related to the long dam built in the streambeds of Naḥal Tanninim and Naḥal 'Ada (Gesher Tanninim; above, Site 19).

22. 2-7/4 14270 21740 19270 71740

Kh. Zeituna (M)

Structural remains in a circular area (diam. c. 50 m) on a mound near Naḥal Tanninim.

Pottery: Roman and Byzantine.

23. 3-7/1 14350 21755 19350 71755

'Enot Timsah

Pool, near springs, in a flat region. In the surrounding area—scatters of dressed building stones and potsherds.

Pottery: Byzantine.

Remains of a Byzantine church, including an apse and mosaic pavements, were documented in this area in the past.

Tsafir, Di Segni and Green 1994:106 (Crocodilon Flumen Naḥal Tanninim) and the bibliography therein.

24. 5-7/2 14540 21715 19540 71715

Ramat Ha-Nadiv

Small ancient quarries, apparently from the Roman and Byzantine periods, extending over a considerable area on the E slope of Ramat Ha-Nadiv.

25. 5-7/4 14580 21730 19580 71730

'En Zur

'Ein Umm el 'Alaq (M)

Remains of a bathhouse and an aqueduct segment E of 'En Zur, ascribed to the Roman and Byzantine periods.

Amit, Hirschfeld and Patrich 1989:81-83.

26. 5–7/1 14560 21750 19560 71750

H. 'Eleq

Umm el 'Alaq (S)

Kh. Umm el 'Alaq (M)

Remains of a khan enclosed by a defense wall on slope of Ramat Ha-Nadiv. Nearby—remains of vaulted buildings and remnants of a settlement (c. 150×150 m), including a massive tower.

Pottery: Roman, Byzantine, Early Islamic, Crusader-Mamluk and Ottoman.

Guérin 1874–1875, II:237.

27. 5–7/3 14595 21740 19595 71740

Tel Zur

Ancient settlement remains—scatters of dressed building stones and potsherds—on slope on the E fringes of Ramat Ha-Nadiv, among the ruins of the deserted village Tel Zur.

Pottery: Roman.

28. 6–7/1 14680 21720 19680 71720

Ramat Ha-Nadiv

Ancient settlement remains (c. 20 dunams) on the shoulder of a low spur running SE from Ramat Ha-Nadiv: rock cuttings and rock-hewn installations, including winepresses and remains of an oil press, as well as a plastered bell-shaped cistern with a square mouth. A sarcophagus lid (0.85×2.35 m) with *acroteria* at its corners was found in the N portion of the site and a concentration of rock-hewn installations (one with hewn niches in its walls) and a scatter of tesserae were recorded in the S portion.

Pottery: Roman and Byzantine.

29. 9–7/1 14910 21720 19910 71720

Naḥal Senunit

Limekiln on hillside near Naḥal Senunit, located close to the probable course of the ancient aqueduct running W from Naḥal Tanninim. It is possible that one of the shafts built into the aqueduct was utilized in a later period in the construction of the limekiln.

Pottery: Byzantine.

30. 1–6/1 14100 21620 19100 71620

Tel Tanninim

El Melât (S)

Tell el Malat (M)

Ancient settlement remains on a low *kurkar* mound (spot height 9; c. 2 dunams) on the Mediterranean coast. Remains of a substantial building (monastery?) were recorded

on the mound's summit, as well as scattered dressed building stones and architectural elements, fragments of marble and roof tiles, tesserae (some colored) and potsherds. Wall segments were exposed in a section cut into the NW side of the mound by the action of the waves. On the mound's W side were sooty installations and remains of a plastered drainage channel. At the S foot of the mound was a plastered installation. Some 80 m S of the mound—remains of a square pool (17×17 m) constructed of *kurkar* stones and lined with light-colored plaster. It is approached by an aqueduct, whose remains are visible for a length of c. 350—a branch of the low aqueduct that led to Caesarea.

Finds: Hellenistic, Roman and Byzantine pottery; one bronze coin, second century BCE.

Excavations conducted at the site (A. Siegelmann and S. Yankelevitz, 1979; R.R. Steiglitz, 1996–1999) revealed remains of several buildings, some of which had floors paved in mosaic. A small portion of a Greek inscription survived in a segment of one of the floors. Also uncovered were rock-hewn installations, including a reservoir, and other installations related to fishing. The finds retrieved in the course of excavations were ascribed to the Persian, Hellenistic, Late Roman and late Byzantine periods.

Guérin 1874–1875, II:319–320 (Kh. Abou Tantour; Crocodilopolis); Conder and Kitchener 1881–1883, II:33 (the site's name was erroneously printed Tell el Helât); Survey in the Area of the Outlet of Naḥal Tanninim, *HA* 40 (1971):10; Tell Tanninim, *HA* 77 (1981):13–14; Tsafir, Di Segni and Green 1994:106 (Crocodilonpolis) and the bibliography therein; Stieglitz 1998.

31. 1–6/3 14115 21605 19115 71605

Naḥal Tanninim

Bridge, from the late Ottoman period, spanning the streambed of Naḥal Tanninim c. 600 m from the Mediterranean coast. It was constructed using dressed *kurkar* stones taken from nearby Tel Tanninim (to W; above, Site 30) in 1898 in anticipation of Kaiser Wilhelm II's visit to Caesarea. Foundations observed in the W part of the bridge revealed a different construction style from that of the rest, possibly indicating that these are remnants of an earlier bridge, which was part of a Roman road (remains of a road were discerned N and S of Naḥal Tanninim).

Pottery: Roman and Byzantine.

32. 1–6/2 14110 21610–14176 21606 19110 71610–19176 71606

Naḥal Tanninim

Remains of an aqueduct running a length of c. 600 m in a flat area alongside Naḥal Tanninim. The aqueduct, most probably from the Roman and Byzantine periods, branched off from the low aqueduct, running to Caesarea; it was apparently used to irrigate agricultural plots or to operate an industrial installation. The aqueduct (up to 0.9 m wide) was built of stones mortared with mud cement, and a pipe, composed of

ceramic rings, was sunk into it. Fragments of the pipe (diam. 0.13 m; length of each ring: 0.48 m) were retrieved.

Pottery: Roman and Byzantine.

33. 2–6/1 14170 21600–14232 21706 19170 71600–19232 71600

Jisr ez Zerka (S)

Jisr ez Zarqa (M)

Segment of the aqueduct that ran to Caesarea, on the *kurkar* ridge and its margins. This segment—a rock-hewn conduit (3.5 m wide) traversing an area of quarries—begins close to Naḥal ‘Ada and ends to the SW, at the Jisr ez Zarqa dam. At several locations along its route cracks and breaches in its walls revealed traces of repairs, as well as construction, which raised the height of the walls, particularly on the W side; these renovations were carried out with small stones and light-colored mud cement (the admixture contained crushed sherds and seashells).

Near Naḥal ‘Ada (map ref. OIG 14228 21700, NIG 19228 71700) a hewn outlet (3 m wide) in the conduit was found, on the far side of farming plots. At this point vertical grooves were cut in the conduit’s sides, to accommodate the placement of a wooden barrier, which served to divert the water. Nearby was an Arabic inscription, carved on a rock surface.

The conduit tapers off from a width of 2.7 m to 1.7 m. About 300 m from the Jisr ez Zarqa dam it branches into two sections, both running in the same general direction. Each branch runs a length of c. 200 m; the E branch is 1.8 m wide, the W—2 m, and they run about 7–20 m apart. The latter branch predates the former: at several locations stone chips, hewn out of the E branch, were dumped in the W branch.

To E of Naḥal Tanninim (map ref. OIG 14195 21646, NIG 19195 71646)—remains of a structure, surmounting the aqueduct, as well as Byzantine pottery, tesserae and small black stones.

Nearby—a small rock-hewn pool with hewn steps, descending to the floor. At this point the aqueduct is 1.7 m wide and 2.15 m deep.

The S end of the hewn segment may be discerned on the *kurkar* ridge, near Jisr ez Zarqa. Further S, the constructed portion of the aqueduct continues, and reaches the high aqueduct to Caesarea.

34. 2–6/6 14200 21600 19200 71600

Jisr ez Zerka (S)

Jisr ez Zarqa (M)

Scatter of building stones and potsherds (10×10 m) on the *kurkar* ridge, N of Jisr ez Zarqa.

Pottery: Roman and Byzantine.

35. 2–6/2 14225 21660 19225 71660

Kitū esh Shōmariya (M)

Ancient quarries, most probably from the Roman and Byzantine periods, spread over c. 150 dunams on the *kurkar* ridge. Two quarrying styles were observed: one created steps (average width and height 0.5 m) and the other—high rock cliffs.

Burial caves hewn in the *kurkar* were documented in the vicinity of the quarries. One of the caves is basically a circular chamber; a stone door is strewn close to the cave.

Near the quarries—scatters of flint tools and flakes.

Lithic finds: Middle Paelolithic, Epipaleolithic and Neolithic.

Olami 1984:200 (Site 237).

36. 2–6/3 14220 21610 19220 71610

Jisr ez Zerka (S) (north)

Jisr ez Zarqa (M) (north)

Ancient quarries, most probably from the Roman and Byzantine periods, on the *kurkar* ridge running along the Mediterranean coast (today close to the Tel Aviv–Haifa Highway, N of Jisr ez Zarqa). A channel (c. 150 m long, 0.6 m wide) hewn alongside one of the quarries apparently drew off rainwater. Rock-hewn burial caves were found among the quarries; one cave contained *arcosolia* and burial troughs.

37. 2–6/4 14250 21620 19250 71620

Naḥal ‘Ada

Structural remains (c. 30×50 m) in a flat area on the E margins of the *kurkar* ridge, near Naḥal ‘Ada. Also at the site—a rectangular rock-hewn tomb and rock cuttings; scatters of marble and roof-tile fragments, and potsherds.

Pottery: Roman and Byzantine.

38. 2–6/5 14275 21625 19275 71625

Naḥal ‘Ada

Ruins of a burial cave hewn in the *kurkar*, near Naḥal ‘Ada.

Pottery: Roman and Byzantine.

