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CLAY BOAT MODELS FROM YAVNEH-YAM

Toward an Understanding of Their Chronology, Function, and Use

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ABSTRACT

This study presents an assemblage of complete and fragmented clay-made boat models uncovered during controlled archaeological excavations from Yavneh-Yam, which is located on the southern coastal plain of Israel. First, the relevant contexts from the Persian and early Hellenistic periods at the site that yielded these models are contextualized within the framework of contemporary geopolitical dynamics. This is in order to clarify the geopolitical status of Yavneh-Yam during these periods and the crucial role of the Phoenician agency. A detailed presentation of the boat models follows, including their typology, petrography (thin-section), and technological examination. Finally, we discuss a possible function and use of this group of votive objects, with far-reaching implications for deciphering the possible Phoenician ritual practices related to Phoenician seafaring activity in the Mediterranean.

KEYWORDS: Palestine, Yavneh-Yam, Persian, Hellenistic, clay boat models, Phoenician, popular cult

Yavneh-Yam is located on the Mediterranean coast, south of Kibbutz Palmachim, approximately equidistant (20 km apart) from Ioppe/Jaffa and Azotus/Ashdod. It is situated along a shallow natural bay, delimited in the north by a low *kurkar* (fossilized dune sandstone) cape and in the south by a high and steep *kurkar* promontory protruding into the sea and creating a good anchorage place. Visited by many scholars from the nineteenth century onward, it was identified as the harbor town of inland Yavneh (Iamneia) (Fischer 2008: 2073). The latter, which has been identified with Tel Yavneh, is situated about 7 km southeast from the harbor and was famous for its part in the history of Roman-period Judaism after the First Jewish War against the Romans (“Yavneh Judaism”; Shahar 2005) (Fig. 1).

The harbor (which is in fact a natural protected anchorage) is mentioned in various written sources, among them in the Ugarit and **Amarna tablets**, where it is called “**harbor**” (Stieglitz 1974), followed by Greek, Latin, Aramaic, and Arabic sources calling it “the harbor of Iamneia (Yavneh),” Ἰαμνεϊῶν λιμὴν: **Ptolemy, Geographia 5.16.2**, recalls the name given in **2 Macc 12:9**, also known as “harbor of Iamneia,” in Syriac. In Aramaic it is *maḥouza d’Yamnīn / maoza d’Yamnias / mao(u)za Iamnias* and occurs in late fifth- and early sixth-century CE sources (Peter the Iberian 123 [ed. Raabe 1895: 114–15, 117–19; ed. Horn and Phenix 2008: 240–41]; LXXXII–LXXXIII: “the fortress of Jamnia, which is near

