'Atiqot 107, 2022

The Early Bronze Age Site of Ashqelon Afridar, Area N

Amir Golani

Introduction

The EB I settlement at Ashqelon Afridar is situated near Israel's southern coast, within the confines of modern Ashqelon, in a natural trough created by two long, wide and low *kurkar* ridges that ran parallel to the coastline. Within this area existed an ecological niche with fertile soils, a high groundwater table and varied flora and fauna, which served as a distinct 'subsistence area' for agriculture (Gophna 1997) where the high water table was exploited by digging shallow wells (Gophna and Liphschitz 1996:145; Nir 2008). Moreover, Ashqelon Afridar's location on the western side of a break in the sand dunes to its east, offered access from the inland regions to the coast, making Ashqelon an important *entrepôt* for maritime and land trade throughout EB I (Gophna 2002; Golani 2014b). Such maritime trade with Egypt along the Mediterranean coast in this period is supported by Nilotic shells retrieved from a typical EB I juglet found off the coast of 'Atlit (Sharvit et al. 2002). At the beginning of EB II, c. 2900 BCE, new climatic conditions, such as increased precipitation, the rising of groundwater levels and the formation of marshlands due to inadequate drainage, apparently caused this region, and much of the coastal plain in Israel, to be widely abandoned (Faust and Ashkenazy 2009; Ackerman et al. 2019).[1]

Since 1990, the modern city's intensive development became the incentive for rescue excavations and extensive mechanical test trenching, revealing a large and sporadic settlement extending from Tel Ashqelon in the south to the Barne'a neighborhood in the north, and from the seashore to approximately one kilometer inland. Both Ashqelon Barne'a and Ashqelon Afridar's regions have undergone extensive excavation (Figs. 1, 2; Golani 2019). The results showed that the EB I occupation in this area is composed of several non-nucleated patches separated by large open spaces without archaeological remains,[2]

[1] For a more detailed survey of the Early Bronze Age site at Ashqelon, see Golani 2019:1–9.

[2] However, it should be noted that the 'open spaces' are essentially where mechanical trenching could not discern any ancient occupation remains. As these were often covered by a very thick overburden of sand dunes and the maximum depth to which the mechanical backhoe could reach from the modern ground surface is c. 4 m, any remains below this level would not be exposed. While the overlying sands included remains of the Roman–Byzantine period, more ancient remains were always situated on sterile basal sands or the *kurkar* bedrock.

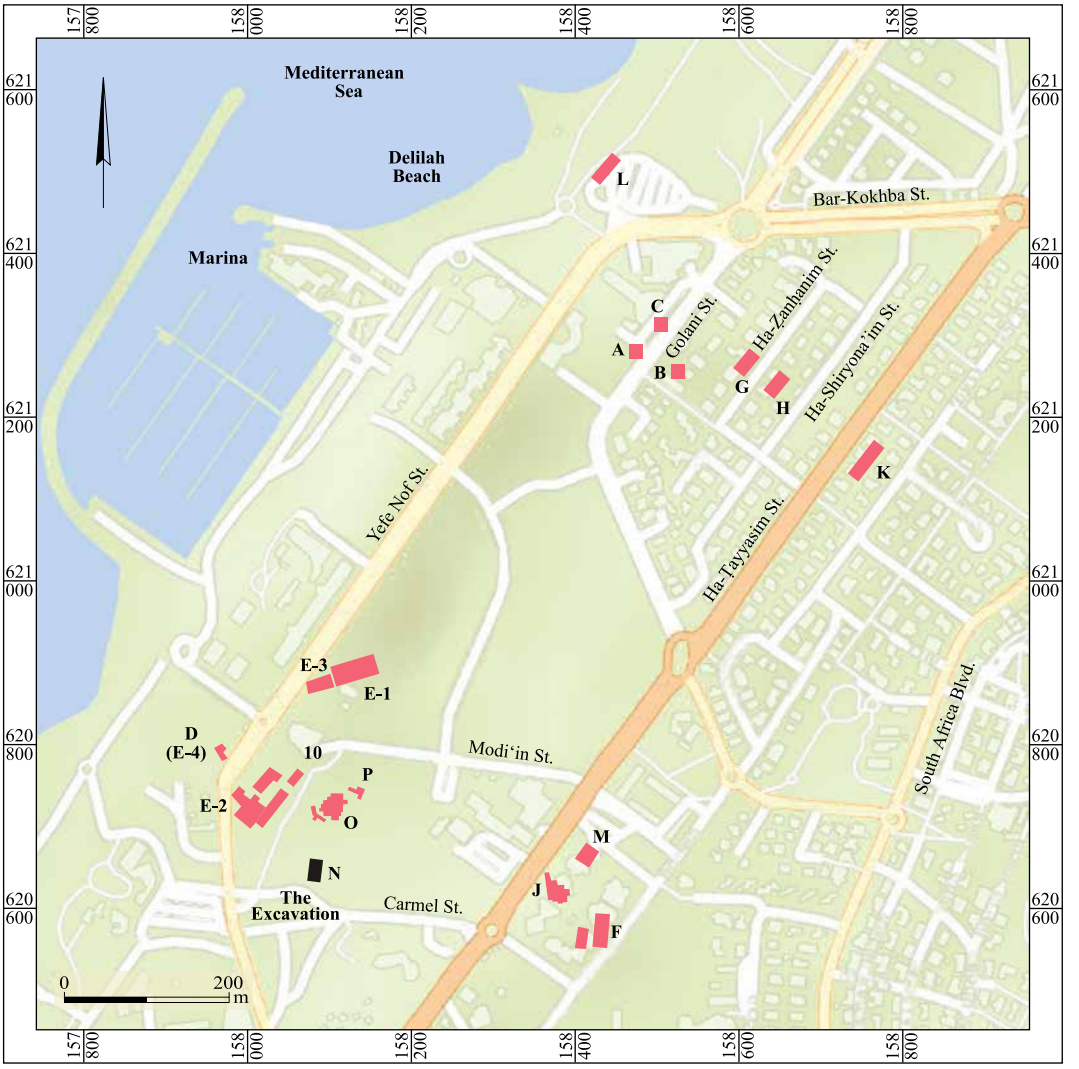
Fig. 1. Location map of the Early Bronze I remains at Ashqelon.

reflecting a single long-duration occupation with shifting settlement foci. The initial EB I settlement, dated to Early EB I, was revealed at several locales, apparently constricting in size during Late EB I (Fig. 1).

The site was first probed by Gophna in 1968 (Gophna 2002), who exposed massive mud-brick building remains of the Late EB I in Afridar Area A (Fig. 2). Since then, many rescue projects revealed continuous settlement throughout EB I (Golani 2019: Figs. 1, 2; Table 1.2; forthcoming).

The present excavation, carried out between May and June 2012 in Area N (map ref. 158083–169/620593–715),[3] is located 350 m southeast of the coastline and 100 m southeast of Area E-2 (Fig. 2; Golani 2004; Golani and Paran 2014; 2021), where remains of

[3] The excavation (Permit No. A-6504), undertaken in Building Lot 52 on behalf of the Israel Antiquities Authority and underwritten by Gadi Sadot Entrepeneurials Ltd., was directed by the author, with the assistance of Yasser el-Amur (administration), Vadim Essmann and Yakov Shmidov (surveying), Yael Yolovich (field photography), Sa'ar Ganor (district archaeologist), Yigal Israel (regional archaeologist), Elisheva Kamaisky and Atalia Fadida (ceramic restoration and conservation), Victoria Nusikovski (metals conservation), Irina Lidsky (artefact drawing) and Clara Amit (artefact photography). For a preliminary report, see Golani 2014a.



A–Gophna 2002; 2004
B–Gophna 2002; 2004
C–Brandl and Gophna 1994; Gophna 2002
D (E-4)–Gophna 2002, 2004; Wallach 2003
E-1–Golani 2004; 2018
E-2–Golani 2004; Golani and Paran 2021
E-3–Golani 2004
F–Khalaily 2004
G–Braun and Gophna 2004
H–Braun and Gophna 2004
J–Baumgarten 2004
K–Baumgarten 2006; Haimi 2009
L–Garfinkel 1999; 2008
M–Golani 2008b
N–Golani 2014b; this volume
O–Paran 2014; Golani and Pasternak 2020
P–Golani 2017
10–Unpublished: Yuval Yekutieli and Nir-Shimshon Paran, Ben-Gurion University
Delilah Beach–Toueg 2010

Fig. 2. Location map of excavation areas with EB I remains in the Ashqelon Afridar region.

numerous pits and fragmentary remains of a developed metallurgical industry were found. The excavations in Area E-2 also uncovered two Early EB I occupation strata: Stratum III, the earliest, with remains of disjointed mud-brick architecture and several pits alongside beaten-earth surfaces that often included many burned mud bricks and provided indirect evidence of copper smelting; and the later Stratum II,[4] which yielded a large built complex that may have formed part of an enclosure, alongside several pits and an infant jar burial.

As in Area E-2, the excavations in Area N also revealed two occupation strata (Strata III–II) that yielded mud-brick and stone architecture, occupation surfaces and other material culture remains which may be attributed to an early stage of EB I.