Nearby, to NE (map ref. OIG 14280 21630, NIG 19280 71630)—remains of a Byzantine burial structure, built of large, well-drafted chalk blocks.

In 1976 A. Siegelmann excavated the burial structure. See: Siegelmann 1992:178.

39. 4–6/1 14415 21665 19415 71665

H. ‘Aqqav

Esh Sheikh Mansūr el Aqqāb; Mansūr el Aqqāb (M)

Building remains, heaps of dressed stones, a bell-shaped cistern and rock-hewn cupmarks, enclosed by a defense wall (c. 1 dunam) on a hill on the W fringes of Ramat Ha-Nadiv.

Pottery: Roman, Byzantine and Early Islamic.
Hirschfeld 2000.

40. 4–6/3 14440 21600 19440 71600

Ramat Ha-Nadiv

Extensive burial field (c. 200×450 m) on slope, in NW portion of Ramat Ha-Nadiv and close to Zūqē Ḥotem (the cliffs on the W part of the plateau). The survey and excavations conducted at the site (R. Greenberg, 1989, 1990) documented c. 40 cairns—stone circles (diam. 6–15 m), each with a central rectangular burial cist built of large upright stone slabs. The cairn field was attributed to the second half of the third millennium BCE.

Greenberg 1992a, 1992b.

41. 4–6/2 14450 21630 19450 71630

Ramat Ha-Nadiv

Rock-hewn installations, among them winepresses, and scatters of building stones and rock-hewn cupmarks, on slope in the S portion of Ramat Ha-Nadiv.

Pottery: Roman and Byzantine.

42. 6–6/2 14600 21602 19600 71602

‘Enot Shumi

Hafayir (M)

Traces of springs on a moderate slope, at the E foot of Ramat Ha-Nadiv. The spring water was directed to the high aqueduct that ran to Caesarea. In the surrounding area—remains of dams, fragments of a sarcophagus and a heap of dressed stones (remnants of a mausoleum?).

Pottery: Roman and Byzantine.

43. 6–6/1 14620 21640 19620 71640

Naḥal Zur

Two segments of an aqueduct, apparently from the Roman and Byzantine periods, on moderate slope near Naḥal Zur, at the E foot of Ramat Ha-Nadiv. One segment is 30 m in length; the aqueduct channel (1 m wide) is plastered. Near it is a heap of well-dressed stones bearing traces of plaster—an admixture containing crushed potsherds and seashells. Traces of travertine coat the plaster, indicating that water flowed through the channel for a lengthy time span.

44. 6–6/3 14685 21610 19685 71610

Naḥal Tanninim

Structural remains (c. 5 dunams), as well as scatters of building stones, architectural elements and tesserae, on moderate slope near a branch of Naḥal Tanninim.

Pottery: Byzantine.

45. 6–6/4 14690 21670 19690 71670

H. Rozez

Kh. Raseiseh (S)

Kh. Ruseisi; Kh. Ruseisa (M)

Settlement remains (c. 20 dunams) on low shoulder (spot height 39) on fringes of Ramat Ha-Nadiv: scatters of building stones and architectural elements, tesserae, fragments of pottery vessels and roof tiles, remains of an oil press, and a well (c. 6 m deep) lined with ashlar stones. Also found was a piece of a marble baptismal font, bearing traces of a carved cross and four letters.

Pottery: Hellenistic, Roman and Byzantine.

An excavation at the site (E. Yannai, 1994) exposed remains of buildings from the Persian, Hellenistic and Byzantine periods. Beneath these strata was a stone-paved floor, around which were fragments of Iron II pottery vessels. The uppermost stratum contained Mamluk and Ottoman potsherds. A quarry was recorded N of the site, alongside of which were remains of a road (Roman?), running N.

An excavation conducted on the E margins of the site (R. Kletter, 2000) revealed building remains and pottery fragments from the Persian, Hellenistic, Roman and Byzantine periods (most of the finds from the two later periods).

Conder and Kitchener 1881–1883, II:62; von Mülinen 1908:32; Yannai 1997; Kletter 2004.

46. 8–6/1 14865 21650 19865 71650

H. Zorim

El Khirba; Kh. Bureika; Kh. Şawāwin (M)

Structural remains (c. 0.5 dunam) on shoulder of spur.

Pottery: Byzantine.

47. 8–6/2 14875 21625 19875 71625

Naḥal Senunit

Rock-hewn tunnel near Naḥal Senunit (a tributary of Naḥal Tanninim). It runs a length of 97 m, for the most part 0.65 m wide and 0.9 m high. Hewn niches (generally 0.1 m deep) cut in the walls accommodated oil lamps. Shafts were hewn at two points along the tunnel's course. One shaft (1.3×1.9 m) reaches the tunnel (7.1 m below the surface), progressing at a 45° angle; a staircase consisting of 27 steps is hewn in the shaft's side. The other shaft is blocked.

48. 9–6/1 14905 21605 19905 71605

Naḥal Tanninim

Settlement remains spread over the lower portion of the slope of a spur, descending to the confluence of Naḥal Tanninim with Naḥal Senunit: building remains, a hewn pit containing steps leading down to the floor, cisterns, rock-hewn burial caves, hewn installations and rock cuttings. One of the burial caves consists of a rectangular chamber

(5×6 m), with nine *kokhim* in its walls. Another cave contains two chambers (each 2.7×3 m), partitioned by a round column (diam. 0.8 m).

Pottery: Roman and Byzantine.

Nearby—a scatter of flint implements and flakes.

Lithic finds: Neolithic.

Olami 1984:200 (Site 242).

49. 1–5/13 14105 21575 19105 71575

Naḥal Tanninim

Milestone, in a flat area S of Naḥal Tanninim, alongside the ancient coastal road that ran to Caesarea: a rectangular base (0.5×0.6 m, 0.3 m high) topped by a round column (1.65 m high) that tapers as it rises (diam. of lower portion 0.4, upper portion 0.3 m), with a vertical groove running its full length. The milestone, well-preserved, apparently did not bear an inscription.

Tel Tanninim—Milestones, *HA* 76 (1981):18. See also below, Sites 50, 51.

50. 1–5/14 14110 21560 19110 71560

Naḥal Tanninim

Milestone, in a flat area S of Naḥal Tanninim, alongside the ancient coastal road that ran to Caesarea: a square base (0.65×0.65 m, 0.4 m high) surmounted by a column (1.1 m high), oval in section (0.65×0.65 m). The milestone bears a worn inscription; a few letters and numbers were discerned.

51. 1–5/12 14110 21545 19110 71545

Naḥal Tanninim

Milestone, in a flat area S of Naḥal Tanninim, alongside a segment (c. 30 m long, 5 m wide) of an ancient road hewn in the *kurkar*. The milestone's base is square (0.43×0.43 m, 0.35 m high) and the circular column (1.1 m high) tapers as it rises (diam. of lower portion 0.48 m, upper portion—0.44 m).

Near the coast, W of the road segment, is a well (dimensions of mouth—1.0×1.1 m) surrounded by a stone fence.

Pottery: Roman and Byzantine.

A scatter of flint tools and flakes was recorded in this area.

Lithic finds: Epipaleolithic.

Olami 1984:200 (Site 238).

52. 1–5/9 14140 21590 19140 71590

Naḥal Tanninim

Enclosure, fenced in with stones (c. 2 dunams, animal pen?), in a flat area S of Naḥal Tanninim. In the vicinity—scatters of white marble fragments, tesserae, potsherds and glass fragments.

Finds: Roman, Byzantine and Early Islamic pottery; coins, fourth–fifth centuries CE; stone amulets and gemmae; fish hooks, spindles and bronze needles.

53. 1–5/3 14120 21575 19120 71575

Naḥal Tanninim

Building remains, quarries and cuttings in the *kurkar*, in a flat strip S of Naḥal Tanninim extending a length of c. 150 m. Also at the site—a mosaic floor segment and fragments of a sarcophagus.

Finds: Hellenistic, Roman and Byzantine pottery; a bronze coin, Antiochus IV (Epiphanes; 175–164 BCE).

54. 1–5/1 14130 21570 19130 71570

Naḥal Tanninim

Two scatters of flint implements on a sandy mound in a flat area S of Naḥal Tanninim.

Lithic finds: Neolithic.

55. 1–5/5 14110 21530 19110 71530

Naḥal Tanninim

Structural remains (c. 3–4×4–6 m) and a plastered pool on low *kurkar* mounds S of Naḥal Tanninim. In the area of the structures—scatters of roof-tile and glass fragments, plaster clumps and tesserae.

Finds: Late Roman and Byzantine pottery; several tiny copper coins, fourth–fifth centuries CE.

56. 1–5/2 14120 21505 19120 71505

Naḥal Tanninim

Structural remains and fragments of marble and roof tiles in flat area S of Naḥal Tanninim.

Finds: Roman pottery; ten coins, second–fourth centuries CE.

57. 1–5/16 14130 21520–14190 21550 19130 71520–19190 71550

Naḥal Tanninim

Segment of the high aqueduct from the Roman and Byzantine periods, leading to Caesarea. The segment, about 1 km long, begins on the *kurkar* ridge (presently in the village of Jisr ez Zarqa), and runs SW through a more or less flat area until it meets the low aqueduct. Parts of the aqueduct are buried in sand; exposed sections revealed a plastered channel (0.6–0.9 m wide, 0.65 m deep).

58. 1–5/11 14155 21560 19155 71560

Naḥal Tanninim

Structural remains (c. 0.5 dunam), scattered building stones, cuttings in the *kurkar* and cupmarks, in a flat area S of Naḥal Tanninim.

Pottery: Roman and Byzantine.

59. 1–5/15 14120 21480–14170 21599 19120 71480–19170 71599

Jisr ez Zerka (S) (west)

Jisr ez Zarqa (M) (west)

Segment of the low aqueduct from the Roman and Byzantine periods, leading to Caesarea, in a fairly flat region (currently W of Jisr ez Zarqa). Most of the segment, running NE–SW, is blanketed by sand dunes.

