Caesarea Maritima – A View from Outside: The Periphery of the Roman and Byzantine Metropolis

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Life and afterlife coexisted in the periphery of Caesarea Maritima the metropolis of the province Judaea, later Syria Palaestina and Palaestina Prima. This paper offers a view on the different activities, which have taken place in the outskirts of Caesarea in about a radius of 15 km from the city-walls. We will focus on the city's necropoleis, wasters, suburb mansions, stone quarries, agricultural installations, water supply and watermills.

Necropoleis

The cemeteries of Caesarea are scattered from the Hadera Stream to *Crocodileon Flumen* (Tanninim Stream) with concentration in close proximity to the city's walls (fig. 1d).[1]

Remains of a 1st century hypogeum with evidence of secondary burial by collecting of bones, a known Jewish practice, was exposed southeast of the city.[2] A number of 3rd to 7th century Jewish funerary inscriptions, which were found scattered in this district[3], suggest a continuous ownership of cemeteries in the area by the Jewish community of Caesarea.

The best Caesarean example of walled cemetery was found next to the Herodian city's south fortification, where inhumation and cremation were practiced between the late 1st and early 3rd century.[4] Deceased were buried in cists built of stone slabs or within urns, mainly of reused pottery vessels. Stepped pyramidal and pillar like stelae of local sandstones were built atop the cists, and inscribed marble gravestones, in Latin and Greek, were attached to their upper-face (fig. 1a).[5]

The fragmentary marble sarcophagi found along the road leading from Caesarea to Flavia Neapolis/Shechem indicate that in Caesarea, like in other cities, burial in roadside cemeteries was practiced. The only excavated burial of this cemetery is the 2nd century mausoleum, where an almost intact lid with gorgoneia and fragments of a marble garland-sarcophagus were found (fig. 1b).[6]

Marble sarcophagi were favored by the wealthiest Caesareans; other Caesareans who wished to be buried in a coffin and could not afford a marble sarcophagus sufficed with local stone or wooden coffins.[7] From 3rd to 4th century on the custom of burying in lead coffins also reached Caesarea and was practiced by certain pagans and Christians alike.[8]

Other walled cemeteries, dating from 2nd to 4th century, are situated northeast of the city (fig. 1d).[9] The graves in these cemeteries were arranged in clusters, where the deceased were laid directly on the cists' floor or within local stone sarcophagi, which were placed inside the cists (fig. 1c). Remains of cremated infants and fetuses were

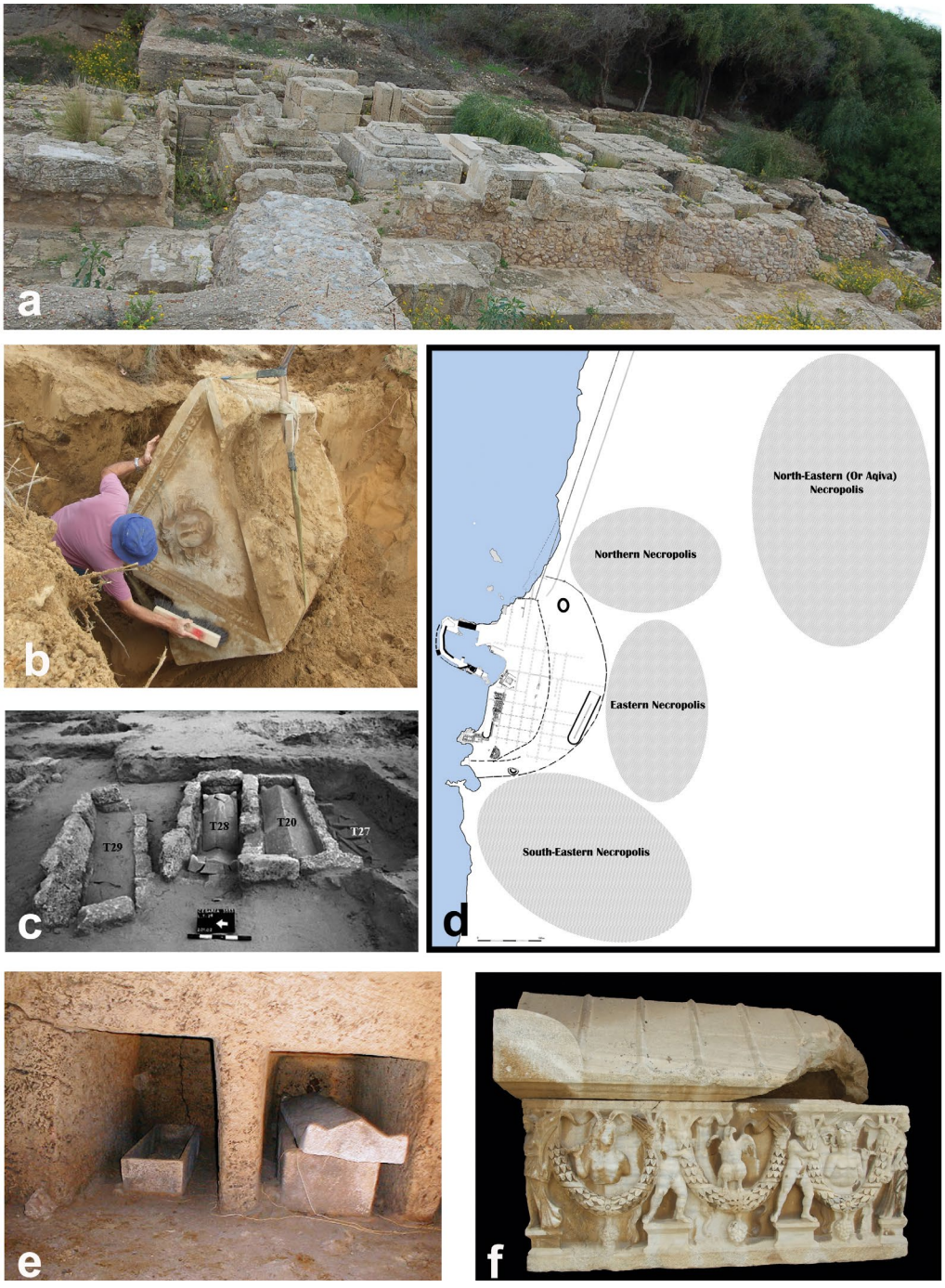

Fig. 1: Necropoleis: (a) Roman cemetery, next to Herodian south fortification. (b) Marble sarcophagus lid, mausoleum next to the road. (c) Northern necropolis, burial cluster. (d) Caesarea necropoleis, map. (e) Roman hypogeum with limestone sarcophagi, Taninim Reservoir area. (f) Garland sarcophagus, Tel Mevorakh mausoleum.