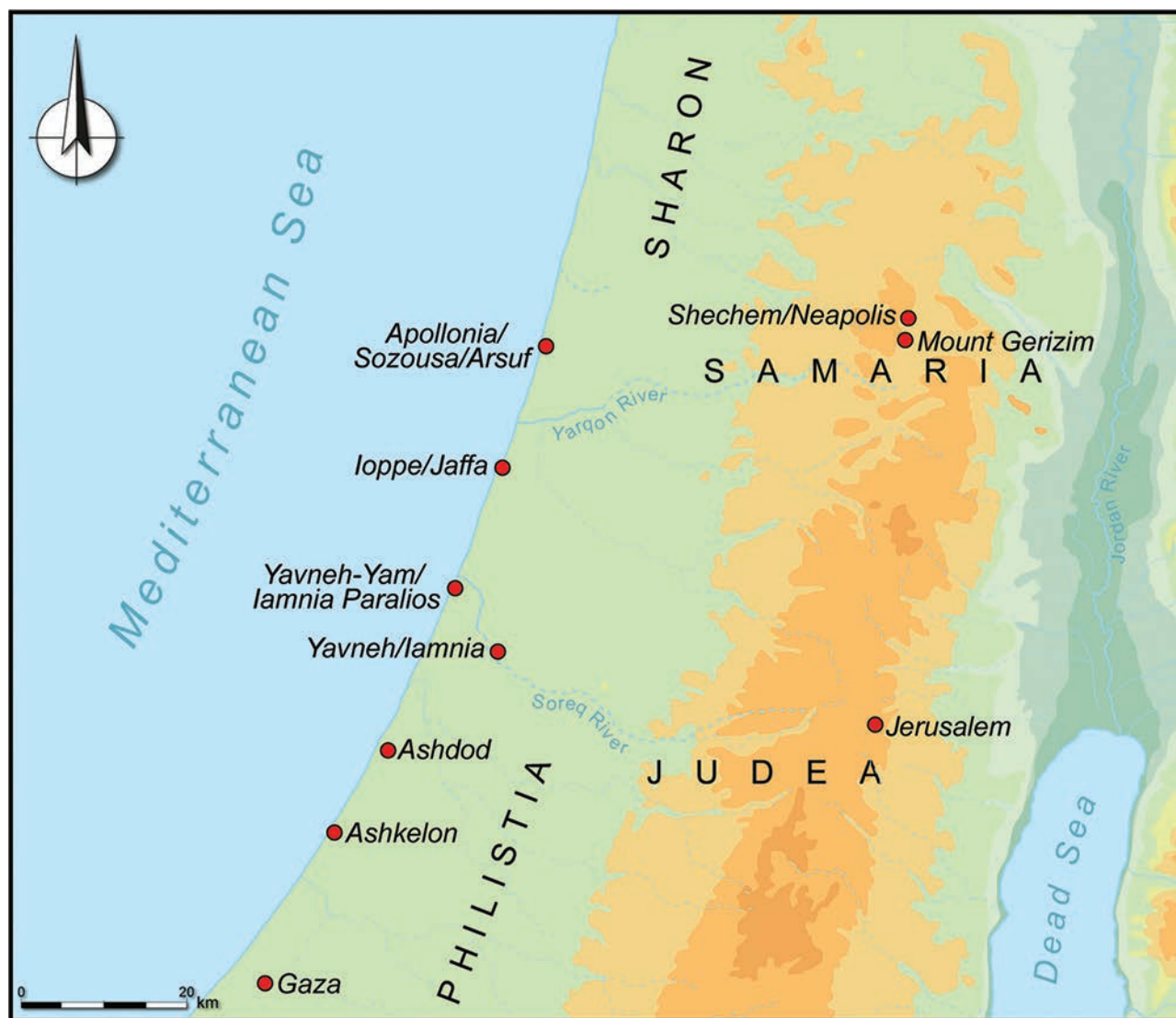


FIG. 1

Location map. (Drawing by I. Ben-Ezra, Institute of Archaeology, Tel Aviv University; courtesy of the authors.)

the sea”; cf. John Rufus, *Plerophoriae* 76 [ed. Nau 1912: 130–31]; *ACO* III: 38, 51, 146–47). From these sources it is obvious that the settlement functioned as a harbor town of inland Iamneia/Yavneh (Fischer 2008: 2073; Fischer and Taxel 2007; Taxel 2022).¹ This is made explicit by Pliny the Elder (*Naturalis historia* 5.14.68) who mentions *Iamneae duae, altera intus* (the two towns of Iamneia, one of them inland). As to the linkage between the Harbor of Yavneh and inland Yavneh, unfortunately, in the well-known Madaba Map of the mid-sixth century CE, the place supposed to be that of

Yavneh-Yam was not preserved, but inland Yavneh is denominated there *Ἰαβνηλ ἢ καὶ Ἰαμνία*, from which it is evident that Iamneia equally means Yavneh (Donner 1992: 57).