A survey (Y. Porath, Y. Neeman and A. Shenhav, 1988) located sections of the aqueduct that runs to Tel Tanninim (above, Site 30) nearby (map ref. OIG 14170 21543, NIG 19170 71543). This aqueduct, which branches off from the low aqueduct to Caesarea, revealed two building phases. In the earlier phase a ceramic pipe was laid in a dug-out channel and sunk into a mixture of gray, limey mud cement and fieldstones; in the later phase, the pipe, no longer in use, was replaced with a plastered open channel, superposed on the pipe and cement admixture. A salvage excavation (Y. Porath, 2000) was conducted of this segment of the aqueduct, located in Jisr ez Zarqa.

Porath and Neeman 1989; Porath 1990, 2002a.

60. 2–5/1, 4 14220 21550–14335 21536 19220 71550–19335 71536

Naḥal ‘Ada

Segments of the high aqueduct from the Roman and Byzantine periods (currently E of Jisr ez Zarqa), leading to Caesarea. The general orientation of the segments is E–W. One segment of the aqueduct conveyed water to ancient Caesarea and the other is a channel that apparently bypassed the marshes in this low, flat area that spread E to the *kurkar* ridge—part of the drainage basin of Naḥal ‘Ada (today between Jisr ez Zarqa and Moshav Bet Ḥananiya). The bypass channel branches off from the main aqueduct (at map ref. OIG 14325 21536, NIG 19325 71536; see also below, Site 63) and continues S in a wide bend, a maximum distance of c. 200 m between the two aqueducts. The channel unites with the main, high aqueduct about 600 m W of the point where it branched off. The high aqueduct, running an almost straight course, is mostly ruinous.

The two segments differ in a number of ways, among them the size of the building stones and their quality. The diversion channel was constructed of stones 1.5–1.7 m in length, and is 2.3 m in width (without the supportive walls on its sides). The channel surmounting it is for the most part 0.9 m wide and 1.4 m deep. Three levels were discerned, each level a bit higher than the preceding one, indicating that repairs were made in the course of its use; all in all the uppermost level rests c. 0.5 m above the channel at the time of its construction. Travertine was discerned on its walls, attesting to leakage. A breach in the bypass channel in the streambed of Naḥal ‘Ada (map ref. OIG 14290 21521, NIG 19290 71521) reveals in detail the aqueduct’s makeup. It is 7.5 m high at this point, and the foundation level of the support walls is 2.5 m higher than the aqueduct’s base level.

At the juncture where the bypass channel meets the original aqueduct, the high aqueduct runs W for a length of c. 300 m, reaching the *kurkar* ridge and a section of the aqueduct, which was formed when the Tel Aviv–Haifa Highway was constructed. The aqueduct here is c. 5 m in height and the support walls on either side are visible.

Near this point (map ref. OIG 14260 21555, NIG 19260 71555) a fragmentary limestone slab (0.46 m in width, 0.24 m thick), which had been fixed to the N wall of the high aqueduct, was found. On its face, within a *tabula ansata*, remains of an indistinct carved inscription were discerned—the letters E, T or F, painted in red.

The channel is swallowed by the *kurkar* ridge (today the location of Jisr ez Zarqa). On the ridge a shaft was found (1.5×1.5 m; map ref. OIG 14200 21550, NIG 19200 71550), in which a staircase descends (the shaft is blocked at a depth of c. 5 m); this may indicate the existence of a tunnel, hewn into the breadth of the ridge, which conveyed water away from the aqueduct.

Olami and Peleg 1975; Peleg 1989.

61. 2–5/3 14215 21540 19215 71540

Jisr ez Zerka (S)

Jisr ez Zarqa (M)

Ancient rock cuttings and quarries on the *kurkar* ridge (c. 50 dunams; presently in and around Jisr ez Zarqa), the majority from the Roman and Byzantine periods. Quarrying created steep precipices (up to 6 m high) and steps.

62. 2–5/2 14280 21500 19280 71500

Naḥal ‘Ada

Ancient quarries and burial caves in *kurkar* outcrops, in a flat area E of the *kurkar* ridge (most of the area is presently cultivated; Naḥal ‘Ada traverses the area from N and S). One of the burial caves was cut into the face of a quarry (c. 20×30 m): a rectangular chamber (4×6 m), containing four sarcophagi, each with a gabled lid and *acroteria* at their corners. A hewn cell is close to the cave’s NW corner (it apparently was intended to hold another sarcophagus), and a *kokh* is hewn in one of the long walls. Another burial cave nearby contains eight *kokhim*; a carved lintel surmounts the entrance and near the threshold is a hinge hole for a door.

Pottery: Roman and Byzantine.

63. 3–5/5 14330 21535 19330 71535

Bet Ḥananya

Two Latin inscriptions from the Tenth Roman Legion (*fretensis*), carved into blocks of hard limestone, set among the dressed *kurkar* stones in the wall of the high aqueduct leading to Caesarea—currently on the outskirts of Moshav Bet Ḥananya. One inscription, carved into a block measuring 0.65×1.00 m within a *tabula ansata*

(0.45×0.45 m), comprises six lines written in a clear hand; the letters in the last three lines are noticeably different from each other in size and style:

IMP CAES	Imp(erator) Caes(ar)
TRAIANUS	Traianus
HADRIANUS	Hadrianus
AUG FECIT	Aug(ustus) fecit
PER VEXILLATIONE	per vexillatione(m)
LEG X FRETE	leg(ionis) X Frete(nsis)

Translation: The Emperor Caesar Trajan Hadrian Augustus constructed by a division of the Tenth Roman Legion *Fretensis*

The other inscription, carved into a limestone block measuring 0.50×0.92 m, was placed near the inscription described above. Symbols of the Tenth Roman Legion are carved on the stone's face: an eagle, standing within a gabled niche above a wreath, which encompasses the four-line inscription carved on a round convex surface (diam. 0.3 m) within a *tabula ansata*. The goddess Nike (minus the head and lower limbs) is depicted beneath the inscription. At the bottom of the stone is a depiction of Atlas kneeling, bearing the earth on his shoulders. The poorly preserved inscription is of careless workmanship—the letters are unevenly and roughly carved:

IMP TRN	Imp(eratori) Traia(n)o
HADR	Hadr(iano)
VEX LEG	vex(illatio) leg(ionis)
X (F) RETE	X (f)rete(nsis)

The wording of the inscription is identical to another carved inscription discovered in a stone collapse at the site in 1927; accompanying this inscription are depictions in relief of a dolphin and a battleship.

Eleven inscriptions—ten in Latin and one in Greek—were recorded on the high aqueduct to Caesarea before 1975, including the two above.

64. 3–5/1, 2 14335 21555 19335 71555

Tel Mevorakh

Tell Bârak (S)

Tell Mubârak (M)

Small round tell (diam. c. 40 m, rising 12 m above the surrounding plain), SE of a bend in Naḥal Tanninim. The survey documented on the tell's summit foundations of a substantial building, and on the SE foot of the tell—rock cuttings and a plastered channel (120 m in long, 0.9 m wide).

Near the tell—a circular rock-hewn burial cave (diam. of central chamber 6 m), containing 13 *kokhim*. The cave's ceiling was supported by a central column bearing a carving of a bull.

In 1923 a mausoleum of stone masonry, ascribed to the third century CE, was discovered on the E foot of the tell (map ref. OIG 14354 21555, NIG 19345 71555). Several marble sarcophagi were found inside, two of them ornamented in relief.

On the plain to the NW of the tell a shaft tomb from the tenth century BCE was accidentally discovered, containing Phoenician and Cypro-Phoenician pottery vessels. Excavations conducted at the tell (E. Stern, 1973–1976) unearthed the following remains: a rectangular fortress of mud-brick construction from the Middle Bronze Age IIA, as well as settlement remains from a later phase of this time span, surrounding the fortress; settlement remains from MB IIB–C; remnants of a settlement (several phases) and of a temple from the Late Bronze Age; remains of a large ‘four-room house’ from Iron I–II; deep pits surmounted by remains of Persian structures; and Hellenistic-period wall segments. Many finds from the Roman period were also discovered, but the tell was evidently unoccupied during this time span. During the Crusader and Mamluk periods the tell served as a burial field.

On the E slope of the tell—a rectangular *arcosolium* cave, hewn into the *kurkar*. A salvage excavation was conducted (R. Badhi, 1993); the finds discovered in the cave were ascribed to the third–fourth centuries CE.

Conder and Kitchener 1881–1883, II:34; Stern 1993 and the bibliography therein; Badhi 1999.

65. 3–5/3 14335 21500 19335 71500

Bet Ḥananya

Remains of a khan—segments of a wall and remnants of a gate—in a flat area (presently on the outskirts of Bet Ḥananya).

Pottery: Roman, Byzantine, Mamluk and Ottoman.

66. 3–5/4 14340 21530 19340 71530

Bet Ḥananya

Rock-hewn shaft tomb (opening c. 1.5×3.0 m) in a flat area (in a private yard on Moshav Bet Ḥananya). Several branches, leading to burial chambers, were documented 3 m below the surface in the past (today the tomb is blocked).

Pottery: Persian, Roman and Byzantine.

67. 4–5/3 14450 21525 19450 71525

Ḥotem Ha-Karmel

Segment of the high aqueduct from the Roman and Byzantine periods, that led to Caesarea, at the S foot of Ḥotem Ha-Karmel (presently in an area between Binyamina Quarries and Moshav Bet Ḥananya). This segment consists of two branches, N and S, whose combined width is 3.2–3.8 m (wider at several points where supports were added to the sides). Two aqueducts were combined here: one starts at ‘Enot Shumi (map ref. OIG 14600 21610, NIG 19600 71610) and the other at ‘En Zabarim (within the Map of Daliya [31]; map ref. OIG 15211 22001, NIG 20211 72001). A pool was

apparently constructed at their meeting point (probably at Binyamina Quarries); the N branch runs from the pool to the W.