Prior to excavation, the area was leveled by modern development works. Mechanical excavation of several trial trenches within the building lot revealed archaeological remains, primarily in its southern part. These had been covered by a thick layer of sand deposited after the EB I occupation and also leveled during modern earthmoving activities. Removal of this sand cover in the southwestern area of the building lot exposed the ancient topography as a mild northern-facing slope; the sand cover was approximately 0.5 m thick in the southern part of the excavation and nearly 4 m thick in its northern part.

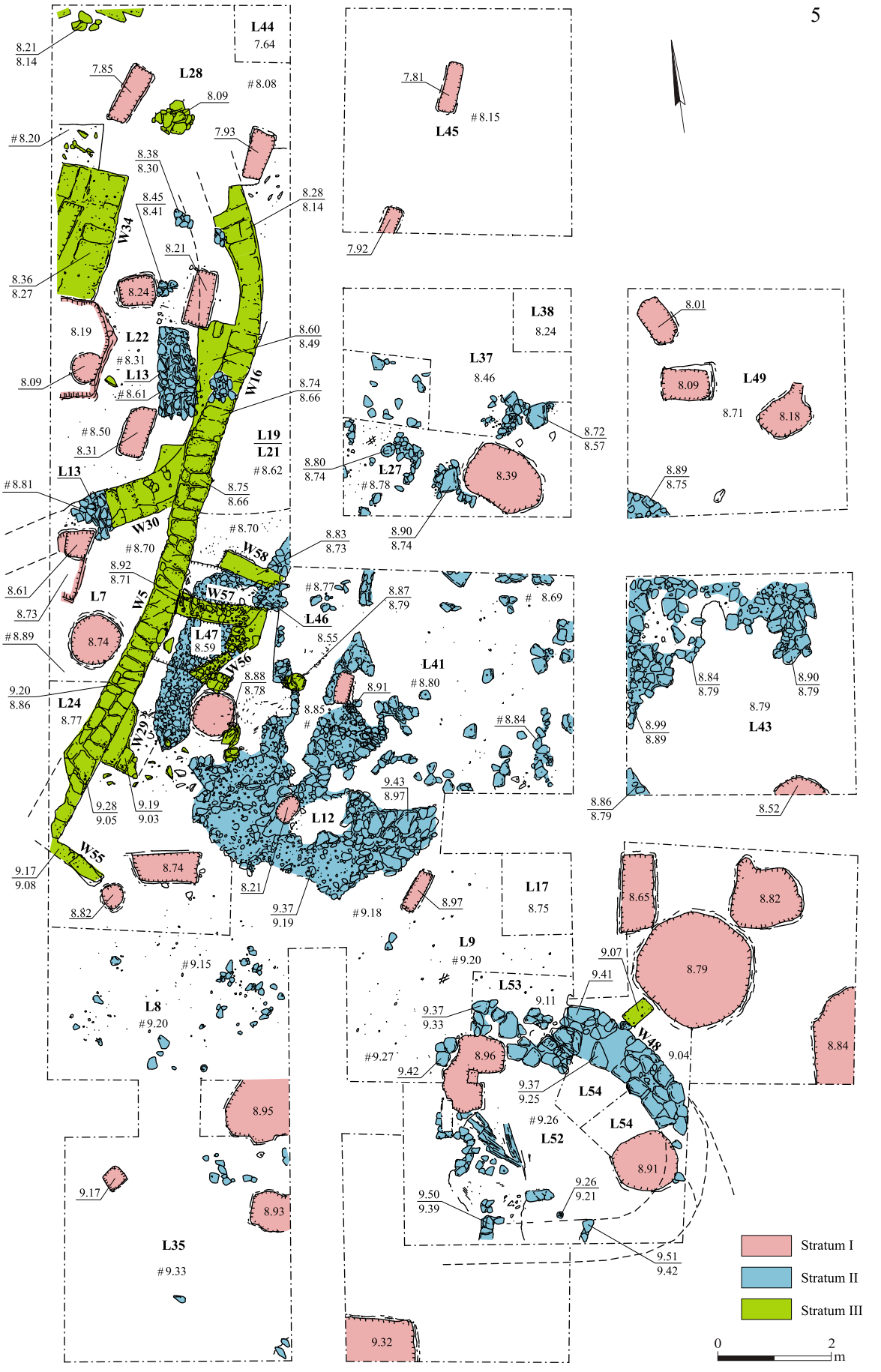
Byzantine-period remains were identified in the immediate vicinity, on the *kurkar* ridge's crest to the west of the present excavation; these included a complete tomb that had been looted in the past, a winepress and disjointed remains of a large building (Golani and Milevski 1999; Wallach 2003; Golani 2004). The limited Byzantine remains unearthed in the present excavation (Stratum I) were represented by many intrusive pits cutting into the earlier remains.

THE EXCAVATION

The excavation in Area N consisted of 13 squares on a north–south axis (Plan 1). Most were excavated or at least probed down to the sterile basal level, exposing two occupation strata (Strata III–II) dating from Early EB I. Both strata were heavily damaged by later intrusions of the Byzantine and modern periods (Stratum I), appearing as pits filled with loose sand, various modern mechanical trenches and other disturbances.

After removing the overlying modern fill by mechanical means, the excavation was conducted with standard hand tools using the balk/debris method in 5 × 5 m squares with one-meter-wide balks in between. Sifting was employed through a 1 sq cm wire mesh for EB I material originating from clear stratigraphic contexts, revealing flint items (see Oron, this volume),fauna remains (see Pines, this volume) and molluscs (see Ktalav, this volume).

[4] In Area E-2, the designation 'Stratum I' was given to fragmentary Roman–Byzantine remains that postdated the EB I occupation.



Plan 1. Area N, Strata III–I.

Stratum III

This earliest occupation was positioned directly upon the sterile basal sands. Most of the architectural elements associated with it were revealed in the western part of the excavated area. These consisted of a long and slightly curving mud-brick wall (W5/W16) running northeast–southwest (Fig. 3). The southern part of W5 was preserved to a maximum height of four courses and was built of irregularly sized light brown mud bricks with numerous *kurkar*-chip inclusions (Fig. 4), laid either in two roughly parallel rows or one row along their width. A beaten-earth surface (L7) was exposed to the west of this wall, associated with its base (Fig. 5). A limited probe (L24) below this surface and wall revealed that both were founded upon sterile basal sands.

At the southern end of this surface, a small mud-brick wall (W55), preserved to a height of one course, seemed to abut the outer face of W5 at a right angle. Further north, a larger segment of a poorly preserved wall (W29), built of two rows and preserved to a height of two courses, also abutted W5 to its east. North of this wall, three additional thin mud-brick walls (W56–W58) were found: W57 was perpendicular to W5 (Fig. 4); W58 was also perpendicular to W5 but did not abut it; and W56 was oblique in relation to W5 (Figs. 4, 5). Between W56 and W57, a short line of stones (L47) appeared to have connected the eastern ends of these walls, creating a small enclosed space. A similar situation was observed between W57 and W58, where a large and worn basalt bowl fragment, pierced at its base, was found positioned in between the end of both walls (L46; Figs. 4–6, and see

Fig. 3. The excavation area, looking south.

Fig. 4. Mud-brick W5, looking west; in foreground (right) are W56, W57 and W58, and the L41 surface.

Fig. 5. Surface 7 at the base of W5, looking east; W30 is on left; note W56, W57 and W58 in background (center).

Fig. 6. Stratum III Surface 41 and W56, W57 and W58, looking southwest; note the lower part of a basalt bowl, on its side, at lower center.

Fig. 14:5). Excavation within these small spaces (L46, L47) revealed that the walls were founded on sterile basal sands.

East of W5 was a large open space where a habitation surface was revealed (L41; Figs. 4–6). In the area near W29, this open space comprised a patch of burned debris overlaid by stone rubble, next to two small circular mud-brick installations.

In its northern part, W5 continued as W16, preserved to a maximum height of three courses and also built of light brown mud bricks with numerous *kurkar*-chip inclusions. Wall 30, at the juncture between these two walls, preserved for one course, apparently represents the southwestern continuation of W16. Together with W16, which curved to the west and extended outside the excavated area, they possibly formed a rounded structure. To the west and at the base of W16 was a low mud-brick bench made of dense dark brown mud-brick material, yet no definite mud-brick outlines were observed in it (Fig. 3). A beaten-earth surface (L22) was associated with both W30 and the bench's edges.

Immediately to the east and at the base of W16 was a beaten-earth surface (L21) laid upon the sterile basal sands and overlaid with debris (L19).

In its northern part, W16 curved to the west, yet its continuation was not found; however, the few mud-brick fragments and stones identified to its northwest may have formed part of its line. A straight-wall segment made of mud bricks and preserved to a height of one course (W34) was identified in the southwestern corner of the area, though its connection to W16 was unclear. A habitation surface (L28)—with ceramics, bones and a circular stone-built

Fig. 7. Stratum III Surface 28 (Square A1).

installation, all associated with the base of W34 and W16—was identified in this area (Fig. 7). This surface was also identified to the east (L45). A limited probe (L44) below Surface 28 revealed that this surface was founded on sterile basal sands.