found in two of the burial clusters. Fragments of funerary inscriptions indicate that also in this cemetery funerary stelae were built atop cists. One Greek epitaph, bearing a cross, shows that Christian families were also buried in this cemetery.[10] The possibility that a cluster – or more than one – was owned by a certain family is suggested by a partially preserved inscription declaring that "It is permitted to all my descendants to be buried nearby". The find spot of the inscription in Caesarea is unknown.[11]

Numerous hypogea with loculi or arcosolia and mausolea were excavated or surveyed in the surroundings of the city (fig. 1e). One, a 3rd to 4th century hypogeum, is associated with the Samaritan community[12]; others apparently served Pagans and Christians.[13] In most cases the hypogea and mausolea were part of a larger burial ground, which includes cist tombs, either cut in bedrock or built of ashlars, with or without sarcophagi.[14] A good example is the Tel Mevorakh necropolis, situated next to the High Level aqueduct leading water to Caesarea, where late Roman arcosolia and cist tombs were found in proximity to a remarkable mausoleum. Two ornamented marble sarcophagi – stylistically dated to the 2nd and 3rd centuries – were found in this mausoleum, together with several undecorated and partly broken ones (fig. 1f).[15]

City Wasters

From the excavations within Caesarea and its vicinity it becomes clear that the city's refuse was widely reused either as construction-fill for public and private buildings or as land reclamation (see below). Broken pottery, empty amphorae, animal bones, debris from demolished buildings etc. were reused in different ways, particularly for constructions and crafts.[16]

That the dealing with refuse was a rather complicated issue is deduced from the 2014 excavation at an area about 60 m south of Caesarea's late antique fortification, where dumped refuse layers were found within enclosures of ashlar walls (fig. 2a, b). The area – about 3,600 m^2 – was operated continuously from the late 2nd to the 6th century as an organized dumping ground. The nature of the dumped refuse from the enclosures indicates that the refuse was sorted at least once. All that could be useful for construction and crafts, such as large rubbles, long animal's bones, metals, glass, large potsherds and complete but cracked pottery vessels was taken for recycling. The rest was left within refuse-enclosures till the organic components decomposed, then the refuse became suitable for use as foundation fill, land reclamation and for other purposes. The fragments of local and imported pottery of all kinds, glass, metals, bones and roof-tiles, found within the deposits[17], point to the domestic nature of the refuse. In contrast, the port refuse (wasters not yet found), as the unpublished 5th century fills in the western façade of the platform of the Augustus and Roma temple, like in the Monte Testaccio dump in Rome, is comprised of more than 90% of broken amphorae.[18]

Scholars suggest that in Rome refuse collection, disposing and reusing were done by private contractors – *stercorarii*, probably under supervision of officials known as *quattuoviri viarum curandarum*.[19] It is not unlikely that the same system operated in Caesarea, not only in the area mentioned but also in other extensive areas next to the flourishing city.

Toward the 7th century the organized refuse collecting ceased to function. Instead the waste was thrown over the city walls or piled within buildings that went out of use, as happened in and near the amphitheater at the northeast part of the city (fig. 2c).[20]

Suburban Mansions

Several late antique upper class suburban palaces and villas provided their owners and guests with the pleasures, which the countryside could offer within sight of Caesarea. So far only five such extensive and luxurious mansions have been found, of which four were partially excavated (fig. 3a).

The first to be discovered is the 'Bird Mosaic' complex located on top of a sandstone ridge (fig. 3c). The complex covered an area of about 1,650 m² (50 × 33 m). All excavated parts of this mansion are covered with mosaics mainly multicolored; the one in the courtyard is decorated with bird medallions (fig. 3b).[21] The mansion had two stories with living rooms, triclinia, service facilities, courtyards, a private bath (as evinced by the water installation) and probably also a private chapel. The unique gold-glass mosaic sigma tabletop uncovered in the mansion demonstrates well how luxurious the mansion was and how wealthy his owners were.[22]

Additional a palatial residence – the 'Harvest Blessings' mansion – is situated in the eastern suburb of Caesarea, in a distance of about 300 m from the 'Birds Mosaic' mansion[23], and occupied an area of approximately 2,300 m² (65 × more than 35 m). The excavated parts include a sizable chapel, living rooms, courts and other compartments whose function is not entirely clear (fig. 3d). The rooms were richly decorated with multicolored mosaics and mural paintings (fig. 3e). Numerous fragments of marble slabs found during the excavations indicate that opus sectile floors and/or marble walls lining were decorating parts of the complex.[24]

Remains of an additional complex were found about 600 m northwest of the 'Harvest Blessing' mansion. The excavated area of this mansion consists of a well-preserved private bath with a circular piscina and small parts of other expenses (fig. 4a, b).[25] Unlike Horton who identified the complex as a public bath[26], other scholars see it as a private dwelling.[27] The complex was generally dated to ca. 550–640; recent excavation of the mansion water supply, conducted by one of the authors, confirmed that the complex was erected during the 6th century.