The N branch runs a length of 1.8 km and is more or less 1.8 m wide. It consists of a channel (c. 1 m wide), in which three ceramic pipes (diam. 0.17–0.18 m), 0.38 m long) were placed on a foundation of mud cement and covered by stones mortared with mud. The S branch, mostly 1.8 m wide, was an open channel (c. 0.9 m wide and 1.75 m deep) conveyed on a network of arches (c. 4.5 m apart). Clay angles, which diverted water upward, to the pipes, were found at two points—two to each ceramic pipe (one at map ref. OIG 14393 21553, NIG 19393 71553, the other 96 m further W). It is possible that at each of these points a small open pool was built, and served as a siphon, thereby slightly diverting the water flow to its original level, and also preventing pressure on the sides of the pipes.

The capacity of the ceramic pipes of the N branch is estimated at 150 cubic m per hour, and the capacity of the open channel (the S branch)—at 1,600 cubic m per hour. The open channel apparently antedates the aqueduct bearing the ceramic pipes.

68. 4–5/5 14485 21531 19485 71531

Ḥotem Ha-Karmel

Structural remains from Middle Bronze IIA at the S end of the Carmel Ridge (Rekhes Ha-Karmel; today within a quarry).

In 2001 A. Gorzalczany conducted a sounding. See: Gorzalczany 2004.

A survey conducted by M. Peilstöcker in the area recorded c. 120 shaft tombs from the Intermediate Bronze Age. Excavations at the site subsequent to the survey (M. Peilstöcker, 2001) exposed c. 60 shaft tombs from this period as well as tombs, dated to Early Bronze I–II (one of them served in the Chalcolithic period), a tomb from the Late Bronze Age and a tomb used in Iron II. Remains of a mausoleum from the Roman period and a limekiln from Byzantine times were also unearthed.

M. Peilstöcker, report in preparation.

69. 4–5/2 14415 21530 19415 71530

Tâhûnet Abu Nûr (S)

Remains of a flour mill near Naḥal Tanninim, at the foot of Ḥotem Ha-Karmel: remnants of a building and several arches (built with dressed stones that were removed from the aqueduct leading to Caesarea). The flour mill, constructed in the Ottoman period, was active until 1922.

Conder and Kitchener 1881–1883, II:34.

70. 4–5/1 14420 21560 19420 71560

Ramat Ha-Nadiv

Scatters of flint implements and fossilized animal bones in the remains of a collapsed natural cave at the foot of a cliff on the W fringes of Ramat Ha-Nadiv.

Lithic finds: Middle Paleolithic.

Olami 1984:171–173 (Site 191).

71. 4–5/4 14420 21580 19420 71580

Ramat Ha-Nadiv

Pottery scatters (c. 200×400 m) on slope, in the SW portion of Ramat Ha-Nadiv (presently in an agricultural area).

Pottery: Roman and Byzantine.

72. 5–5/1, 2 14535 21565 19535 71565

Kefar Shumi

Kh. Esh Shuna (M)

Khan from the Ottoman period—a two-story building and a courtyard enclosed within a wall—at the foot of the SE slope of Ramat Ha-Nadiv. The khan was built on remains of a Roman theater; rooms on the lower story of the khan are arrayed in a semicircle, following the arrangement of the theater's seats, which served as a foundation for the later structure. The khan's upper story has vaulted rooms, approached by a staircase that begins to the E of the courtyard gate. Seats, built of large stones, survive from the theater.

Nearby—a segment of a mosaic floor and a marble sarcophagus.

Pottery: Roman, Byzantine and Ottoman.

To NE of the khan (map ref. OIG 14540 21570, NIG 19540 71570)—segments of an aqueduct, carrying a channel, built of fieldstones and mortared with mud cement. This aqueduct, which runs W, truncated by Binyamina Quarries, is located at a higher elevation than that of 'Enot Shumi (above, Site 42), and apparently was fed from another source.

73. 5–5/3 14565 21560 19565 71560

Biq'at Ha-Nadiv

Remains of an ancient settlement on moderate slope on the margins of Biq'at Ha-Nadiv: scatters of drafted building stones and many potsherds, tesserae and marble and roof-tile fragments.

Pottery: Roman and Byzantine.

Near the settlement remains is a vaulted well, whose sides are constructed of ashlar, that continued to be used until just a few score years ago.

74. 8–5/1 14860 21578 19860 71578

Kh. el Charashi (Mül)

Remains of an ancient settlement (c. 15 dunams) on moderate slope on the margins of Biq'at Ha-Nadiv, close to Naḥal Tanninim: scatters of building stones and potsherds.

Pottery: Roman and Byzantine.

To NE of the site (map ref. OIG 14872 21590, NIG 19872 71590)—cupmarks and grooves, hewn into a prominent rock surface.

75. 9–5/1 14900 21560 19900 71560

Naḥal Tanninim

Rock-hewn tunnel, approached by a square shaft, near the streambed of Naḥal Tanninim. A staircase is built into the side of the shaft.

Pottery: Roman and Byzantine.

Siegelmann 1994.

76. 0–4/1 14090 21485 19090 71485

Qesarya (west)

Kurkar milestone in a sandy area near the Mediterranean shore (currently W of Qesarya). The milestone is about 100 m W of the high aqueduct from the Roman and Byzantine periods, leading to Caesarea. The base is square (0.5×0.5×0.5 m), and the column surmounting it is circular (1.3 m high). Traces of an inscription—eleven lines—were discerned; the letters (generally 0.5 cm high) bore vestiges of red paint.

77. 0–4/2, 3 14080 21440 19080 71440

Qesarya (west)

Ruin (c. 5 dunams) on small *kurkar* hill (spot height 15) close to the Mediterranean Sea (presently W of Qesarya). A road hewn into the *kurkar* (5.8 m wide) leads to the top of the hill, where remnants of a building (6 m long) from the time of the British Mandate period were found, built atop remains of an ancient structure (ancient marble architectural elements were incorporated into the walls of the later building). Nearby, to N—a blocked cistern. Also—a plastered channel (the plaster contains crushed potsherds), covered over with stone slabs, running W. In the SE portion of the site—remains of two walls (15 m and 17 m long), forming the corner of a building. Remains of a support wall built of dressed stones runs along the W side of the hill.

In a flat area some 60 m E of the hill, a segment of the high aqueduct (most of it lies under sand dunes), from the Roman and Byzantine periods, continues to Caesarea. This portion of the aqueduct features two separate channels. The W channel is blocked with stones and above it are remnants of a narrow channel; the E channel is covered with stone slabs.

Near the aqueduct are remains of a square structure (4.5×4.5 m) containing a square plastered pool (2.7×2.7 m). Around the structure—scattered building stones and potsherds.

Pottery: Roman and Byzantine.

78. 2–4/1 14280 21465 19280 71465

Ḥ. Mallaḥ

El Mallaḥa (M)

El Mallahe (Mül)

Remains of a structure (7.3×8.3 m) built of dressed stones, some of them very large (up to 0.45×0.45×1.50 m), on a low hill near Naḥal ‘Ada. The E wall is 1.4 m wide.

Near the structure are ancient quarries (c. 10 dunams). One of them contains a rectangular columbarium (3.5×4.3 m, 2.4 m high), facing E. Several rows of niches, nine to a row, survive in the wall facing the entrance; in the S wall six rows of niches were counted, up to 21 niches to a row; and several niches survive on either side of the entrance.

Pottery: Roman and Byzantine.

von Mülinen 1908:335.

79. 3–4/1, 2 14330 21425 19330 71425

Naḥal ‘Ada

Scatters of potsherds and building stones, including well drafted stones (c. 1 dunam), in a flat area (presently most of it is cultivated), E of Naḥal ‘Ada.

Pottery: Roman and Byzantine.

Nearby, to S (map ref. OIG 14330 21420, NIG 19330 71420)—remains of an aqueduct (the ‘unfinished aqueduct?’).

‘Ad 1999.

80. 4–4/1 14407 21410 19407 71410

Binyamina (west)

Two-story building, most probably from the end of the Ottoman period, on moderate slope (currently W of Binyamina); ancient building stones were incorporated in its walls. In the area—pottery scatters.

Pottery: Byzantine.

81. 4–4/3 14440 21460 19440 71460

Binyamina

Remains of ancient burials on a low hill and its slopes (today in a built-up section of Binyamina): scatters of potsherds, fragments of glass vessels and sarcophagus.

Pottery: Roman.

82. 4–4/2 14460 21450 19460 71450

Binyamina

Foundations, of *kurkar* construction (stones average 0.25×0.30×0.50 m), belonging to an ancient aqueduct (2.7 m wide) running NE–SW for a length of c. 300 m, on a moderate slope (today a built-up section of Binyamina). The foundations have augmentations (one course, each 1.45 m wide), which serve as bases for arches spaced at fixed intervals of 6 m; they bore an aqueduct that apparently replaced, or was a branch of, the aqueduct located in a marshy area to the NW—the high aqueduct leading to Caesarea (see above, Site 60). This branch’s source was probably in Naḥal Tanninim, at the foot of Ḥotem Ha-Karmel (map ref. OIG 14450 21520, NIG 19450 71520; today the area of Binyamina Quarries).

Pottery: Byzantine.

The aqueduct foundations were excavated by Y. Ne’eman (report, IAA Archives).

83. 4–4/4 14460 21460 19460 71460

Binyamina

Scatter of flint implements—cores, bladelets and flakes—and scattered animal bones and teeth, on moderate slope (today a built-up area in Binyamina).

Lithic tools: Middle Paleolithic and Epipaleolithic.

Olami 1984:200 (Site 239).

84. 4–4/5 14495 21495 19495 71495

Naḥal Tanninim

Remains of an ancient cemetery on moderate slope near Naḥal Tanninim (currently on the outskirts of the Giv'at Ha-Po'alim neighborhood, Binyamina). The cemetery was looted; dressed building stones and potsherds are scattered around the site (c. 1 dunam).

Pottery: Roman and Byzantine.

85. 5–4/4 14510 21400 19510 71400

Binyamina

Scatters of Late Roman pottery on moderate slope (presently in Binyamina). In this area a stone slab (0.22×0.29 m) was found (not *in situ*), bearing carvings of clearly Jewish symbols—a seven-branched menorah, a shofar and a *lulav*—and a Greek inscription, “One God, help Judah the elder”. The stone, which apparently served as a Jewish tombstone (similar stones were discovered in the area to the W, in H. Qesari), was ascribed a date in the fifth century CE.