Stratum II

Stratum II represents a later occupation stage that superposed Stratum III. One of the main characteristics of the Stratum II occupation, distinguishing it from Stratum III, was the use of local *kurkar* stones for the building's foundations. The Stratum II remains comprise several habitation surfaces and the stone foundations of one curvilinear structure.

Three habitation levels (L8, L9, L35) were revealed in the southern part of the excavated area, characterized by beaten-earth surfaces interspersed with small- to medium-sized stones. Southeast of L9 was exposed part of a curvilinear structure. Most of this structure was severely damaged by erosion and later disturbances, yet its northeastern part was still intact, showing a curving wall (W48) built of medium- to large-sized *kurkar* stones preserved for one course (Fig. 8). The structure's outline appears to have been horseshoe-shaped; the few stones found in its southern and western parts may indicate remnants of a wall that was robbed or had eroded away. Within the space enclosed by W48 was a floor overlaid with large amounts of burned destruction debris (L52), including two smashed storage jars (Figs. 8; 13:7),[5] large amounts of burned mud-brick and large chunks of burned clay containing

[5] Due to the very deteriorated state of the ceramic remains, only part of one of these storage jars was restored (Fig. 13:7). The other storage jar was identical in size, shape and decoration.

Fig. 8. Part of curving W48, looking west; note the many Stratum I intrusions and the remains of two smashed store jars (L52).

much organic temper (Fig. 9). These finds were interpreted as the remains of the roof's clay and straw coating that collapsed over the contents of the house when it was destroyed.

A limited probe (L54) below Floor 52 revealed that the floor was founded on an earlier occupation level. This earlier occupation was also revealed in L53 and L17, immediately to the north of W48. These consisted of a few ceramic remains, charred olive pits, and one mud brick, identical in composition to those associated with Stratum III and thus, the attribution of the stone structure to Stratum II seems most likely.

Further north, the Stratum II remains consisted of several concentrations of stones (L12, L43, L27) that may have once been part of architectural elements yet appear to have been dismantled. These stone concentrations may also be collected building materials that were not utilized. In one locale (L27), several stones appear to have remained *in situ* and may be the remains of installations built on a floor that included a large fragment of a ceramic bowl. No remains of Stratum III were found in this square (L37), and a limited probe (L38) revealed the presence of sterile basal sands immediately underneath.

Most of the Stratum II stone concentrations were laid directly upon the Stratum III remains. A segment of a beaten-earth surface strewn with numerous ceramic remains (L13) was found directly above Stratum III W30. This same surface continued north, overriding Stratum III W16 and including a small circular stone installation (Fig. 10).

Fig. 9. Straw impressions in the burned clay as revealed on Floor 52.

Fig. 10. Surface 13 overriding W30 and W16, looking south; a circular stone-built installation is visible on left.

Stratum I

Stratum I includes any remains later than Stratum II, various later intrusions, and other features, usually reflected as pits of rectangular, rounded or irregular form, filled with sands and cutting into the earlier remains (Plan 1). However, some of these pits may have also been natural. The man-made pits may have originated in the Byzantine occupation in the area, already partly uncovered in previous excavations in Area E-2.

THE FINDS

THE CERAMIC ASSEMBLAGE (Figs. 11–14)

A small amount of Early Bronze Age pottery, dominated by fragments, was associated with occupation Strata III–II. The pottery was examined and sorted in the field; potsherds from loci destined for restoration were kept in their entirety and sorted after the ceramic restoration was completed. Only one of the two smashed store jars found in L52 (see Fig. 8) was partially restorable.

While sorting, all the non-diagnostic body sherds were discarded, and all rims, bases, handles and other sherds indicating a specific form, manufacturing, or decorative technique, were retained. During the later detailed examination and formulation of the stratigraphy, both the context and content of the various loci were re-examined. Many loci were 'weeded out' at this stage, as they could not be associated with certainty with any of the two strata, producing a characteristic ceramic assemblage for each stratum (see Appendix, below). The ceramic repertoire associated with both strata is very similar. Already noted during the excavation, the ceramic finds were not a factor in the stratigraphic differentiation between the excavated loci. The two strata are presented in separate figures (for Stratum III, see Figs. 11, 12; for Stratum II, see Fig. 13), yet are discussed together in the following typological description of the assemblage.

Technology

Due to the relatively low firing temperature of the ceramic vessels, along with the salinity and abrasive nature of the surrounding soil matrix, the majority of the pottery recovered was in a very poor and crumbly state. The material was so friable that, in the field, it was only 'dry cleaned,' as immersion in water would have caused many of the sherds to disintegrate to mud.

The pottery is handmade, and the coil method appears to have been dominant in the production of most ceramic forms. Bases are the most numerous among the diagnostic sherds, nearly all of them were flat, none bore traces of mat impressions. Some vessels bore faint traces of a red slip or wash, and a few retained burnish remnants, though this surface treatment may have been more common than it seems, as the red color and the burnish may have worn off due to the degenerative nature of the soil composition. Burnishing was

identified on only one bowl (Fig. 11:8). Plastic decoration, usually in the form of small consecutive indentations made with the thumb or an instrument of similar size either on or just below the rim (here termed a scalloped, pie-crust, or thumb-indented rim), is common on bowls, holemouth jars, store jars and ledge handles. One fragment (Fig. 12:8), appears to have a plastic knob decoration. All the fragments appear to have been made of local *ḥamra* or loess soils.[6] The remains of an Early EB I ceramic firing-pit kiln, identified in Area J Stratum VI at Ashqelon Afridar (Baumgarten 2004:167, Fig. 6), are an indication that most, if not all the vessels were locally produced.

Typology

The typological designations used in this report follow those formulated during the processing of the ceramic assemblage of Ashqelon Afridar Area E (Golani 2004) and resumed in the publication of Ashqelon Afridar Area M (Golani 2008) and Ashqelon Barneʿa (Golani 2022). Lacunae in the typological sequence indicate the absence of that form in the present ceramic assemblage. The assemblage comprises three main types: bowls (Figs. 11:1–10; 13:1, 2), holemouth jars (Figs. 11:11, 12; 13:3–5) and storage jars (Figs. 12:1–6; 13:6–8).

Bowls

Type B Ia: V-Shaped Bowls with Simple Tapering Rims (Figs. 11:1–7; 13:1).— The simple V-shaped bowl is one of the most common bowl forms in both strata. Examples range from thin-walled, delicate forms (Fig. 11:1–5) to larger forms with thicker walls (Fig. 11:6, 7; 13:1). The rims are generally straight and tapering. Some bowls show remnants of a red wash on the vessel's exterior (Fig. 11:3), yet none bear a decorative red band on the rim, a distinctive feature of the Chalcolithic period.

Common during the Chalcolithic period, V-shaped bowls continue into EB I, as attested in previous excavations at Ashqelon Afridar yielding early EB I settlement remains, such as Area E (Golani 2004: Fig. 22:1–9), Area F Strata II–I (Khalaily 2004: Type B1, Figs. 6:5; 11:1–3, 5–16), Area J Strata 6–5 (Baumgarten 2004: Figs. 9:1; 10:1, 2; 15:2), Area G (Braun and Gophna 2004: Fig. 17:1, 3, 4, 6, 7) and Area M (Golani 2008: Fig. 8:1–8), as well as in other early EB I sites such as Niẓẓanim Stratum 5 (Yekutieli and Gophna 1994: Fig. 12:16, 18, 19).

Type B II: V-Shaped Bowls with Red Slip and Burnish (Fig. 11:8).— A bowl with a simple tapering rim, whose distinguishing feature is a characteristic thick red slip or wash and burnishing on the vessel's exterior and interior. A single example of this type was recovered from Stratum III, and it is absent from Stratum II. This distinctive bowl type is well-known in the southern Shephelah and the coastal region during Early EB I and is apparently indicative

[6] The ceramic fabrics were examined by the naked eye by Anat Cohen-Weinberger (IAA petrographer).