Not far from this complex – north to the city's late antique fortification – another complex was partly excavated by G. Edelstein, who suggested that the remains are of

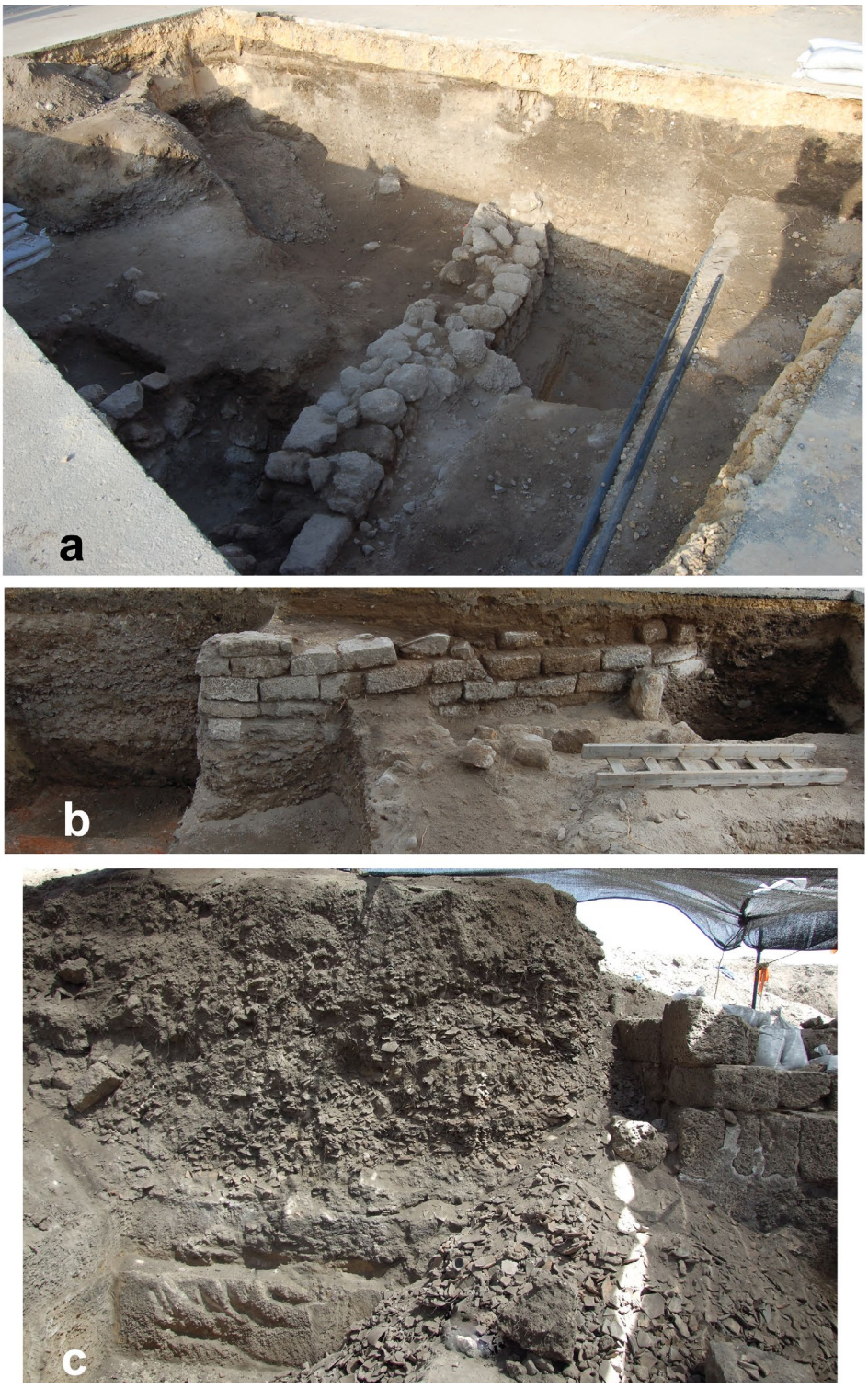

Fig. 2: City wasters: (a–b) Waster ground enclosures, south of the Late Antique fortification. (c) City waste damping within the amphitheater.