Di Segni 1993; Tsafrir, di Segni and Green 1994:89.

86. 5–4/1 14595 21405 19595 71405

Binyamina

Rock cuttings (c. 800 sq m) and scattered potsherds on moderate slope (currently in the E portion of Binyamina).

Pottery: Roman and Byzantine.

87. 5–4/2 14560 21460 19560 71460

Naḥal Tanninim

Rock cuttings and installations (c. 300 sq m), as well as scattered building stones and potsherds, near the bank of Naḥal Tanninim.

Pottery: Roman and Byzantine.

88. 5–4/3 14585 21480 19585 71480

Naḥal Tanninim

Scatters of building stones, marble fragments and potsherds on moderate slope, between branches of Naḥal Tanninim (presently an agricultural area).

Pottery: Roman and Byzantine.

89. 7-4/1 14730 21420 19730 71420

Tel Burga

El Bureij (S)

Kh. Tell el Bureij (M)

Extensive enclosure (c. 250 dunams) surrounded by a rampart, on moderate slope SE of Naḥal Tanninim (today in a vineyard). The survey recorded scatters of ancient architectural elements, many potsherds and roof-tile fragments on the N fringes of the site. Flint implements, pottery and a seal were found.

Lithic finds: Lower and Middle Paleolithic.

Pottery: Chalcolithic, EB, MB IIA–B, Iron, Persian, Roman, Byzantine and Early Islamic.

An excavation at the tell (M. Kochavi and R. Gophna, 1971) exposed part of the remains of a settlement from the Middle Bronze Age II (estimated area of 50 dunams) and a segment of the rampart that encircled the enclosure (on its W). The majority of the finds were ascribed to MB II; Chalcolithic and Early Bronze artifacts were mixed with chalk material brought to the site for the construction of the rampart and apparently derive from another settlement, several kilometers to the E. Finds from the Intermediate Bronze Age (MB I) found in this part of the rampart apparently originate from a settlement that occupied portions of the enclosure during this time span.

Conder and Kitchener 1881–1883, II:52; The Sharon Survey; Naḥal Tanninim, *HA* 21 (1967):10; Tel Burga, *HA* 39 (1971):18; 41–42 (1972):15–16; Kochavi, Beck and Gophna 1979; Olami 1984:200 (Site 241).

90. 9-4/3 14930 21490 19930 71490

Ḥ. ‘Egem

Kh. el ‘Ajami; Kh. ‘Ajama (M)

Scanty settlement remains on shoulder of hill (presently on the outskirts of Moshav Avi’el): building stones, some of them drafted, and pottery scatters. Rock-hewn pits, a rock-hewn pool, remains of an oil press and a *maqam* were recorded here in the past.

Pottery: Persian, Hellenistic and Early Islamic.

von Mülinen 1908:338.

91. 9-4/2 14960 21485 19960 71485

Ḥ. Defes

Kh. ed Dufies (S)

Kh. ed Dafāis; Kh. ed Dafayis (M)

Scatters of ancient building stones and architectural elements (c. 10 dunams) at edge of spur (spot height 72).

Pottery: Byzantine, Crusader and Crusader–Mamluk.

Conder and Kitchener 1881–1883, II:58.

92. 9–4/1 14985 21405 19985 71405

Kh. Abu Shusha (M)

Scanty settlement remains at edge of spur (currently in Giv'at 'Ada): scatters of building stones, pottery and tesserae.

Pottery: Roman and Byzantine.

von Mülinen 1908:338.

93. 0–3/2 14051 21310 19951 71310

Qesarya (west)

Segment of the high aqueduct from the Roman and Byzantine periods, leading to Caesarea, in a flat area near the coast (currently W of Qesarya). Excavations of this segment (A. Negev, 1963; Y. Olami and J. Peleg, 1972) uncovered four stone slabs bearing inscriptions, affixed to the aqueduct's side.

Negev 1964, 1972; Olami and Peleg 1975.

94. 0–3/1 14060 21340 19060 71340

Qesarya (west)

Segment of the low aqueduct from the Roman and Byzantine periods, leading to Caesarea, in a flat area E of and parallel to the high aqueduct segment (above, Site 93; currently W of Qesarya): a rectangular arched channel plastered inside and out. The aqueduct is ruinous from the edge of this segment to the outskirts of Caesarea.

95. 0–3/3 14090 21310 19090 71310

Qesarya

Remains of a bathhouse, protruding from the sand on a low hill (today in Qesarya).

Pottery: Roman.

96. 1–3/1 14150 21305 19150 71305

Qesarya (east)

Scatters of building stones, some drafted, in area of low sandy hills (presently E of Qesarya).

Pottery: Roman.

97. 2–3/1 14290 21390 19290 71390

Or 'Aqiva (north)

Remains of an ancient road (c. 5 m wide) in a flat area (today N of Or 'Aqiva), discovered beneath a blanket of sand, that apparently led from Kefar Shumi (above, Site 72) to Caesarea.

Pottery: Byzantine and Early Islamic.

98. 3–3/1 14330 21335 19330 71335

Or ‘Aqiva (east)

Ancient cemetery on moderate slope (currently E of Or ‘Aqiva): graves, constructed of drafted stones, containing limestone sarcophagai.

Lipkunsky 2000.

99. 6–3/1 14660 21305 19660 71305

Tel Duda’im

Tell ed Dôdehân (S)

Kh. Tell ed Dodāhan; Kh. ed Dudahan (M)

Small tell (c. 6 dunams) at the edge of a low spur (spot height 30), N of Naḥal ‘Ada. On the tell’s summit stands the corner of a substantial building, well constructed of drafted stones. In this part of the site a variety of architectural elements were found, among them a Corinthian capital. Also found were an oil press stone weight, fragments of marble and glass vessels, tesserae, waste from a potter’s workshop, and pottery fragments, warped by the heat of a kiln.

Pottery: Byzantine, Crusader and Mamluk.

Conder and Kitchener 1881–1883, II:69.

100. 8–3/1 14810 21350 19810 71350

Naḥal ‘Ada

Milestone, found on a moderate slope N of Naḥal ‘Ada, close to the road leading from Binyamina to Giv‘at ‘Ada (transferred to a private yard in Giv‘at ‘Ada). The milestone’s base is square (0.58×0.58 m, 0.48 high), and the round column tapers as it rises (diam. of lower part—1.78 m, of higher part—1.55 m; circumference of the ring dividing the base from the column—1.88 m). Traces of an inscription were observed on the column.

101. 9–3/1 14975 21380 19975 71380

Naḥal ‘Ada

Remains of a structure, constructed of drafted stones, and scatters of building stones and potsherds, at the foot of a slope near Naḥal ‘Ada.

Pottery: Byzantine.

102. 0–2/1 14000–14100 21180–21260 19000–19100 71180–71260

Ḥ. Qesari

Kaisarieh (S)

Qisariya; Qisārya; Caesarea (M)

Remains of the ancient port city of Caesarea, built on the Mediterranean coast by Herod in the last quarter of the first century BCE, close to the location of the Hellenistic port town Straton’s Tower (Midgal Shorshon; in the late Persian period it was apparently a

Phoenician trading post). Under Roman rule the city became the capital of Judea, and subsequently of the Syrian province of *Palaestina Prima*. In the Roman and Byzantine periods the city reigned as the administrative, economic and cultural center of all of Eretz-Israel. In the Byzantine period the majority of its inhabitants were Christians, however, Jews and Samaritans also resided in the city. Following the Arab conquest (639 CE), Caesarea came under Arab rule until the Crusaders assumed control. The city was conquered and devastated by Mamluk Sultan Baybars in 1265 and completely annihilated in 1291.

Modern study of the city and its environs, including the aqueducts leading to it, began with the survey conducted by members of the PEF in the 1870s. Excavations were initially conducted on a limited basis (Y. Ory, 1947—the synagogue remains; S. Yeivin, 1951—remains of the street and the Byzantine church); from the late 1950s on, systematic excavations have been conducted by various scholars and expeditions.

Excavations conducted in the city and its environs exposed remains of residential and public buildings, streets, city walls and gates, and installations from the Hellenistic, Roman, Byzantine, Early Islamic, Crusader, Mamluk and Ottoman periods.

Guérin 1874–1875, II:321–339; Conder and Kitchener 1881–1883, II:13–29; Negev and Frova, Avi-Yonah 1993 and the bibliography therein; Levine and Nezer 1993 and the bibliography therein; Bowle and Hollum 1993 and the bibliography therein; Tsafir, Di Segni and Green 1994:94–96 and the bibliography therein; Porath 1996, 2002b. Maritime Caesarea: Raban 1993 and the bibliography therein.

103. 0–2/2 14045 21250 19045 71250

Ḥ. Qesari (east)

Kaisarieh (S) (east)

Qisariya; Qisārya; Caesarea (M) (east)

Remains of a substantial oval amphitheater, most probably from the Roman period, in a depression in a sandy area E of Ḥ. Qesari (Caesarea).

104. 0–2/3 14090 21290 19090 71290

Qesarya

Ancient burial field, most probably from the Roman period, in area of low sandy hills (presently on the outskirts of Qesarya).

Pottery: Roman, including a roof-tile fragment, imprinted with the letter X.

In this area remains of a Byzantine building, apparently a mansion, were discovered, in which a mosaic pavement segment with Greek inscriptions set within medallions was found.

The mansion was excavated by A. Siegelmann; see Siegelmann 1975.

105. 2–2/1 14251 21271 19251 71271

Or 'Aqiva

Remains of a Roman burial structure, in which a limestone sarcophagus was found, on a moderate sandy hill (today in Or 'Aqiva).

In 1980 A. Siegelmann conducted a salvage excavation at the site. See: Siegelmann 1992:66*.

106. 4-2/1 14470 21275 19470 71275

Kh. el Burj (M)

Stronghold (10.7×13.7 m, up to 5 m in height) on moderate slope N of Naḥal 'Ada (today a cultivated area). The entrance (1.65 m wide, 2.3 m high) to the stronghold is arched, and the walls incorporate earlier building elements, including a marble fragment decorated with a lotus, and a stone, bearing traces of a carved inscription (two lines; dimensions—0.41×0.95 m, height of letters—10 cm).