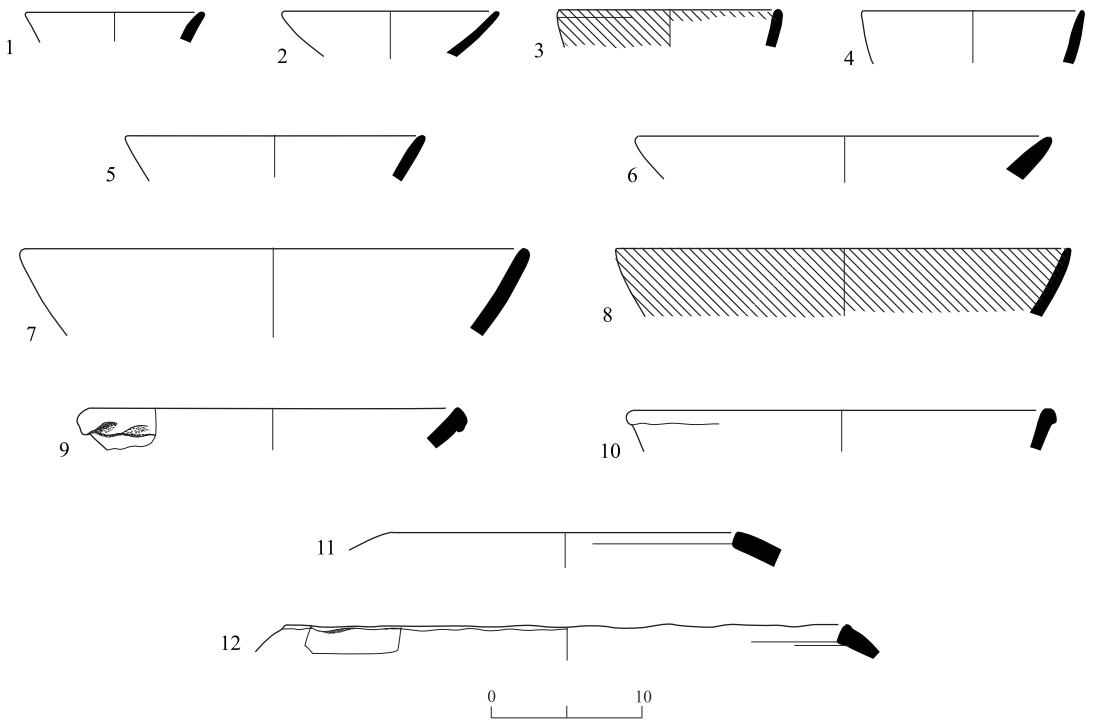


Fig. 11. Stratum III Pottery: bowls and holemouth jars.

No.	Type	Locus	Basket	Description
1	Bowl B Ia	22	440	Brown-orange clay, small-sized white and gray grits, brown core, poorly fired
2	Bowl B Ia	41	437	Brown-orange clay, small to medium-sized white and gray grits, gray-black core, poorly fired
3	Bowl B Ia	7	209	Brown-orange clay, small to medium-sized white and gray grits, gray core, red slip on ext., poorly fired
4	Bowl B Ia	21	243	Light brown clay, small to medium-sized white and gray grits, dark gray core, poorly fired
5	Bowl B Ia	22	440	Brown-orange clay, small to medium-sized white and gray grits, brown-gray core, poorly fired
6	Bowl B Ia	22	440	Brown clay, small-sized white and gray grits, dark gray core, poorly fired
7	Bowl B Ia	41	411	Brown clay, small to medium-sized white and gray grits, gray core, poorly fired
8	Bowl B II	22	261	Brown-orange clay, small to medium-sized white and gray grits, brown-gray core, red slip and burnish on int. and ext., poorly fired
9	Bowl B VIb	41	387	Brown clay, small to medium-sized white and gray grits, dark gray core, impressed thumb decoration on out-folded rim, poorly fired
10	Bowl B VII	41	411	Light brown clay, small to medium-sized white and gray grits, light brown core, poorly fired
11	Holemouth jar H II	28	441	Brown clay, small to medium-sized white and gray grits, light brown-gray core, impressed thumb decoration on rim, medium fired
12	Holemouth jar H V	45	455	Brown clay, small to medium-sized white and gray grits, brown core, medium fired

of southern EB I. Such vessels have been found at Taur Ikhbeineh Phases IV–III (Oren and Yekutieli 1992: Fig. 10:23, 24), Azor Stratum I (Golani and Brink 1999: Fig. 5:1), Tel ʻErani DII Layer D (Yekutieli 2001: Fig. 33:8), ʻEn Besor Site H (Roshwalb 1981: Fig. H.4:8), Tel Lakhish Cave 1503 (Tufnell 1958: Pl. 56:28) and Ashqelon Afridar Area E (Golani 2004: Fig. 22:10–13). The red-burnish decorative tradition on such bowls has been attributed to a late phase of Early EB I (EB IA; see Yekutieli 2000:131). Red slip and burnished decoration are typical Egyptian ceramic traits, suggesting that this practice may reflect an Egyptian influence (Yekutieli 2000:150).

Type B VIb: Large and Thick V-Shaped Bowls with Straight Walls and Pie-Crust Decoration (Fig. 11:9).— The large, thick-walled V-shaped bowls have straight walls and a pie-crust or scalloped decoration on the outer edge of a slightly outturned and folded-over rim. They were found in Chalcolithic sites like Shiqmim BP II (Levy 1987: Fig. 12.3:1; 12.6:1), Abu Maṭar Stratum IB-ante IV (Commenge-Pellerin 1987: Fig. 21:4), and in Early EB I sites like Ashqelon Afridar Area E (Golani 2004: Figs. 8:10; 23:9–11), Area F Stratum II (Khalaily 2004: Figs. 6:6, 9–11, 12:2, 4–5), Area G (Braun and Gophna 2004: Fig. 17:11–13), Niẓẓanim Stratum 4 (Yekutieli and Gophna 1994: Fig. 11:18), Taur Ikhbeineh Phases IV–III (Oren and Yekutieli 1992: Fig. 10:14), Azor Stratum I (Golani and Brink 1999: Fig. 5:11, 12) and ʻEn Besor Site H (Roshwalb 1981: Fig. H.4.:15). This distinctive bowl type is probably indicative of Early Southern EB I.

Type B VII: Bowls with Rounded, Folded-Out Rims (Figs. 11:10; 13:2).— Such V-shaped bowls with a rounded, folded-over rim, were found at EB I Taur Ikhbeineh Phases III–II (Oren and Yekutieli 1994: Fig. 9:4) and at Ashqelon Afridar Area F Stratum I (Khalaily 2004: Fig. 6:1–3), Area J Strata 4, 2 and 1 (Baumgarten 2004: Figs. 11:1; 13:1; 14:1) and Area M (Golani 2008: Fig. 11:5). The same form is also found further inland, for example, at Harṭuv (Mazar and Miroschedji 1996: Fig. 17:27–29), associated with the early phase of the Late EB I. The form is common at the very end of Early EB I and continues into the beginning of Late EB I.

Holemouth Jars

Type H II: Holemouth Jar with Truncated Rim (Fig. 11:11).— These holemouths are common throughout EB I and were found at sites such as Niẓẓanim Stratum 5 (Yekutieli and Gophna 1994: Fig. 12:13), Ashqelon Afridar Area F Strata II–I (Khalaily 2004: Figs. 7:4; 14:2, 8) and the Tel Ḥalif Terrace ʻSilo Site' Stratum III (Alon and Yekutieli 1995: Fig. 23:10). In the present excavation, they were found primarily in Stratum III.

Type H V: Holemouth Jar with Sculpted Rim (Fig. 11:12; 13:3).— These holemouth jars have a thickened truncated rim often upturned or with a slightly protruding lower and upper lip, exhibiting a 'hammer-head' profile. Some rims are decorated with shallow thumb indentations. Though antecedents may be found in the Chalcolithic period, this distinctive

form is more common in Early EB I southern Shephelah and coastal plain. Examples are found at Azor Strata II–I (Golani and Brink 1999: Figs. 6:3–9; 11:3–6) and at Ashqelon Afridar Area E (Golani 2004: Fig. 26:1, 2), Area F Stratum II (Khalaily 2004: Fig. 14:3), Area J Stratum 6 (Baumgarten 2004: Fig. 15:6) and Area M Stratum I (Golani 2008: Fig. 9:8). Yekutieli assigned this type to the later part of Early EB I (EB IA_2; Yekutieli 2001:31–34).

Type H VIII: Holemouth Jars with Outturned, Folded-Over Rims (Fig. 13:4, 5).— The holemouth jars exhibit a sharply folded-over rim, often decorated with a thumb-indented scalloped decoration. Close parallels of this form, all from southern Canaan and dating from the end of Early EB I, were found at sites such as Taur Ikhbeineh Phases V–IV (Oren and Yekutieli 1992: Fig. 11:14), Azor Stratum I (Golani and Brink 1999: Fig. 6:2, 8), Ashqelon Afridar Area F Strata II–I (Khalaily 2004: Figs. 7:1–3, 6, 8; 14:3, 7) and Area J Strata 5–4 (Baumgarten 2004: Figs. 10:13, 14; 11:19), and Niẓẓanim Stratum 4 (Yekutieli and Gophna 1994: Fig. 11:14, 16).

Store Jars

Type SJ II: Thick-Walled Pithoi with Sloping Shoulders, Vertical Necks and Outturned Rims with Thumb Indentations (Figs. 12:1, 2; 13:6, 7).— This form is common in southwestern Canaan during Early EB I and is known from sites such as Azor Stratum I (Golani and Brink 1999: Fig. 5:5); Ashqelon Afridar Area F Stratum I (Khalaily 2004: Fig. 8:1, 2), Area J Strata 6–5 (Baumgarten 2004: Figs. 9:10, 11; 10:7; 16:3), Area G (Braun and Gophna 2004: Fig. 19:9–13) and Area M Strata II–I (Golani 2008: Figs. 9:10; 10:1–3); Niẓẓanim Stratum 4 (Yekutieli and Gophna 1994: Fig. 11:5); and Taur Ikhbeineh Phases V–III (Oren and Yekutieli 1992: Figs. 11:3; 12:14). This type is not known from Late EB I contexts and may be indicative of Early EB I in the region.