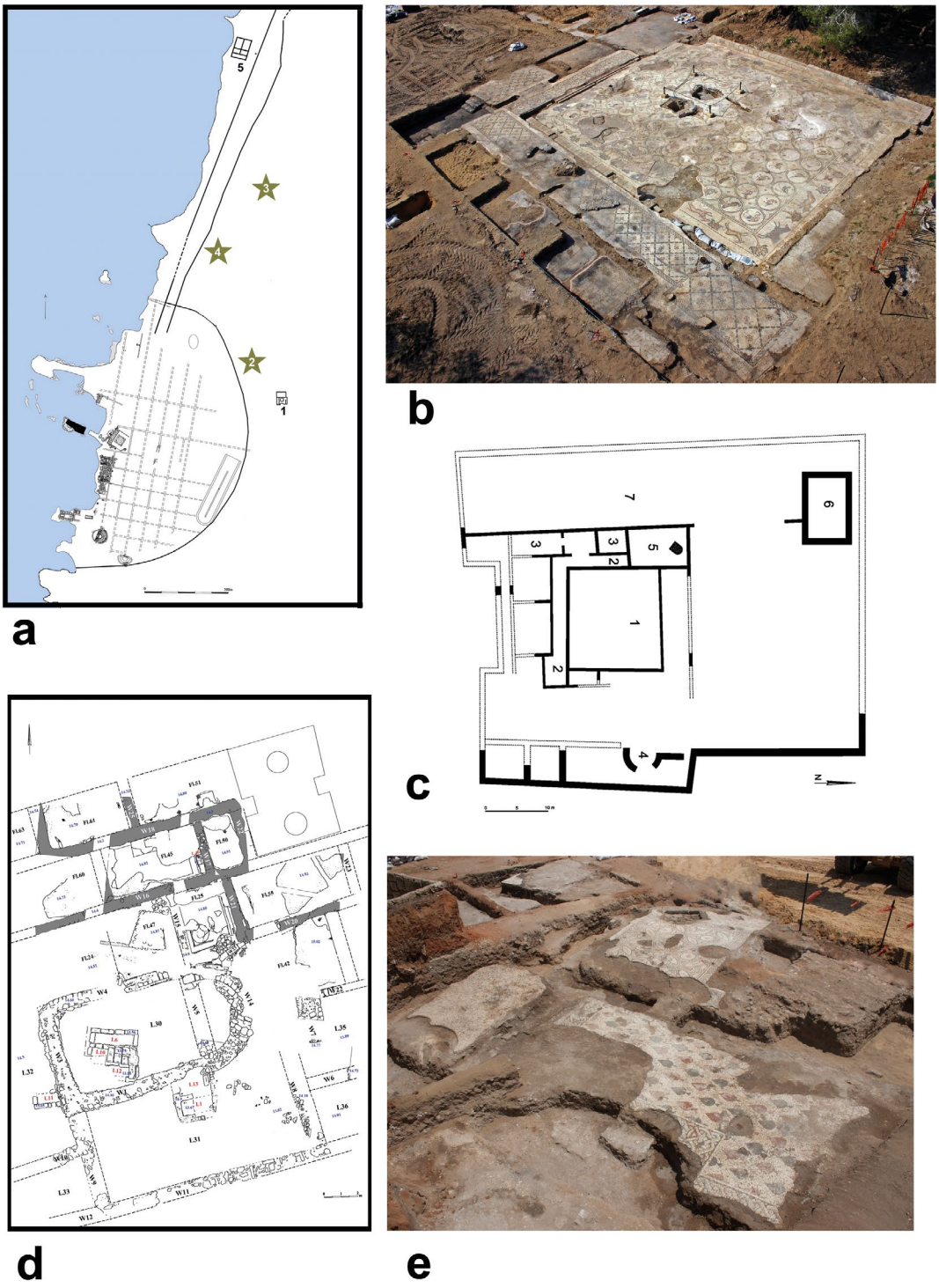

Fig. 3: Suburban Mansions: (a) Caesarea Suburb Mansions, map. (b–c) ‚Bird Mosaic' mansion: (b) Plan. (c) Aerial view. ‚Harvest Blessing' mansion: (d) Plan. (e) Mosaic floors, northern wing.

either a public or private bathhouse.[28] Yet the possibility that the large elliptic hall, the room or rooms attached to it on the north – all paved with colored mosaics – and the marble bases and columns uncovered in the hall, are the remains of a private mansion should not be ruled out (fig. 4c, d).

The ‚Tell Tadwira' mansion located on top of the sandstone hill facing the seashore – about 1.5 km north of Caesarea – was only surveyed.[29] This rather impressive complex has the remains of two monumental stairways one at the south and the other on the north (fig. 4e, f). On top of the hill there are remains of walls, mosaic and marble floors, and pools or water cisterns.

In the Roman period suburban mansions located in range of visibility from a city were common in many parts of the Roman Empire, including Caesarea, Apollonia-Arsuf and Bet Govrin in the Province of Syria Palaestina.[30] In Late Antiquity, on the other hand, suburban mansions were generally uncommon. The 6th century suburb villa near Amorium in Phrygia, Asia Minor, mentioned in the Life of St. Theodore of Sykeon[31] is one of the few examples known from this period. It had a private chapel like the 'Harvest Blessings' and probably also the 'Bird Mosaic' mansion in Caesarea. The phenomenon of contemporary existence of four or more palatial mansions in distance of visibility from the city and from each other can only be explained by the fact that the owners were high administrative and/or cleric officials of the province stationed in its capital city Caesarea.

Quarries

Despite the substantial use of imported marbles and decorative stones the main building material used in Caesarea was the local calcareous sandstone. The sandstone quarries spread along the ridges from the Hadera stream in the south to the border of the Roman province Phoenicia in the north. The archaeological record provides little evidence about sandstone quarry management. The large sized quarries, the uniform measures of the quarried blocks in each one, suggest municipal ownership and operation (fig. 5a)[35], yet also private enterprise under municipal concession or private ownership and operation should not be ruled out.

The limestone quarries located on the slopes of Mount Carmel and on the western edge of the hills of Samaria (fig. 5b) supplied Caesarea with stone harder than the sandstone. The limestone was more suitable for architectural members and decoration, including sculpture, as well as street and public squares paving. The extent of limestone quarries also suggests municipal ownership.[33]

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Agriculture

Caesarea Maritima controlled a large *territorium*, which included extensive agricultural hinterlands in the Sharon Plain and south of Mount Carmel. However, evidence of agricultural production was also found in the proximity to the city. The remains of an early Roman winepress, for example, were exposed a few hundred meters to the east of the contemporary city wall.[34] This accords with the mention of a "winepress of Caesarea" in Tosefta (Tosefta Ahilot 18:13) even though the written evidence is much later.

The remains of the large Byzantine agricultural complex discovered about 2 km to the northeast of the city, is another meaningful example.[35] It includes a system of irrigation channels, which were operated from a shallow well and a large circular pavement (19 m in diameter), which most likely functioned as threshing floor (fig. 6). To fertilize the soil, an extensive area around the site was covered with a layer of dark soil that came from the city wastes. Such an elaborate and sizeable system suggests that the facility was owned and operated either by the municipality, or by one of the wealthy citizens of Caesarea. Additional agricultural plots, with soil fertilized with city waste, were exposed to the north and east of the late antique walls of the city.[36]

Considering the size of the population of Roman and Byzantine Caesarea (up to 50,000 or more) the evidence available today of the agricultural activities in the city's proximity is undoubtedly but a small fraction of what actually was.