Exploration of the site via surveys and excavations was summarized in a number of publications (see Piasetzky-David et al. 2020: 471–72). Intensive archaeological excavations were carried out in Yavneh-Yam between 1992 and 2011, initiated and directed by Moshe Fischer and from 2005 onward co-directed by Itamar Taxel on behalf of the Department of Classics and the Institute of

Archaeology, Tel Aviv University (for preliminary reports, see, e.g., Fischer and Taxel 2014). They have shown that the site was continuously inhabited between the MBA II (Stratum XI) and the early Crusader period (twelfth century CE, Stratum I). The main excavation areas were concentrated on and around the promontory and to its east (Areas A, B, B1, B2, C, and T), revealing remains from the Iron Age (Strata X–VIII), Persian (Stratum VII), and Hellenistic periods (Stratum VI), followed by remains from the Early Roman (Stratum V), Late Roman (Stratum IV), and Byzantine periods (Stratum III). Remains from the Early Islamic period (Stratum II) were limited mainly to the promontory and its surrounding area (Fig. 2). In what follows, we first present a review of selected architectural complexes of the Persian (Stratum VII) and Hellenistic (Stratum VI) periods that yielded an unusually high number of clay boat models. This is followed by a detailed presentation of these objects and a discussion of their possible function and use in Phoenician ritual practices.

Stratum VII (Persian Period, Fifth–Fourth Centuries BCE)

After what seems to be a hiatus in the permanent occupation of the site following a destruction of the late Iron Age settlement of Stratum IX, attributed to the campaign of Nebuchadnezzar II of 604 BCE (Fantalkin 2001: 133), and some squatters' activities in the early sixth century BCE (Stratum VIII), a renewal of the settlement occurred in the early fifth century BCE, under Persian-Achaemenid rule. Remains of this phase were unearthed mostly in Area A, located on the saddle between the promontory and the seashore cliff, and to a lesser extent in Areas B and C (on the sea cliff north of Area A and on the promontory, respectively). These remains represent sections (including a complete room) of a number of buildings, the walls of which were built according to the so-called Phoenician ashlar-piers building technique that combines ashlar in field-stone walls. The finds from this layer (mainly in Area A) include a large inventory of both local and imported pottery. The imports consist of Aegean amphorae and mainly Athenian black- and red-figure pottery of the early and mainly late fifth century as well as the early

fourth century BCE, in addition to a large number of fragments of black-glazed vessels, either plain or decorated with stamped and rouletted motifs on the bottom (Klinger 2003). Out of the painted pottery types, a great amount can be attributed to kraters decorated with bands of laurel leaves, checkerboard squares, and meanders, often including mythological figures. These ceramics represent the impact of the Athenian mass production and its diffusion in eastern Mediterranean coastal sites (Nunn 2014). A small limestone altar and some clay figurines of Greek-Persian style were also found together with Milesian and Phoenician coins, mainly of the fourth century BCE, which pinpoint the end of this complex's occupation. Although Yavneh-Yam is not mentioned in the main sources of the Persian period, which relate to the coast of Palestine (such as Herodotus or Pseudo-Scylax), the inscription on the sarcophagus of Eshmunazar II (KAI 14) provides reliable information that the rule of Sidon had extended over the coastal region of the Sharon Plain from Dor to Jaffa already toward the end of the sixth century BCE (Briant 2002: 607–8; Elayi 2004; Fantalkin and Tal 2009). Taking into consideration both the material culture of Stratum VII as well as the later historical evidence, which points to the existence of a flourishing Sidonian community in Yavneh-Yam during the Hellenistic period (below), it is possible that during the Persian period Sidon's authority extended further south as far as Yavneh-Yam. On the other hand, considering Tyre's control of the southern coast of Palestine (Pseudo-Scylax §104; see Stern 1984: 8–12) and Yavneh-Yam's connection to the Tyrian cult of Melqart/Heracles during the Hellenistic period (Farhi and Bachar 2020), one may assume a certain degree of Tyrian involvement in this area as well. It is not impossible therefore that both major Phoenician cities, Sidon and Tyre, shared their use of Yavneh-Yam's natural anchorage during the Persian period. It is worth mentioning that from the Middle Bronze Age until modern times this anchorage provided the only natural shelter for seagoing vessels between Tel Ridan (south of Gaza) and Jaffa (Galili and Sharvit 1991). The Yavneh-Yam excavations have demonstrated, through the combination of the "Phoenician" building technique and Greek ceramics, the Phoenician supremacy and the permanent