Type SJ VI: Small- to Medium-Sized Bag-Shaped Storage Jars with Sloping Shoulders and Necks, and Plain Tapering Rims (Fig. 12:3, 4).— These vessels usually have a slightly sloping or vertical neck, and a slightly outturned rim occasionally bearing impressed thumb decoration (Fig. 12:3). This form is generally considered characteristic of the end of Early EB I and has been found at sites such as ‘En Besor Site H (Roshwalb 1981: Fig. H.7:1), Niẓẓanim Stratum 4 (Yekutieli and Gophna 1994: Fig. 11:1), Tell Ḥalif Terrace ‘Silo Site’ Strata IV–III (Alon and Yekutieli 1995: Figs. 23:7; 24:13) and Ashqelon Afridar Area F Stratum I (Khalaily 2004: Fig. 10:1) and Area J Strata 5–4 (Baumgarten 2004: Figs. 10:5, 10; 11:8).

Type SJ VII: Small- to Medium-Sized Store Jars with Sloping Shoulders and Slightly Outturned Rims (Figs. 12:5, 6; 13:8).— This form is found throughout most of Early EB I at sites such as Azor Strata II–I (Golani and Brink 1999: Figs. 5:8, 17; 10:9–13), Ashqelon Afridar Area J Stratum 4 (Baumgarten 2004: Fig. 11:7), Area M Stratum II (Golani 2008:

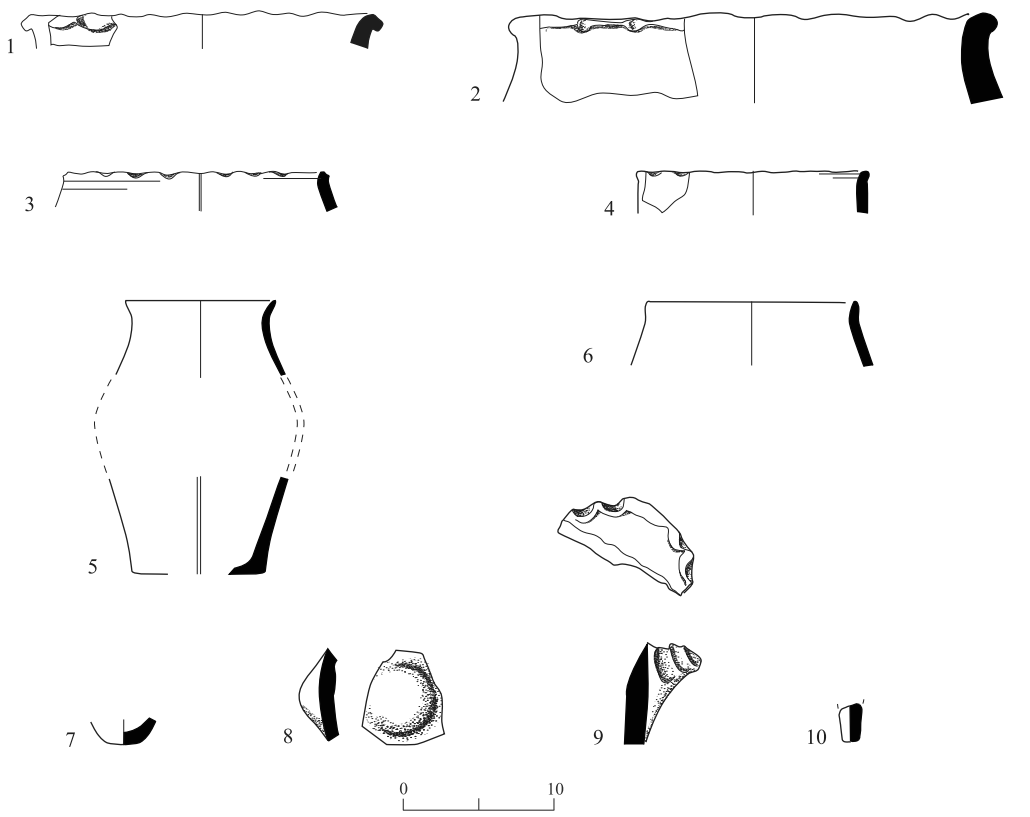


Fig. 12. Stratum III pottery: store jars and varia.

No.	Type	Locus	Basket	Description
1	Store jar SJ II	22	261	Light brown-orange clay, small to medium-sized white and gray grits, light gray core, impressed thumb decoration on rim, poorly fired
2	Store jar SJ II	22	261	Brown clay, small- to medium-sized white and gray grits, gray core, impressed thumb decoration on rim, poorly fired
3	Store jar SJ VI	21	243	Brown clay, small-sized white and gray grits, brown-gray core, impressed thumb decoration on rim, poorly fired
4	Store jar SJ VI	41	437	Brown clay, small-sized white and gray grits, dark gray core, impressed thumb decoration on rim, poorly fired
5	Store jar SJ VII	41	438	Dark brown-gray clay, small- to medium-sized white and gray grits, dark gray core, poorly fired
6	Store jar SJ VII	41	381	Brown clay, small- to medium-sized white and gray grits, brown core, poorly fired
7	Juglet base JT	23	362	Brown clay, small- to medium-sized white and gray grits, brown-gray core, poorly fired
8	Knob	19	235	Brown clay, small- to medium-sized white and gray grits, brown-gray core, poorly fired
9	Ledge handle LH II	41	371	Brown clay, small- to medium-sized white and gray grits, brown-gray core, impressed thumb decoration on rim, poorly fired
10	Cornet base	41	437	Brown clay, small- to medium-sized white and gray grits, brown core, poorly fired

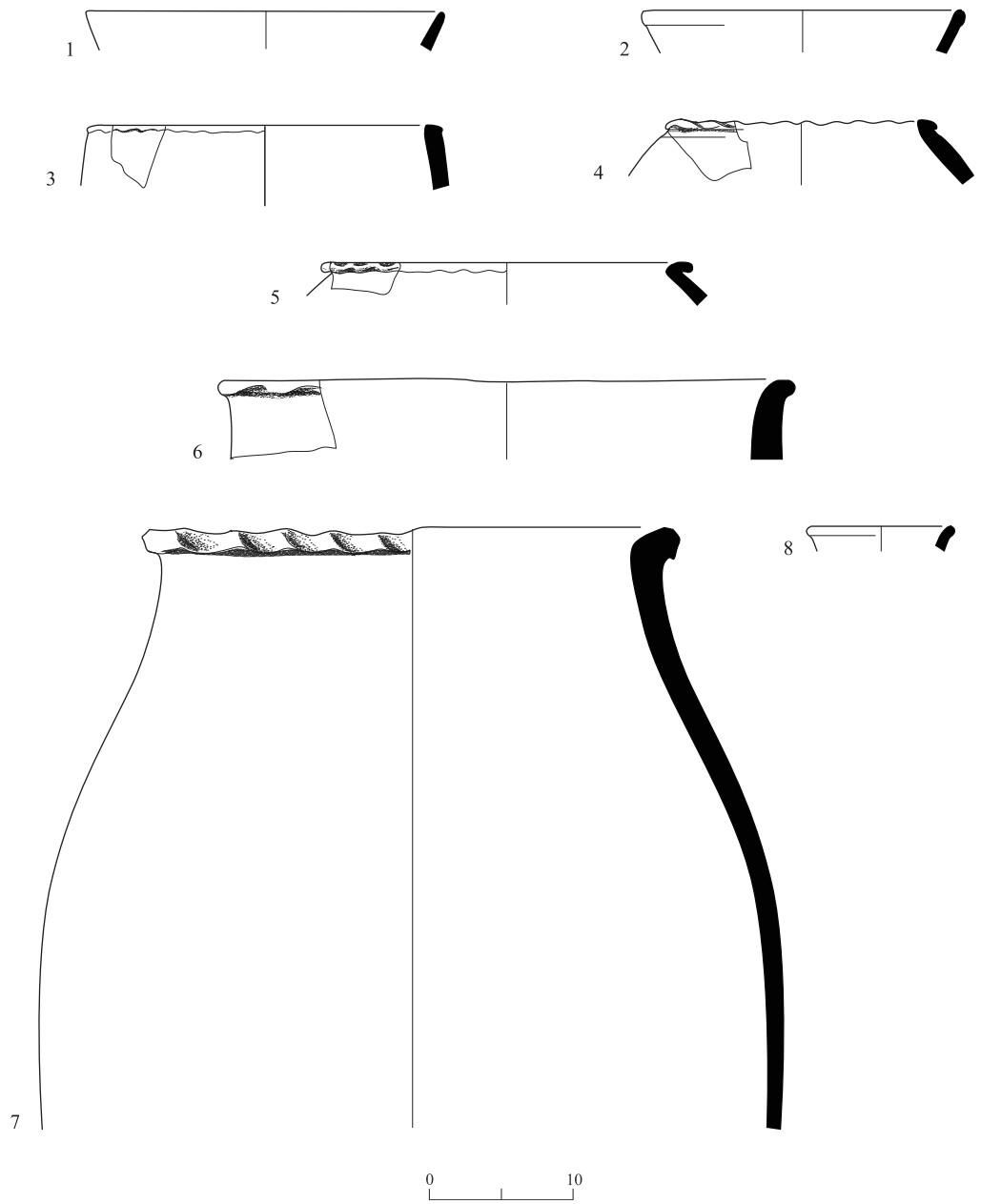


Fig. 13. Stratum II pottery: bowls, holemouths and store jars.