Water Supply

Based on the excavations in the southwestern zone of the city, wells and water cisterns were the only source of water supply until the first third of the 1st century CE. Since then an elaborate system of three aqueducts were created to supply Caesarea with water (fig. 7a).[37]

The High-level aqueduct is the earliest and the most complex system among the three. It reached the *castellum* – the distribution pool next to the Herodian city wall – and supplied the city with good quality drinking water.[38] The high-level aqueduct consists of two main channels, A and B, whose primary water source was the ʿEin Shuni spring on the southern slopes of Mount Carmel. During the late Roman and early Byzantine period, two sources, higher other water than the ʿEin Shuni one, were added to the system (springs of the Tanninim Stream and ʿEn Zur). At its peak, the high-level aqueduct carried water to a distance over than 14 km.

Channel A – with estimated flow rate of 650–325m³/hour – was most probably built during the second quarter of the 1st century CE (fig. 7b). Channel B – with an estimated flow rate of 750m³/hour – was added alongside channel A during Hadrian's reign, as is well attested by no less than eleven inscriptions (fig. 7c).

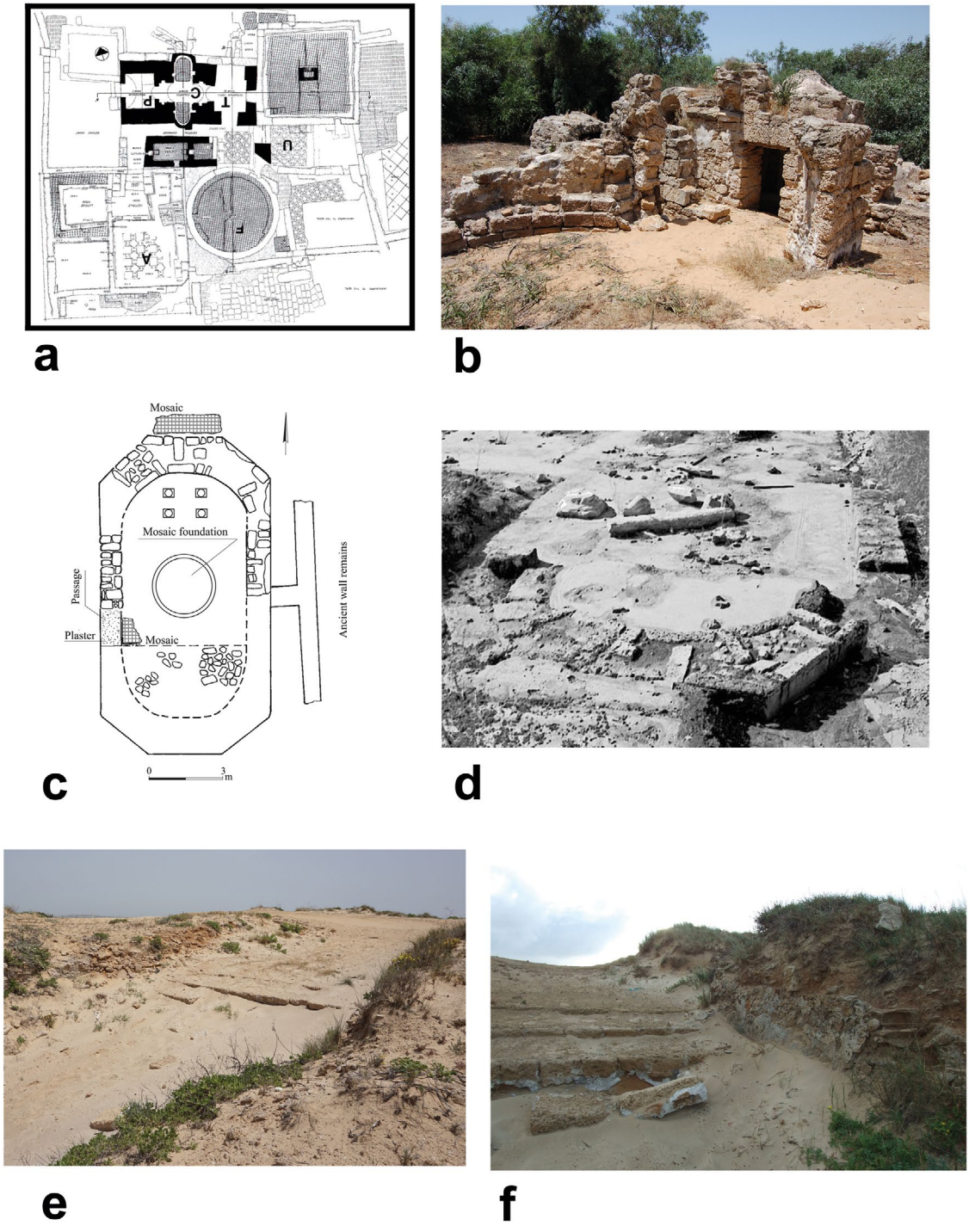
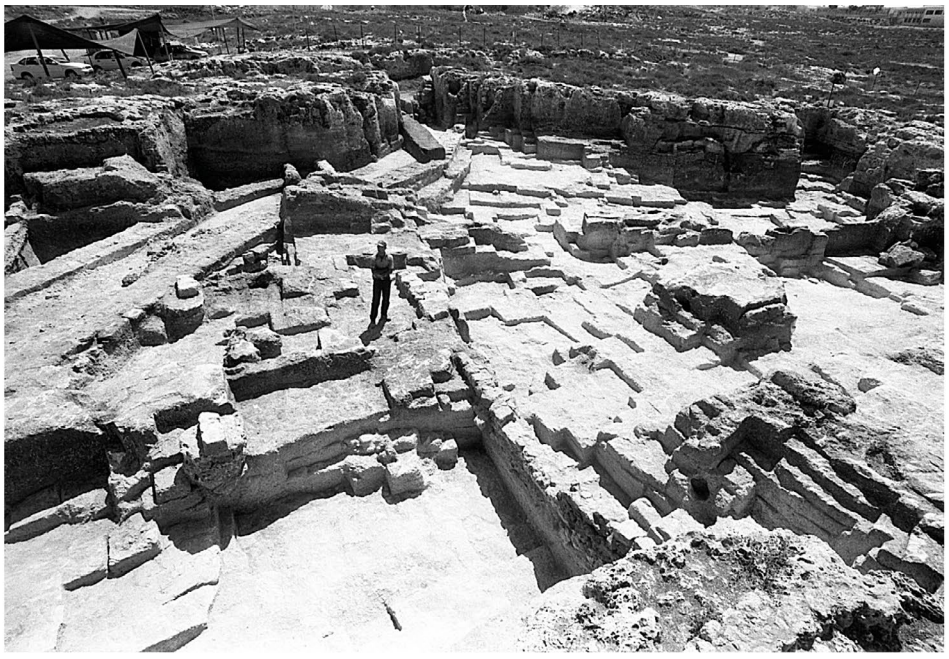