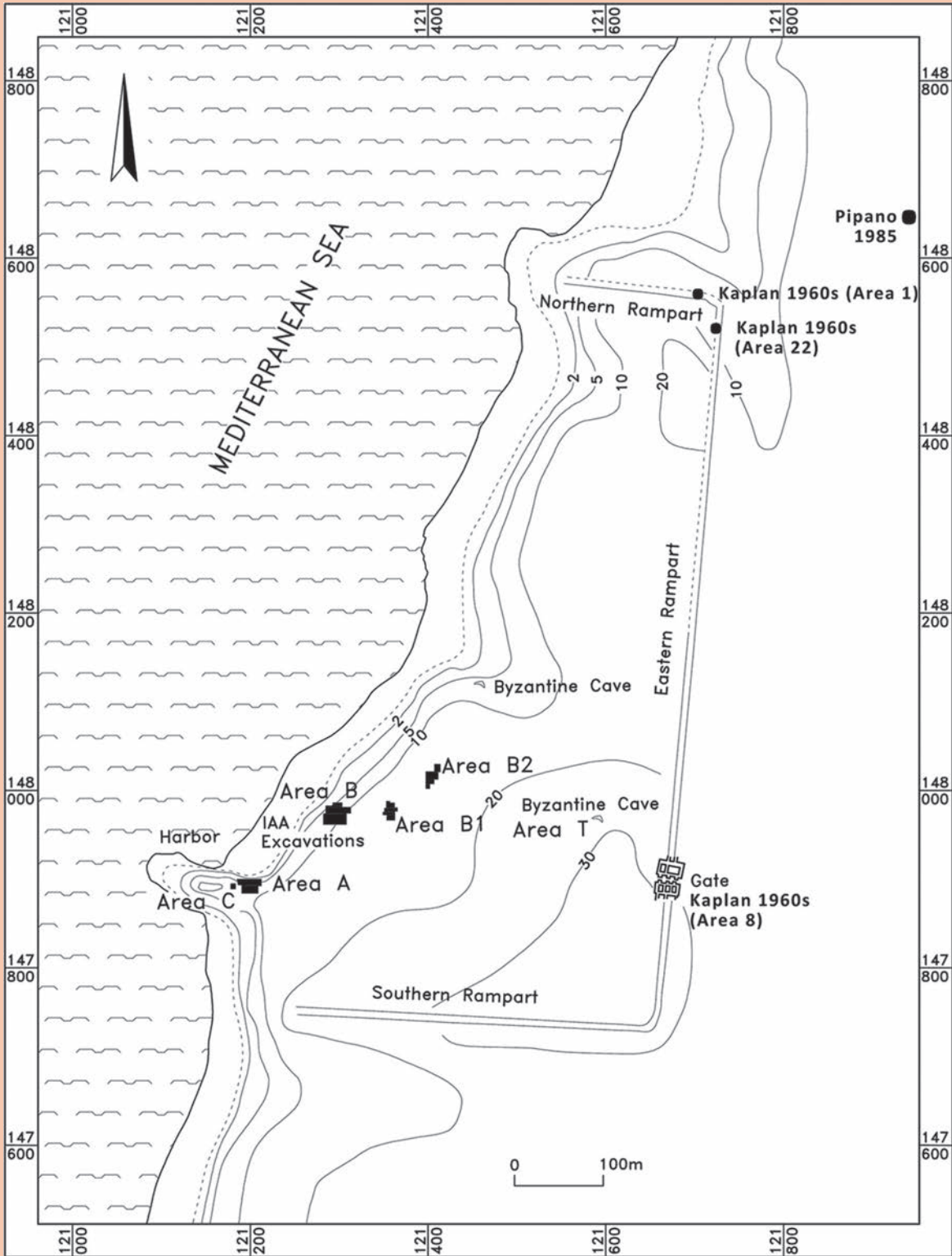


FIG. 2
 Yavneh-Yam, site map with indication of areas of excavations. (Prepared by I. Ben-Ezra, Institute of Archaeology,
 Tel Aviv University; courtesy of the authors.)

supply of Greek imports, which supported the diverse population groups along the Levantine coast on the eve of Alexander the Great's conquest.