Fig. 10:7) and Area F Stratum I (Khalaily 2004: Figs. 9:5, 7, 13, 15–17), Taur Ikhbeineh Phases V–II (Oren and Yekutieli 1992: Figs. 9:8; 11:6, 11; 12:8; 13:11) and Niẓẓanim Strata 5–4 (Yekutieli and Gophna 1994: Figs. 11:2, 3; 12:1, 3).

◂ **Fig. 13**

No.	Type	Locus	Basket	Description
1	Bowl B Ia	13	333	Brown-orange clay, small-sized white and gray grits, brown-gray core, poorly fired
2	Bowl B VII	39	365	Brown clay, small-sized white and gray grits, brown-gray core, medium fired
3	Holemouth jar H V	52	337	Dark brown clay, small- to medium-sized white and gray grits, dark brown, poorly fired
4	Holemouth jar H VIII	13	275	Light brown-orange clay, small- to medium-sized white and gray grits, light gray-brown core, impressed thumb decoration on rim, poorly fired
5	Holemouth jar H VIII	39	365	Light brown-orange clay, small- to medium-sized white and gray grits, gray-brown core, impressed thumb decoration on sharply outturned rim, medium fired
6	Store jar SJ II	13	332	Light brown-orange clay, small- to medium-sized white and gray grits, light brown gray core, impressed thumb decoration on rim, poorly fired
7	Store jar SJ II	52	190	Brown clay, small- to medium-sized white and gray grits, dark gray core, impressed thumb decoration on rim, poorly fired
8	Store jar SJ VII	9	290	Brown clay, small-sized white and gray grits, gray core, poorly fired

Ledge Handles

Type LH II: Ledge Handles with Thumb Indentations (Fig. 12:9).— Thumb-indented ledge handles are common throughout EB I. They were found at sites such as Ashqelon Afridar Area G (Braun and Gophna 2004: Fig. 22:5–12) and Area F (Khalaily 2004: Fig. 17:1–4), Niẓẓanim Strata 4–3 (Yekutieli and Gophna 1994: Figs. 9:2, 3; 11:7, 8), Taur Ikhbeineh Phases IV–II (Oren and Yekutieli 1992: Figs. 9:2, 9; 10:12), Tel Ḥalif Terrace 'Silo Site' Strata III–I (Alon and Yekutieli 1995: Figs. 15:6; 18:10, 11; 22:1; 23:6, 9) and Tel 'Erani Layer C (Kempinsky and Gilead 1991: Fig. 11:4).

Varia

The base of a small juglet (Fig. 12:7) and a cornet fragment (Fig. 12:10) were also recovered from Stratum III. Cornets are usually considered a *fossile directeur* of the Late Chalcolithic period, yet have often been found within EB I ceramic assemblages at Ashqelon.

Conclusions

The ceramic assemblage of Strata III and II, though very limited in size, may be associated with Early EB I. All the forms present in both strata find parallels at sites dating from this period, while forms generally indicative of a Late EB I date, such as holemouth jars with

pronounced thickening on their inside and hemispherical bowls, are notably absent. The association of the present corpus with Early EB I is further strengthened by many parallels from sites dating from the Chalcolithic period. Early EB I, especially in the Ashqelon region, is characterized by numerous Chalcolithic 'holdovers' in its ceramic repertoire and other material culture aspects (cf. Golani 2013; forthcoming).

GROUNDSTONE OBJECTS (Fig. 14)

A small assemblage of groundstone artifacts was recovered during the excavation. These included a complete basalt spindle whorl (Fig. 14:1), a fragment of a perforated stone (Fig. 14:2), a *kurkar* fragment of a possible tournette (Fig. 14:3) and two fragments of basalt bowl bases (Fig. 14:4, 5).

The spindle whorl was found on Floor 52 within a Stratum II structure, alongside two smashed store jars, all covered by destruction debris. Whorls hafted on suspended spindles provided continuous rotary motion on the flywheel principle, enabling twisting the fibers to fashion threads (Barber 1991:70–78). The whorl, of Shamir's Type 4 Ring Basalt, is typical of the Early Bronze Age and weighs 14.73 g, which is very light for a stone whorl, perhaps indicating its use for spinning short fibers, such as wool (Shamir 2003:214).

The upper part of a *kurkar* tournette fragment is ground down and smoothed on both flat sides, while remains of a pivot hole, consisting of a double-chamfered perforation, are found on one end. Tournettes were usually made of basalt and occasionally of limestone; such objects made of *kurkar* stone are relatively rare, providing evidence that potters also used local materials for their production.

The two fragments of basalt-bowl bases were associated with Stratum III; one (Fig. 14:5) was found on Surface 41 (Fig. 6) and bore remains of a perforation at its center. Flat-based basalt bowls first appear in the Chalcolithic period, being also typical of EB I. Among the various groundstone tools typically found at Ashqelon, basalt bowls are especially common, often much more than at other contemporary sites, and are evidence of Ashqelon's well-developed trade contacts and its inhabitants' relative wealth during EB I (Rosenberg and Golani 2012).

METAL AWL (Fig. 14:6)

One small copper-alloy awl was recovered from a disturbed context (L33). The awl is typical of the Chalcolithic period and EB I, and was found, e.g., at Chalcolithic Shiqmim (Shalev and Northover 1987: Pl. 14.5:2–4) and EB I Ashqelon Afridar (Segal, Halicz and Kamenski 2004: Fig. 1:3–12). It could have originated in EB I occupation strata.

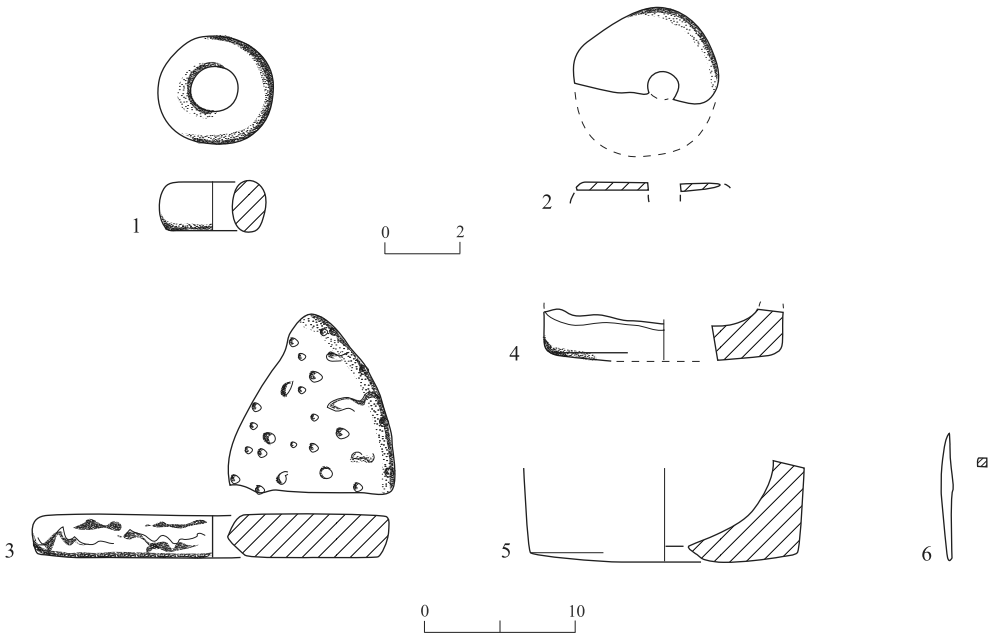


Fig. 14. Groundstone and metal objects.

No.	Type	Locus	Basket	Description
1	Spindle whorl	52	485	Non-vesicular basalt, well-worked; weight 14.73 g
2	Perforated stone fragment	41	446	Limestone?
3	Grinding stone fragment	45	502	*Kurkar* stone, smoothed on int. and ext.
4	Bowl base	45	482	Non-vesicular basalt, polished on int. and ext.
5	Bowl base	10	506	Non-vesicular basalt, polished on int. and ext., remains of perforation at base
6	Awl	33	426	Copper alloy

Radiocarbon Dating

Four radiocarbon samples were submitted for analysis by E. Boaretto of the D-REAMS Radiocarbon Laboratory at the Weizmann Institute of Science, Reḥovot. All the samples were of olive stones, which are short-lived yearly growths (Table 1). The samples came from L21, L22 and L28, defined as debris upon habitation surfaces and surface makeups associated with Stratum III; and from L8, defined as debris upon a habitation surface associated with Stratum II. The results showed that all samples clearly date to Early EB I, within the first half of the fourth millennium BCE. This dating is consistent with previous radiocarbon-dated samples from Areas E, G, J (Stratum 5) and M in Ashqelon Afridar (Golani 2013: Fig. 2; 2018; forthcoming; Golani and Segal 2002).