Fig. 4: Suburban Mansions: (a) Plan. (b) Mansion with private bath after Horton 1996. (c–d) Mansion? after Edelshtein 2007. (e–f) Tell Tadwira' mansion, southern and western stairways.



a

b

Fig. 5: Quarries: (a) Sandstone quarry, Tanninim Reservoir area. (b) Limestone quarry, western slopes of Mount Carmel.

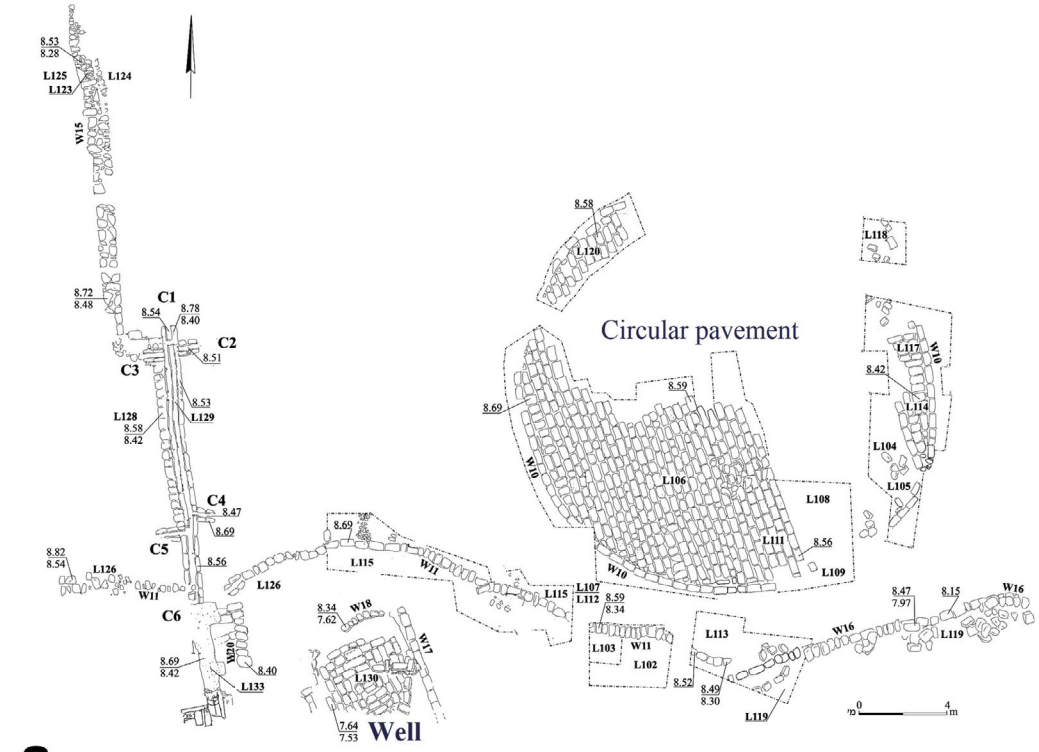


Fig. 6: Agricultural Installations: (a) Plan. (b) Agricultural complex east of Caesarea.