Pottery: Roman, Byzantine, Early Islamic and Crusader.

107. 8-2/1 14890 21205 19890 71205

Ḥ. Bavlun

Tell Abu Hammâd; Kh. Bablûn (S)

Kh. Abu Hamad (M)

Structural remains at the semi-hemispherical edge of a low spur (spot height 44): segments of plastered floors, scatters of building stones, burnt bricks and tesserae. An oil-press pressing stone, a *ṭabun* and a square basalt grinding stone were recorded at the site.

Pottery: Roman, Byzantine and Early Islamic.

Conder and Kitchener 1881–1883, II:57, 69.

108. 9-0/1 13970 21075 18970 71075

Sedot Yam

Rectangular structure (5.6×6 m; pool?), constructed of stones and plastered inside and out, under sands that accumulated on a rock promontory on the Mediterranean coast (today W of Qibbuz Sedot Yam; the site is located within Map 48/1). A pipe, consisting of ceramic rings introduced into a hewn channel covered with stone slabs, approaches an opening in the SW corner. Apparently the pipe begins in a rectangular pool, hewn in the S arm of the rock promontory, c. 80 m SW of the structure.

Angert 1995.

109. 0-1/1 14015 21125 19015 71125

Sedot Yam

Remains of structures and a defense wall, mosaic pavements, stone slabs and architectural elements of marble and granite, on moderate slope some 300 m from the Mediterranean coast (presently in Qibbuz Sedot Yam). An excavation (M. Peleg and R. Reich, 1985, 1986) uncovered remains of buildings from the Late Roman or the early Byzantine periods (several strata), as well as headless marble statues from the Roman period, not *in situ*. Among the finds were fragments of pottery vessels from the end of the Byzantine and the beginning of the Early Islamic periods.

Peleg and Reich 1986.

110. 3–1/1 14390 21110 19390 71110

Naḥal ‘Ada (south)

Structural remains, and rock cuttings and cupmarks, on moderate slope of a sandy hill, S of Naḥal ‘Ada.

Pottery: Persian and Roman.

111. 4–1/1 14420 21125 19420 71125

Naḥal ‘Ada (south)

Scatters of building stones and potsherds in area of sand dunes S of Naḥal ‘Ada.

Pottery: Roman.

112. 5–1/1 14560 21160 19560 71160

Ḥ. Ḥidot

Kh. Hudeidūn (M)

Ancient settlement remains in sandy area S of Naḥal ‘Ada: scatters of building stones and architectural elements, including column drums and capitals.

Pottery: Byzantine.

113. 6–1/1 14620 21120 19620 71120

Naḥal ‘Ada (south)

Scatters of building stones and potsherds, as well as a *ṭabun*, on moderate slope (currently a cultivated area) S of Naḥal ‘Ada.

Pottery: Roman and Byzantine.

114. 7–1/1 14715 21180 19715 71180

Ḥ. Zaf

Kh. Sufsāfa (M)

Be’er Ḥanna

Bir es Sufsāf (S)

Small ruin (c. 2 dunams) on moderate slope S of Biq‘at Ha-Nadiv, near a spring: remains of buildings from the last few generations that incorporated ancient building elements in their walls, and a road paved with flat stones (averaging 0.4×0.6 m). An olive-oil extraction installation and a fragmentary crushing stone from an oil press were also found at the site.

Pottery: Roman, Byzantine and Early Islamic.

Conder and Kitchener 1881–1883, Maps.

115. 8–1/1 14890 21160 19890 71160

Naḥal Mishmarot

Scatters of flint implements, including hand tools, on the banks of Naḥal Mishmarot, where a water conduit traverses the stream (Menashe Region Waterworks).

Lithic finds: Lower Paleolithic.

Olami 1984:200 (Site 243).

116. 8–1/2 14890 21112 19890 71112

Esh Sheikh el Utak (S)

Maqbarat el Witaq; Esh Sheikh el Utaq (M)

Remains of an ancient Muslim cemetery on a moderate slope (today on the fringes of a cultivated area) near Nahal Mishmarot: remains of graves and scatters of *kurkar* building stones. Also at the site are remains of a building with a rounded niche (1.2 m wide) that faces S; on the plaster are traces of carvings.

Pottery: Roman, Byzantine and Early Islamic.

Conder and Kitchener 1881–1883, Maps.

117. 9–0/1 13985 21020 18985 71020

Sedot Yam (south)

Segments of a ceramic pipe (diam. of rings 0.18 m), exposed in the sand near the seashore (presently S of Qibbuḏ Sedot Yam; the site is located in Map 48/1). These may be the remains of an aqueduct that led S to Caesarea in the Roman or Byzantine periods.

An excavation was conducted by Y. Porath (IAA Archives).

118. 1–0/1 14100 21010 19100 71010

Sedot Yam (southeast)

Burial cave hewn in *kurkar* on moderate slope (currently SW of Qibbuḏ Sedot Yam).

Pottery: Byzantine.

An excavation was conducted by Y. Porath (report in preparation).

119. 1–0/2 14105 21040 19105 71040

Sedot Yam (southeast)

Tombs—some of them of masonry, others hewn in *kurkar*—on moderate slope SE of Qibbuḏ Sedot Yam (uncovered when a road was paved).

Pottery: Roman and Byzantine.

An excavation was conducted by Y. Porath (report in preparation).

120. 1–0/3 14125 21070 19125 71070

Sedot Yam (east)

Remains of a farmstead from the Roman period on moderate slope in a sandy area. Also at the site—a bathhouse and a ‘Persian-wheel’ (*saqiye*) well.

An excavation was conducted by Y. Porath (report in preparation).

121. 2–0/1 14225 21065 19225 71065

Or ‘Aqiva (south)

Scatters of flint implements and flakes (c. 450 sq m) on a *hamra* outcrop, exposed on the slope and foot of a sandy hill (spot height 46; presently S of Or ‘Aqiva, on both sides of the Tel Aviv–Haifa Highway). Among the tools collected at the site were notched arrowheads, characteristic of the Pottery Neolithic period (although pottery was not found).

Lithic finds: Epipaleolithic and Neolithic.

Olami 1984:200 (Site 240).

122. 6–0/1 14650 21030 19650 71030

Kh. eṣ Ṣaharij (M)

Remains of an ancient settlement—scatters of building stones and potsherds—spread over an extensive area on moderate slope (today a cultivated area). Marble pieces, segments of mosaic pavements, sarcophagus fragments and a tomb were recorded here in the past.

Pottery: Roman and Byzantine.

123. 6–0/2 14675 21050 19675 71050

Pardes Ḥanna–Karkur (northwest)

Scatters of building stones, potsherds, tesserae and glass fragments (c. 50×50 m) on moderate slope (presently a cultivated area NW of Pardes Ḥanna).

Pottery: Byzantine.

124. 9–0/1 14995 21095 19995 71095

Naḥal Mishmarot

Ancient cemetery—rock-hewn tombs—on moderate slope E of Naḥal Mishmarot. Some of the tombs contained sarcophagae.

References*

- 'Ad, U.
1999 Remains of 'The Incomplete Aqueduct' North of Binyamina. *'Atiqot* 38:93*–98* (Hebrew; English summary, p. 228).
- Amit, D., Hirschfeld, Y. and Patrich, J.
1989 The Aqueducts of Ancient Palestine. Jerusalem (Hebrew).
- Amit, D., Hirschfeld, Y. and Patrich, J. eds.
2002 *The Aqueducts of Israel*. (Journal of Roman Archaeology; Supplementary Series, 46). Portsmouth, Rhode Island.
- Angert, A.
1995 Caesarea Coast. *ESI* 14:138–139.
- Avi-Yonah, M.
1960 Milestones near Ma'agan Mikha'el. *BIES* 24:19–36.
1993 Caesarea; The Excavation of the Synagogue. In *NEAEHL* 1:278–280.
- Badhi, R.
1999 Tel Mevorakh. *ESI* 19:104*.
- Barag, D.
1964 An Inscription from the High Level Aqueduct at Caesarea, Reconsidered. *IEJ* 14:250–252.
- Bar-Yosef, O. and Vandermeersch, B.
1991 Kabara Cave — 1989. *ESI* 9:36.
1992 Kebara Cave — 1990. *ESI* 10:108–109.
- Conder, C.R. and Kitchener, H.H.
1881–1883 *The Survey of Western Palestine*, I–III. London.
- Di Segni, L.
1993 A Jewish Greek Inscription from the Vicinity of Caesarea Maritima. *'Atiqot* 22:133–136.
- Gorzalczany, A.
2004 'Enot Shuni. *ḤA–ESI* 116:22*–23*.