Table 1. ^{14}C Results of Sampled Olive Pits

Lab No.	Locus, Basket	^{14}C Age ± 1σ (year BP)	Calibrated Range ± 1σ (BCE)	Calibrated Range ± 2σ (BCE)
RTD-7728	L21, B254	4801 ± 41	3644 (14.2%) 3628 3588 (54.0%) 3529	3660 (93.9%) 3516 3398 (1.5%) 3384
RTD-7730	L28, B414	4747 ± 39	3634 (49.2%) 3552 3541 (14.2%) 3517 3396 (4.7%) 3386	3640 (75.5%) 3498 3437 (19.9%) 3377
RTD-7729	L22, B360	4761 ± 33	3634 (9.4%) 3621 3608 (43.8%) 3551 3542 (15.0%) 3522	3640 (85.8%) 3511 3425 (9.6%) 3382
RTD-7727	L8, B250	4729 ± 38	3631 (30.1%) 3579 3535 (14.6%) 3507 3427 (23.5%) 3381	3635 (62.7%) 3496 3460 (32.7%) 3376

CONCLUSIONS

Along with previous work conducted in Area E-2, the present excavations are an important contribution to our understanding of the early stages of the EB I occupation at Ashqelon Afridar, also termed the ‘lost horizon’ or ‘missing link’ between the Chalcolithic and EB I in southern Canaan (Braun 2000; 2011). At Ashqelon, this occupation was previously identified mainly in two Area G occupation strata (Braun and Gophna 2004), and in Area E, which consisted primarily of pits alongside a developed metallurgical industry (Golani 2004). The radiocarbon dates from the debris found within pits in Area E-2 attested to an early phase within the EB I sequence (cf. Golani 2004; Golani and Segal 2002); these results, however, have been criticized since the samples originated from a post-depositional buildup within pits, which were clearly earlier and had long gone out of use, and not from a clearly stratified deposit (Braun and Gophna 2004:222–224). Recent excavations in Area E-2 (Golani and Paran 2014; 2021), and the present excavations in Area N, have now revealed stratified occupation remains contemporary with these pits, presenting an identical material culture and the same radiocarbon dates. The results from these two excavations validate previous radiocarbon dates and their association with a growing body of Early EB I material culture showing continuity from the previous Late Chalcolithic in this region.

Appendix: List of Loci and Walls

Locus	Square	Locus Above	Locus Below[i]	Description	Stratum
1	D1		8	Topsoil removal and clearance of late intrusions	I?
2	C1		7, 10, 6, 11	Topsoil removal and clearance of late intrusions	I?
3	C2		12	Topsoil removal and clearance of late intrusions	I?
4	D2		9	Topsoil removal and clearance of late intrusions	I?
5	C1	2	24	Mud-brick wall	III
6	C1	2	10, 23	Stone debris	II
7	C1	2	24	Debris upon a floor associated with W5	III
8	D1	1	42	Debris upon a habitational surface	II
9	D2	4	17	Debris upon a habitational surface	II
10	C1	2	46, 47	Combined into L41	III
11	C1	2	23	Combined into L6	II
12	C2	3	41	Stone debris	II
13	B1		19, 22, 30	Debris upon a habitational surface	II
14	C2	12	41	Combined into L12	
15				Unused locus number	
16	B1/A1	13	21	Mud-brick wall	III
17	D2	9	n.e.	Probe into surface makeup down to sterile basal sands	III?
18	A1		20	Topsoil removal and clearance of late intrusions	I?
19	B1	13	21	Debris upon surface	III
20	A1	18	28	Debris	II?
21	B1	19	n.e.	Surface makeup and exposure of sterile basal sands	III
22	B1	13	n.e.	Debris upon surface	III
23	C1	6, 11	n.e.	Combined into L41	III
24	C1	7	n.e.	Probe into the floor makeup down to sterile basal sands	III
25	D2		27	Topsoil removal and clearance of late intrusions	I?
26	D3		n.e.	Topsoil removal and clearance of late intrusions	I?
27	D2	25	37	Debris on a habitational surface	II
28	A1	20	n.e.	Debris upon surface	III
29	C1	10	n.e.	Mud-brick wall	III
30	C1/B1	13	n.e.	Mud-brick wall	III
31	B1/C1			Mud-brick wall	III
32	E1		35	Topsoil removal and clearance of late intrusions	I?
33	D2, D3, E2, E3	40	48, 50, 51, 52, 53	Topsoil removal and clearance of late intrusions	I?
34	A1	20	n.e.	Mud-brick wall(?)	III
35	E1	32	n.e.	Debris upon surface	II
36	A1	28	28	Combined into L28	III
37	B2	27	38	Surface makeup	III–II
38	B2	37	n.e.	Probe down to sterile basal sands	III
39	A2		45	Debris	II?
40	E2		33	Topsoil removal and clearance of late intrusions	I?

[i] n.e. = not excavated.

APPENDIX (cont.)

Locus	Square	Locus Above	Locus Below[i]	Description	Stratum
41	C1, C2	12,14	n.e.	Debris upon surface east of W5	III
42	D1	8	n.e.	Surface makeup and outlining W55	III–II
43	C3		n.e.	Debris	III–II
44	A1	28	n.e.	Probe below L28 surface down to sterile basal sands	III
45	A2	39	n.e.	Debris	III?
46	C1	10	n.e.	Probe into surface makeup down to sterile basal sands	III
47	C1	10	n.e.	Probe into surface makeup down to sterile basal sands	III
48	D2, D3, E3	33	53, 54	Stone wall	II
49	B3		n.e.	Topsoil removal and clearance of late intrusions	I?
50	E2, E3	33	n.e.	Combined into L52	II
51	E2	33	n.e.	Combined into L52	II
52	E2, E3	33	54	Destruction debris upon floor	II
53	D2, D3, E3	33	n.e.	Surface makeup	III–II
54	E2, E3	52	n.e.	Floor makeup	III–II
55	D1	10	n.e.	Mud-brick wall	III
56	C1	10	n.e.	Mud-brick wall	III
57	C1	10	n.e.	Mud-brick wall	III
58	C1	10	n.e.	Mud-brick wall	III

REFERENCES

Ackermann O., Osband M., Bar-Matthews M. and Ayalon A. 2019. The Geographical Setting, Geoarchaeology and Sedimentology. In A. Golani. *Ashqelon Barne'a; The Early Bronze Age Site* I: *The Excavations* (IAA Reports 65). Jerusalem. Pp. 17–35.

Alon D. and Yekutieli Y. 1995. The Tel Ḥalif Terrace 'Silo Site' and Its Implications for the Early Bronze Age I. *'Atiqot* 27:149–189.

Barber E.J.W. 1991. *Prehistoric Textiles: The Development of Cloth in the Neolithic and Bronze Ages with Special References to the Aegean*. Princeton.

Baumgarten Y.Y. 2004. An Excavation at Ashqelon, Afridar—Area J. *'Atiqot* 45:161–184.

Baumgarten Y. 2006. Ashqelon. *HA–ESI* 118 (July 6). http://www.hadashot-esi.org.il/Report_Detail_Eng.aspx?id=374&mag_id=111 (accessed November 26, 2009).

Brandl B. and Gophna R. 1994. Ashqelon–Afridar. *ESI* 12:89.

Braun E. 2000. Area G at Afridar, Palmahim Quarry 3 and the Earliest Pottery of Early Bronze Bronze Age I: Part of the "Missing Link". In G. Philip and D. Baird eds. *Ceramics and Change in the Early Bronze Age of the Southern Levant* (Levantine Archaeology 2). Sheffield. Pp. 113–128.

Braun E. 2011. The Transition from Chalcolithic to Early Bronze I in the Southern Levant: A 'Lost Horizon' Slowly Revealed. In J.L. Lovell and Y.M. Rowan eds. *Culture, Chronology and the Chalcolithic: Theory and Transition* (*Levant* Suppl. S. 9). Oxford–Oakville. Pp. 160–177.

Braun E. and Gophna R. 2004. Excavations at Ashqelon, Afridar—Area G. *'Atiqot* 45:185–241.

Commenge-Pellerin C. 1987. *La poterie d'Abou Matar et de l'Ouadi Zoumeili (Beershéva) au IV^e millénaire avant l'ère chrétienne* (Les Cahiers du CRFJ 3). Paris.

Faust A. and Ashkenazy Y. 2009. Settlement Fluctuations and Environmental Changes in Israel's Coastal Plain during the Early Bronze Age. *Levant* 41:19–39.

Garfinkel Y. 1999. Neolithic Site of Ashkelon (Afridar Area L), 1997, 1998. *IEJ* 49:141–143.

Garfinkel Y. 2008. Layer III: Late Chalcolithic Remains. In Y. Garfinkel and D. Dag. *Neolithic Ashkelon* (Qedem 47). Jerusalem. Pp. 310–314.

Golani A. 2004. Salvage Excavations at the Early Bronze Age Site of Ashqelon, Afridar—Area E. *'Atiqot* 45:9–62.

Golani A. 2008. The Early Bronze Age Site of Ashqelon, Afridar—Area M. *'Atiqot* 60:19–51.

Golani A. 2013. The Transition from the Late Chalcolithic to the Early Bronze I in Southwestern Canaan—Ashqelon as a Case for Continuity. In E. Braun and V. Roux eds. *The Transition Late Chalcolithic to Early Bronze Age in the Southern Levant* (*Paléorient* 39/1). Paris. Pp. 95–210.