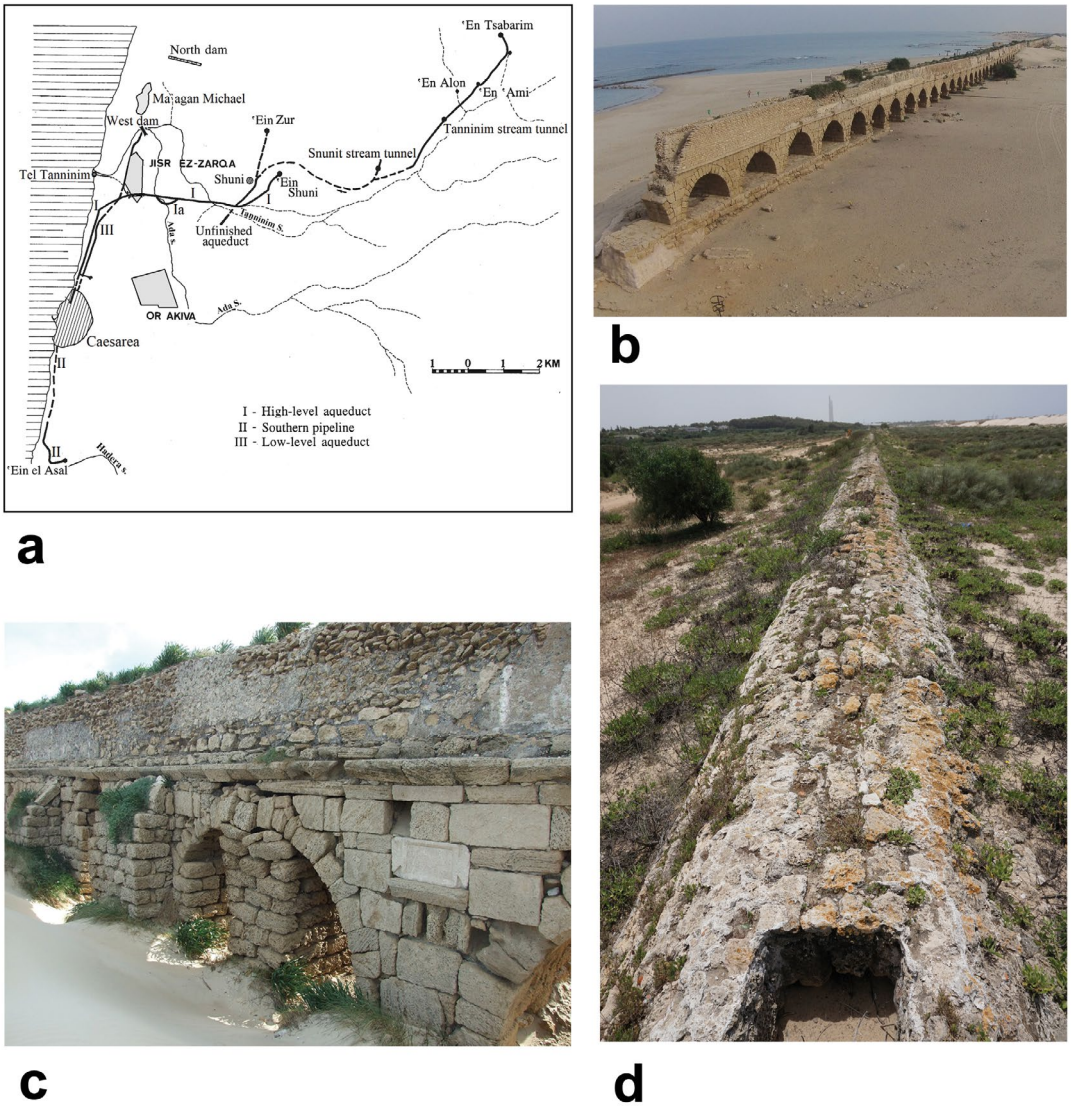


Fig. 7: Water Supply: (a) Caesarea aqueducts, map. (b) High Level Aqueduct Channel A. (c) High Level Aqueduct Channel B. (d) Low Level Aqueduct.

The eastern parts of the high-level aqueduct were constructed as ground channels, either laid upon solid foundations or cut into the bedrock. The western parts along the costal lowlands were built upon arches.

In the end of the 3rd century or later a bypass (Channel D; fig. 7a: Ia) was added to Channel A after the section passing through the marshy land, which the Tanninim stream created, began to sink and leak in several points. As for Channel B, the very same problem was solved, in the end of the 4th century or later, by inserting three terracotta pipes into the channel; the pipes (Channel C1) supplied Caesarea with an estimated flow rate of 64.8m³/hour. Later, probably during the 6th century, the pipes of Channel C1

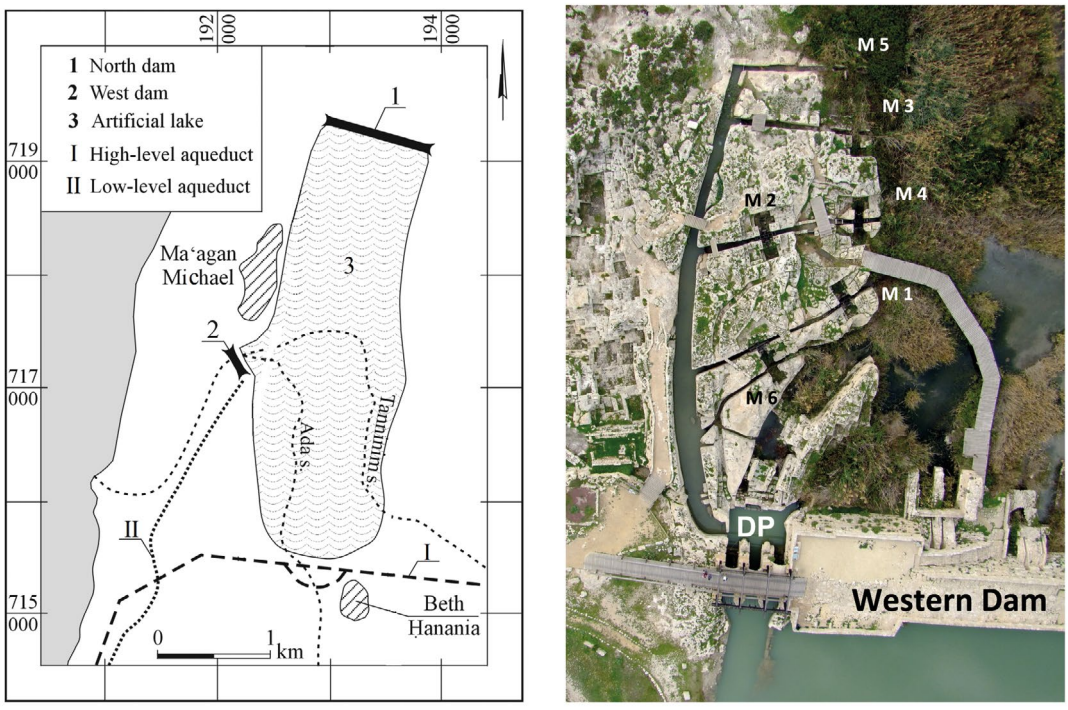


Fig. 8: Water Supply and Water Operated Flour Mills: (a) Tanninim reservoir, map. (b) Flour mills, aerial view.

ceased to function and a new Channel C2 – with an estimated flow rate of 130m³/hour – was constructed atop. Channel C2 was fed from water sources topographically higher than the previous sources and supplied the Caesareans with water that reached the city at a height of one meter more than previously possible.