*The following abbreviations are used:

- BIES* *Bulletin of the Israel Exploration Society* (Hebrew)
ESI *Excavations and Surveys in Israel*
ḤA *Ḥadashot Arkheologiyot* (Hebrew)
ḤA–ESI *Ḥadashot Arkheologiyot–Excavations and Surveys in Israel*
IEJ *Israel Exploration Journal*
NEAEHL E. Stern and A. Lewinson-Gilboa eds. *The New Encyclopedia of Archaeological Excavations in the Holy Land*. Jerusalem 1993
ZDPV *Zeitschrift des Deutschen Palästina-Verein*

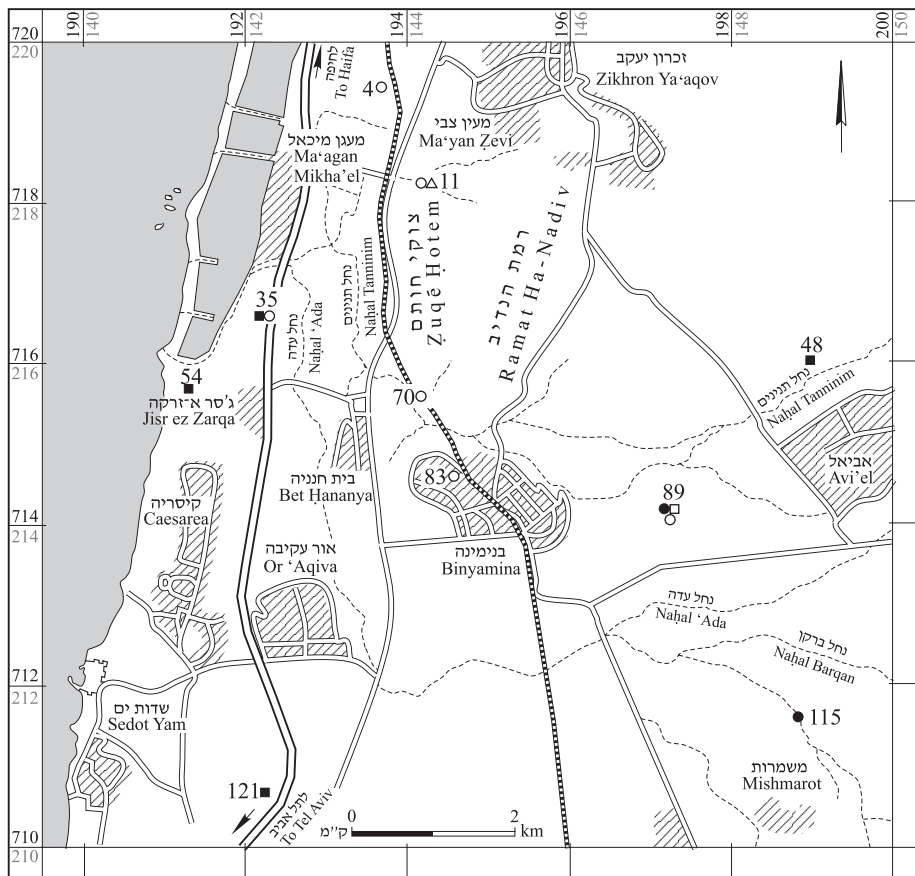
- Greenberg, R.
 1992a Ramat Hanadiv — 1989/1990; Area T, Tumulus Field. *ESI* 10:12–14.
 1992b The Tumulus Field at Ramat Ha-Nadiv. *Qadmoniot* 25:91–97 (Hebrew).
- Guérin, V.
 1874–1875 *Description géographique, historique et archéologique de la Palestine; 2: Samarie, I–II*. Paris.
- Hirschfeld, Y.
 2000 Ramat HaNadiv Excavations: Final Report of the 1984–1998 Seasons. Jerusalem.
 2002 The Aqueducts at Ramat Hanadiv and Shuni. In D. Amit, J. Patrich and Y. Hirschfeld eds. *The Aqueducts of Israel*. (Journal of Roman Archaeology; Supplementary Series, 46). Portsmouth, Rhode Island. Pp. 387–401.
- Holum, K.G. and Raban, A.
 1993 Caesarea; Identification; History; Exploration and Excavation; The Joint Expedition's Excavation; Excavations in the 1980s and 1990s, and Summary. In *NEAEHL* 1:270–272, 282–286.
- Kletter, R.
 2004 Horbat Rozez. *HA–ESI* 116:18*.
- Kochavi, M., Beck, P. and Gophna, R.
 1979 Aphek–Antipatris, Tel Poleg, Tel Zeror and Tel Burga: Four Fortified Sites of the Middle Bronze Age IIA in the Sharon Plain. *ZDPV* 95:121–165.
- Levine, L.I. and Netzer, E.
 1993 Caesarea; Excavations in the 1970s. In *NEAEHL* 1:280–282.
- Linder, E.
 1993 Ma'agan Mikha'el (The Shipwreck). In *NEAEHL* 3:918–919.
- Lipkunsky, D.
 2000 Or 'Aqiva (East). *ESI* 20:37*.
- von Mülinen, E., Graf
 1908 *Beiträge zur Kenntnis des Karmels*. Leipzig.
- Negev, A.
 1964 The High Level Aqueduct at Caesarea. *IEJ* 14:237–249.
 1966 New Inscriptions from the High Level Aqueduct of Caesarea. *BIES* 30:136–141.
 1972 A New Inscription from the High Level Aqueduct at Caesarea. *IEJ* 22:52–53.
- Negev, A. and Frova, A.
 1993 Caesarea; Excavations in the 1950s and 1960s. In *NEAEHL* 1:272–278.
- Olami, Y.
 1984 *Prehistoric Carmel*. Jerusalem and Haifa.
- Olami, Y. and Peleg, J.
 1975 The Aqueducts of Caesarea. *Qadmoniot* 30–31:83–86 (Hebrew).
- Peilstöcker, M.
 1999a Zikhron Ya'aqov, Nevé Remez. *HA–ESI* 110:30*–31*.
 1999b Or 'Aqiva. *HA–ESI* 110:35*.
 2000 Zikhron Ya'aqov, Nevé Remez. *HA–ESI* 111:30*.

- Peleg, J.
 1989 The Water System of Caesarea. In D. Amit, Y. Hirschfeld and J. Patrich eds. *The Aqueducts of Ancient Palestine*. Jerusalem. Pp. 115–122 (Hebrew).
 2002 The Dams of Caesarea's Low-Level Aqueduct. In D. Amit, J. Patrich and Y. Hirschfeld eds. *The Aqueducts of Israel* (Journal of Roman Archaeology; Supplementary Series, 46). Portsmouth, Rhode Island. Pp. 141–148.
- Peleg, M. and Reich, R.
 1986 Caesarea (Sedot Yam). *ESI* 4:16–17.
- Porath, Y.
 1990 Tel Tanninim, Aqueduct. *ESI* 7–8:175.
 1994 Caesarea, the High Aqueduct (Jisr ez-Zarqa). *ESI* 12:28–29.
 1997 'Enot Shuni (East), Caesarea Aqueduct. *ESI* 19:26*–27*.
 2002a The Aqueduct to Tel Tanninim. *HA–ESI* 114:111*.
 2002b The Water Supply to Caesarea: A Re-assessment. In D. Amit, J. Patrich and Y. Hirschfeld eds. *The Aqueducts of Israel* (Journal of Roman Archaeology; Supplementary Series, 46). Portsmouth, Rhode Island. Pp. 105–129.
- Porath, Y. and Neeman, Y.
 1989 The Aqueduct to Tel Tanninim. *HA* 94:31–32 (Hebrew).
- Porath, Y. and Yankelevitz, S.
 1991 Caesarea, the High Aqueduct. *ESI* 9:130–131.
- Prausnitz, M.W.
 1969 A Station near Ma'agan Mikha'el. *Mitekufat Haeven* 9:15–17 (Hebrew).
- Raban, A.
 1993 Maritime Caesarea. In *NEAEHL* 1:286–291.
- Schick, T.
 1993 Kebara Cave. In *NEAEHL* 3:852–855.
- Siegelmann, A.
 1970 Herodian Columbarium near Ma'agan Mikha'el. *'Atiqot* 6:70–73 (Hebrew; English summary: p. 7*).*
 1975 A Byzantine Mosaic Floor with Inscriptions at Caesarea. *Qadmoniot* 31–32:87–89 (Hebrew).
 1992 Roman and Byzantine Remains in the Northern Coastal Plain. *'Atiqot* 21:63*–67* (Hebrew; English summary: p. 178).
 1994 Upper Nahal Tanninim, Aqueducts. *ESI* 12:29–30.
- Stern, E.
 1993 Mevorakh, Tel. In *NEAEHL* 3:1031–1035.
- Stieglitz, R.R.
 1998 A Late Byzantine Reservoir and Piscina at Tel Tanninim. *IEJ* 48:54–65.
- Tsafrir, Y., Di Segni, L. and Green, J.
 1994 *Tabula Imperii Romani; Iudaea o Palaestina; Eretz Israel in the Hellenistic, Roman and Byzantine Periods; Maps and Gazetteer*. Jerusalem.
- Yannai, E.
 1997 Horvat Rozez. *ESI* 16:67–68.

Maps According to Periods

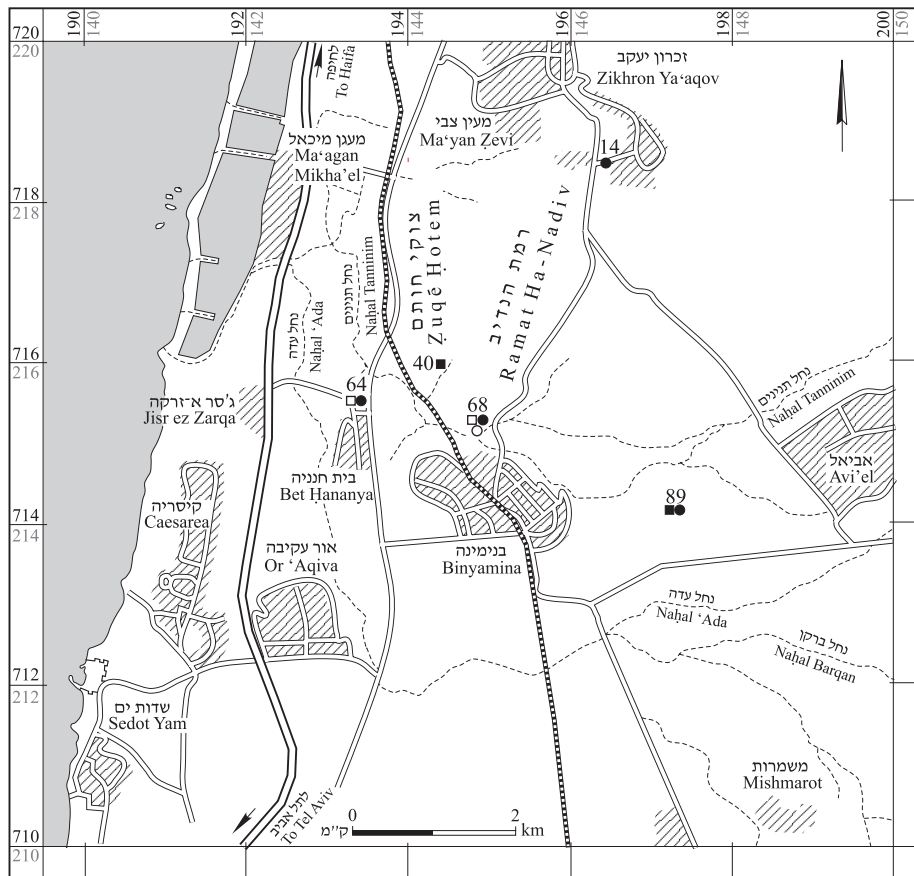
Map 1 מפה

- | | | |
|--------------------|---|----------------------------|
| Lower Paleolithic | ● | התקופה הפליאוליתית התחתונה |
| Middle Paleolithic | ○ | התקופה הפליאוליתית התיכונה |
| Upper Paleolithic | △ | התקופה הפליאוליתית העליונה |
| Neolithic | ■ | התקופה הניאוליתית |
| Chalcolithic | □ | התקופה הכלקוליתית |