Golani A. 2014a. Ashqelon, Afridar Area N. *HA–ESI* 126 (December 31). http://www.hadashot-esi.org.il/report_detail_eng.aspx?id=13680&mag_id=121 (accessed July 25, 2018).

Golani A. 2014b. Ashqelon during the EB I Period—A Centre for Copper Processing and Trade. In A. Mączyńska ed. *The Nile Delta as a Centre of Cultural Interactions between Upper Egypt and the Southern Levant in the 4th Millennium BC* (*Proceeding of the Conference Held in the Poznań Archaeological Museum, Poznan, Poland 21–22, June 2012*) (Studies in African Archaeology 13). Poznań Pp. 119–137.

Golani A. 2017. Ashqelon. *HA–ESI* 129 (December 16). http://www.hadashot-esi.org.il/report_detail_eng.aspx?id=25352&mag_id=125 (accessed October 4, 2018).

Golani A. 2018. Ashqelon. *HA–ESI* 130 (May 28) http://www.hadashot-esi.org.il/report_detail_eng.aspx?id=25425&mag_id=126 (accessed Oct. 4, 2018).

Golani A. 2019. *Ashqelon Barne'a. The Early Bronze Age Site* I: *The Excavations* (IAA Reports 65). Jerusalem.

Golani A. 2022. *Ashqelon Barne'a. The Early Bronze Age Site* II: *The Finds* (IAA Reports 70). Jerusalem.

Golani A. Forthcoming. The Late Chalcolithic/Early Bronze I Transition in Southwestern Canaan and the Ashqelon Occupational Sequence. In M.J. Adams, V. Roux and F. Höflmayer eds. *Transitions during the Early Bronze Age in the Levant: Methodological Problems and Interpretive Perspectives (Proceedings of a Conference at the Albright Institute of Archaeological Research, Jerusalem, May 16–18, 2018)*.

Golani A. and Brink E.C.M. van den. 1999. Salvage Excavations at the Early Bronze Age IA Settlement of Azor. *'Atiqot* 38:1–49.

Golani A. and Milevski I. 1999. Ashqelon, Afridar (A). *ESI* 19:82*–83*.

Golani A. and Nagar Y. 2011. Newly Discovered Burials of the Chalcolithic and the Early Bronze Age I in Southern Canaan—Evidence of Cultural Continuity? In J.L. Lovell and Y.M. Rowan eds. *Culture, Chronology and the Chalcolithic: Theory and Transition* (*Levant* Suppl. S. 9). Oxford–Oakville. Pp. 84–96.

Golani A. and Paran N.-S. 2014. Ashqelon, Afridar Area E-2. *HA–ESI* 126 (December 21). http://www.hadashot-esi.org.il/report_detail_eng.aspx?id=13679&mag_id=121 (accessed July 25, 2018).

Golani A. and Paran N.-S. 2021. An Early Bronze Age Site at Ashqelon, Afridar (Area E-2). *'Atiqot* 103:45–89.

Golani A. and Pasternak M.D. 2020. Ashqelon, Afridar Area O-2. *HA–ESI* 132 (December 30). https://www.hadashot-esi.org.il/images//Ashqelon-8388-hangasha.pdf (accessed May 16, 2002).

Golani A. and Segal D. 2002. Redefining the Onset of the Early Bronze Age in Southern Canaan: New Evidence of ^{14}C Dating from Ashqelon Afridar. In E.C.M. van den Brink and E. Yannai eds. *In Quest of Ancient Settlements and Landscapes: Archaeological Studies in Honour of Ram Gophna.* Tel Aviv. Pp. 135–154.

Gophna R. 1997. The Southern Coastal Troughs as EB I Subsistence Areas. *IEJ* 47:155–161.

Gophna R. 2002. Afridar 1968: Soundings in an EB I Occupation of the "Erani C" Horizon. In E.D. Oren and S. Ahituv. *Aharon Kempinski Memorial Volume: Studies in Archaeology and Related Disciplines* (Beer Sheva XV). Be'er Sheva'. Pp. 129–137.

Gophna R. 2004. Excavations at Ashqelon, Afridar—Introduction. *'Atiqot* 45:1–8.

Gophna R. and Liphschitz N. 1996. The Ashqelon Trough Settlements in the Early Bronze Age I: New Evidence of Maritime Trade. *Tel Aviv* 23:143–153.

Haimi Y. 2009. Ashqelon. *HA–ESI* 121 (June 28). http://www.hadashot-esi.org.il/Report_Detail_Eng.aspx?id=1119&mag_id=115 (accessed November 26, 2009).

Kempinski A. and Gilead I. 1991. New Excavations at Tel Erani: A Preliminary Report of the 1985–1988 Seasons. *Tel Aviv* 18:164–191.

Khalaily H. 2004. An Early Bronze Age Site at Ashqelon, Afridar—Area F. *'Atiqot* 45:121–159.

Ktalav I. This volume. Molluscs from the Early Bronze Age Site at Ashqelon Afridar, Area N.

Levy T.E. 1987. *Shiqmim* I: *Studies concerning Chalcolithic Societies in the Northern Negev Desert, Israel (1982–1984)* (BAR Int. S. 356). Oxford.

Mazar A. and Miroschedji P. de. 1996. Hartuv: An Aspect of the Early Bronze I Culture of Southern Israel. *BASOR* 302:1–40.

Nir Y. 2008. The Wells of Ashkelon. In L.E. Stager, J.D. Schloen and D.M. Master eds. *Ashkelon* 1: *Introduction and Overview (1985–2006)*. Winona Lake. Pp. 105–106.

Oren E.D. and Yekutieli Y. 1992. Taur Ikhbeineh: Earliest Evidence for Egyptian Interconnections. In E.C.M. van den Brink ed. *The Nile Delta in Transition:4th–3rd Millennium B.C. (Proceedings of*

the Seminar Held in Cairo, 21–24 October 1990, at the Netherlands Institute of Archaeology and Arabic Studies). Tel Aviv. Pp. 361–384.

Oron M. This volume. The Flint Assemblage from Ashqelon Afridar, Area N.

Paran N.-S. 2014. Ashqelon, Marina *HA–ESI* 126 (December 31). http://www.hadashot-esi.org.il/report_detail_eng.aspx?id=13693&mag_id=121 (accessed October 4, 2018).

Pines M. This volume. Early Bronze Age I Fauna Remains from Ashqelon Afridar, Area N.

Rosenberg D. and Golani A. 2012. Groundstone Tools of a Copper-Smith's Community: Understanding Stone-Related Aspects of the Early Bronze Age Site of Ashqelon Barne'a. *JMA* 25:27–51.

Roshwalb A.F. 1981. *Protohistory in Wadi Ghazzeh: A Typological and Technological Study Based on the Macdonald Excavations.* Ph.D. diss. University of London. London.

Segal I., Halicz L. and Kamenski A. 2004. The Metallurgical Remains from Ashqelon, Afridar—Areas E, G and H. *'Atiqot* 45:311–330.

Shalev S. and Northover J.P. 1987. Chalcolithic Metal and Metalworking from Shiqmim. In T.E. Levy ed. *Shiqmim* I: *Studies concerning Chalcolithic Societies in the Northern Negev Desert, Israel (1982–1984)* (BAR Int. S. 356). Oxford. Pp. 357–371.

Shamir O. 2003. Spindle Whorls. In A. Golani. *Salvage Excavations at the Early Bronze Age Site of Qiryat Ata* (IAA Reports 18). Jerusalem. Pp. 209–215.

Sharvit J., Galili E., Rosen B. and Brink E.C.M. van den. 2002. Predynastic Maritime Traffic along the Carmel Coast of Israel: A Submerged Find from North 'Atlit Bay. In E.C.M. van den Brink and E. Yannai eds. *In Quest of Ancient Settlements and Landscapes: Archaeological Studies in Honour of Ram Gophna.* Tel Aviv. Pp. 159–166.

Toueg R. 2010. Ashqelon. *HA–ESI* 122 (May 26). http://www.hadashot-esi.org.il/Report_Detail_Eng.aspx?id=1401&mag_id=117 (accessed March 3, 2016).

Tufnell O. 1958. *Lachish* IV *(Tell ed-Duweir): The Bronze Age* (The Wellcome Archaeological Research Expedition to the Near East Publications IV) (2 vols.). London–New York–Toronto.

Wallach Z. 2003. Ashqelon A. *HA–ESI* 115:58*–59*.

Yekutieli Y. 2000. Early Bronze Age I Pottery in Southwestern Canaan. In G. Philip and D. Baird eds. *Ceramics and Change in the Early Bronze Age of the Southern Levant* (Levantine Archaeology 2). Sheffield. Pp. 129–152.

Yekutieli Y. 2001. The Early Bronze IA of Southwestern Canaan. In S.R. Wolff ed. *Studies in the Archaeology of Israel and Neighboring Lands in Memory of Douglas L. Esse* (SAOC 59/ASOR Books 5). Chicago–Atlanta. Pp. 659–688.

Yekutieli Y. and Gophna R. 1994. Excavations at an Early Bronze Age Site near Nizzanim. *Tel Aviv* 21:162–185.