The south pipeline (fig. 7a: II), a single terracotta pipe, was the second system that supplied water to Caesarea. It began at the 'Ein el-'Asal spring on the mouth of the Hadera stream and dated to the late Roman or the Byzantine period. The pipeline, protected by thick concrete casing, ran northward along the low Mediterranean seashore and reached the city from the south. Three control basins were observed along its route.[39]

The third system that supplied water to Caesarea was the low-level aqueduct, which received the water from the Tanninim reservoir (fig. 7a: III). During the 4th century, an artificial lake located 3.5 km north of Caesarea, was created (fig. 8a). The lake covered an area of about 6 km². Local springs and two streams supplied water to the lake. To raise the water level up to 2.5 m, two massive dams were constructed. The northern dam was blocking a 900 m long gap between the foot of Mount Carmel and the sandstone ridge parallel to the Mediterranean coast; the western dam was constructed within the 190m gap created by the Tanninim and the Ada streams in the sandstone ridge (fig. 8a). The dams were built of Roman concrete dressed with

ashlars. Original wooden frames that were used in the construction of the western dam were uncovered during the excavation.[40] A tripled floodgate passage was cut through the bedrock next to the southern end of the western dam. It was operated by means of wooden gates; the remains of which were exposed during the excavation. The water flowed through the passages into a distribution pool and from there it was distributed to the low-level aqueduct and to the flour mills.

The northern section of the low-level aqueduct was cut into the bedrock and covered with concrete vault ceiling (fig. 7d). The southern section was entirely built of concrete. It is not clear how the brackish water supplied by the low-level aqueduct was used.

Water Operated Flour Mills

The six flour mills activated by the Tanninim artificial lake were hewn and built to the west of the western dam during the Byzantine period (fig. 8b).[41] Each was operated from the distribution pool by a feeding channel. The water activated a vertical wheel, which rotated two pairs of Pompeian type millstones made of basalt by means of cogwheels system (not preserved). The use of Pompeian type millstones in the water-operated flour mills at the Tanninim lake is unique and not reported from any other similar devices.[42] The twelve Tanninim lake millstones, which likely operated around the clock and supply most of the daily flour needs of the approximately 50,000 citizens of Caesarea, were undoubtedly a profitable public enterprise.

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Notes

[1] Gendelman – Gersht forthcoming.

[2] Porath 2007, 46–47; Porath 2008, 1660.

[3] CIIP II, Nos.1445. 1467. 1494. 1499. 1504. 1525. 1554. 1657. 1674.

[4] Porath 2000, 37*; Porath 2008, 1660.

[5] CIIP II, Nos.1434. 1436. 1444. 1531.

[6] Gendelman – Gersht forthcoming.

[7] On bronze handles from wooden coffins discovered in the early Roman period hypogeum, see Bahat 1966, 16.

[8] Rahmani 1988, 246–248; Rahmani 1999, 90–93 nos.16–23 pls. 9–12.

[9] Avner – Gendelman 2007; Gendelman forthcoming.

[10] Lehmann – Holum 2000, No. 212; CIIP II, No.1533.

[11] Lehmann – Holum 2000, No.143; CIIP II, No.1613.

[12] Porath 2007, 50.
[13] E.g. Bahat 1966; Siegelmann – Ne'eman 1992; Siegelmann 1992, 64–66; Haiman 2009; Sa'id 2012; Gendelman – Massarwa 2011, figs. 3–5.
[14] E.g. Siegelmann 1992, 64–66; Lipconsky 1998; Pelistöcker 1999; Nagorsky 2003, Porath 2007, 48; Gendelman – Massarwa 2011, figs. 3–5. 11.
[15] Stern 1978, 10 f. pls. 4. 5.
[16] Peña 2007, 119–208.
[17] For similar refuse deposits from all around Roman Empire cf. Peña 2007, 279–282.
[18] Peña 2007, 229–306.
[19] Panciera 2000, 103–105; Peña 2007, 278 f.
[20] For similar practice in diverse sites cf. Peña 2007, 283 note 9.
[21] Reich 1985; Porath – Gendelman – Gorin-Rosen 2007, 118–133.
[22] Porath – Gendelman – Gorin-Rosen, 125–127.
[23] Avi-Yonah 1973, 9; Siegelman 1974; Gendelman forthcoming.
[24] Gendelman forthcoming.
[25] Horton 1996.
[26] Horton 1996, 189.
[27] Hirschfeld 1997, 46 f.; Porath – Gendelman – Gorin-Rosen 2007, 137.
[28] Edelstein 2007, 58.
[29] Everman 1992, 183 f. fig.1.
[30] Porath 2008, 1660; Roll – Tal 2008; Vincent 1922.
[31] Ellis 1988, 569 note 33.
[32] Gendelman – Massarwa 2011, fig. 11; Sa'id 2011; 2012; 2016.
[33] E.g. Olami – Sander – Oren 2005, Site 15.
[34] Gendelman 2011.
[35] 'Ad 2009.
[36] Porath – Gendelman – Gorin-Rosen 2007, 123. 136; Nagorsky 2003.
[37] Porath 2002.
[38] Porath 2002; Porath – 'Ad 2015.
[39] Porath 1990.
[40] Sa'id – 'Ad 2004; Porath – 'Ad – Sa'id forthcoming.
[41] Oleson 1985; Sa'id – 'Ad 2004.
[42] 'Ad – Sa'id – Frankel 2005.

Image Credits

Photos: P. Gendelman (figs. 1a. b. f; 2a. c; 3e; 4e. f, 5b; 7b. d); T. Sagiv (figs. 1c. e; 5a; 6b); V. Asman (fig. 6a). – Maps and plans: A. Iamim and P. Gendelman (figs. 1d; 3a); R. Mishaev (fig. 3b); A. Aj'an (fig. 3d); Courtesy of the Israel Antiquities Authority (figs. 7a; 8a). – Aerial view: Skyview, Courtesy of the Israel Antiquities Authority (figs. 3b; 8a. b).

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