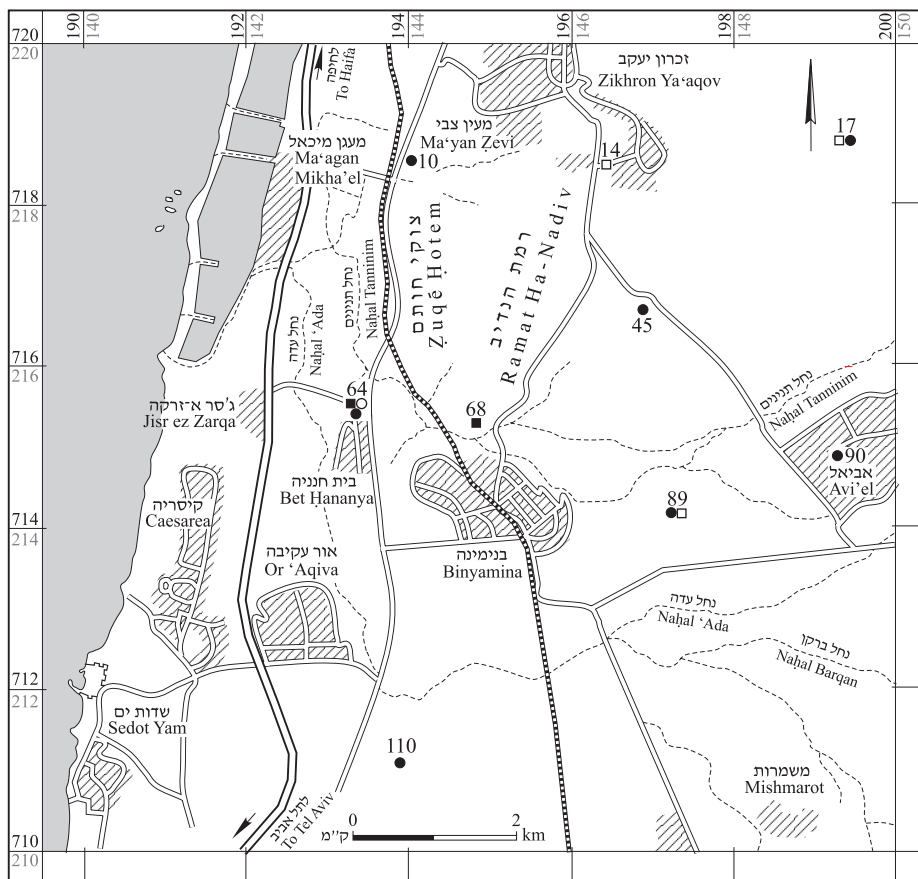
Map 2 מפה

- | | | |
|------------------|---|--------------------------|
| Early Bronze | ■ | תקופת הברונזה הקדומה |
| Middle Bronze I | ○ | תקופת הברונזה התיכונה א' |
| Middle Bronze II | ● | תקופת הברונזה התיכונה ב' |
| Late Bronze | □ | תקופת הברונזה המאוחרת |



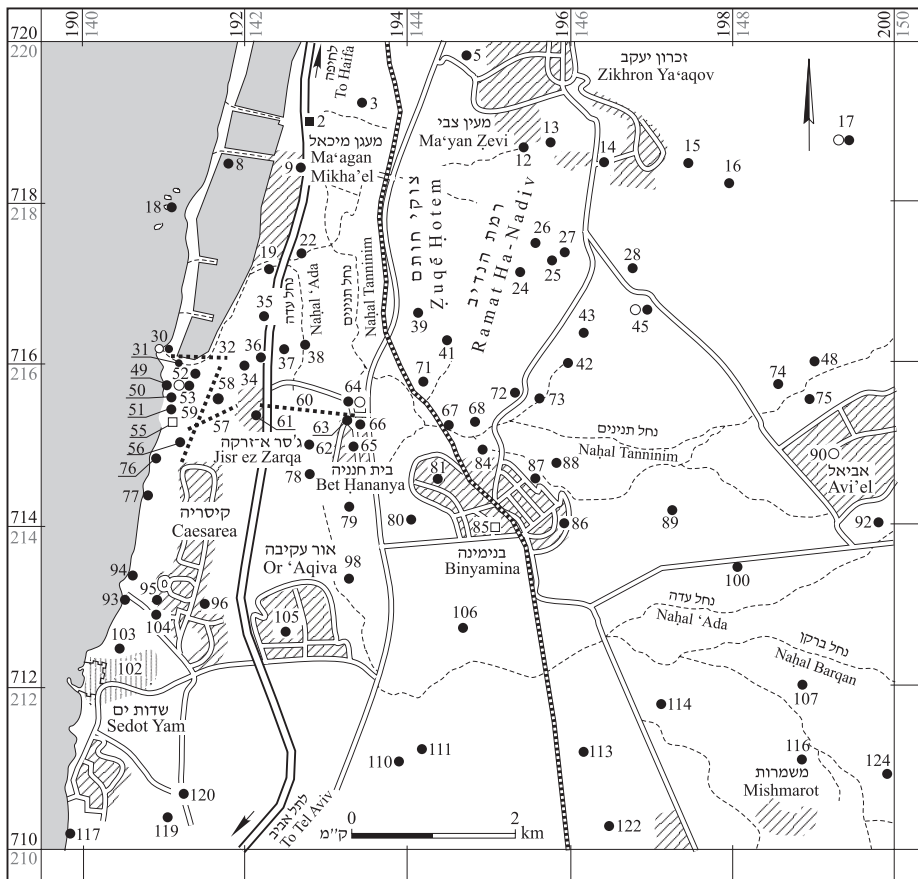
Map 3 מפה

- Iron □ תקופת הברזל
- Iron I ○ תקופת הברזל א'
- Iron II ■ תקופת הברזל ב'
- Persian ● התקופה הפרסית



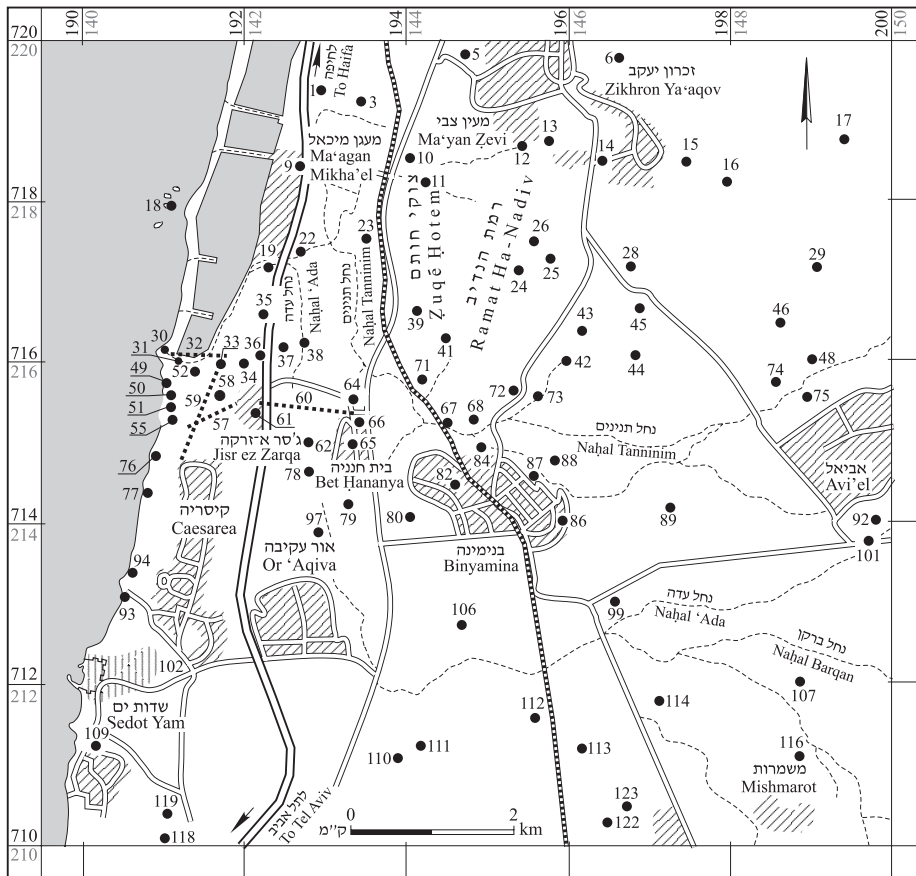
Map 4 מפה

- | | | |
|-------------|---|-----------------------|
| Hellenistic | ○ | התקופה ההלניסטית |
| Roman | ● | התקופה הרומית |
| Early Roman | ■ | התקופה הרומית הקדומה |
| Late Roman | □ | התקופה הרומית המאוחרת |



Map 5 מפה

Byzantine ● התקופה הביזנטית



Map 6 מפה

- | | | |
|---------------|---|------------------------|
| Early Islamic | ● | התקופה האסלאמית הקדומה |
| Crusader | ○ | התקופה הצלבנית |
| Mamluk | ■ | התקופה הממלוכית |
| Ottoman | □ | התקופה העות'מאנית |