Stratum VI (Hellenistic Period, Third–Second/First Centuries BCE)

The Hellenistic period aroused the interest in Yavneh-Yam of both archaeologists and historians already in 1986 when during a preliminary survey at the promontory of the southern edge of the site a fragmentary Greek inscription was discovered. The inscription is carved on a hard limestone slab (23 × 33 cm preserved dimensions) and consists of a letter dated to June/July 163 BCE and a *hypomnema* (a petition) representing the correspondence between the Seleucid king Antiochus V and the citizens of Yavneh-Yam. The main conclusion from the inscription is that the “Sidonian” citizens of the “Harbor of Iamneia” (Yavneh-Yam) who rendered (naval) services to the grandfather of Eupator, Antiochus III, were to do so again for Eupator in 163 BCE (Isaac 1991; *CPE* III, no. 2267). For these services the Sidonians at the Harbor of Iamneia were granted the same concessions as their ancestors. It is worth mentioning that these interactive talks regarding services in exchange for privileges occur just a few years after the outbreak of the Maccabean revolt. Given the information from 2 Maccabees (12:9, 39–46) about the fire incident provoked by Judas Maccabeus in the Harbor of Iamneia—which, if it truly occurred, should have happened before 161 BCE (Maccabeus's death)—the Yavneh-Yam inscription represents a life document of the real concern of both king and Hellenized citizens trying to overcome past conflicts to be prepared for any danger to come.

Archaeological remains from the Hellenistic period were unearthed in Yavneh-Yam mainly in Area A, where a building was found that had been erected over the ruins of another one of the Persian period, reusing some of the latter's walls and building materials. Some of the Hellenistic-period building stones were partly covered with painted stucco. This area also yielded a large number of murex shells, apparently evidencing purple production somewhere nearby. The Hellenistic stratum

contained a large variety of finds shedding light on the character of the society that lived there on the eve of the Hasmonean destruction, as well as on the period and the circumstances when the destruction happened. The pottery of Stratum VI can be divided into imported fine table ware and amphorae, and local semi-fine and everyday ware. The imported (eastern Mediterranean) table ware included fishplates, echinus bowls, Eastern Sigillata A bowls, mold-made bowls, a complete krateriskos, and lagynoi. A great number of imported amphorae has been retrieved in the Hellenistic destruction layer of the building complex in Area A. The great majority of the amphorae came from Rhodes, but some were of Chian and Thasian origin. An almost complete amphora of south Italian origin bears the name of LLVC—a wine producer from Brundisium (Brindisi) from ca. 100 BCE. A rather outstanding find is a handle of a locally made jug bearing a stamp of a certain Aristokrates, the agoranomos, dated to year 180 of the Seleucid era, that is 133/132 BCE. All these ceramics corroborated by numismatic evidence point rather solidly to an occupation until the late second century BCE, hardly much beyond it. Glass vessels and metal objects can be added to the ceramic assemblage retrieved from the Hellenistic stratum of Yavneh-Yam, as well as a glass pendant depicting the Greco-Egyptian god Harpokrates and clay figurines, notably that of a harp player (Fischer 2004; Fischer and Jackson-Tal 2003).

Architectural remains and inscriptions found on the island of Delos attributed to citizens from Iamneia—most probably Yavneh-Yam (rather than inland Yavneh)—who erected sanctuaries for their gods on the holy mountain of the island place the Iamnitai in a larger frame of connections within the eastern Mediterranean *koiné*. This must be seen against the background of the complex relationships between the Hellenized cities and the Maccabees during the second century BCE. Although according to 2 Macc 12:9 Judas Maccabeus “attacked the Jamnites (Iamnitai) by night and set fire to the harbor and the fleet, so that the glow of the light was seen in Jerusalem, thirty miles distant” (NRSV), archaeological evidence shows that the town enjoyed around fifty years of continuing prosperity. Then it was finally destroyed, as part of the conquests attributed to John Hyrcanus I toward

the end of his reign or the beginning of that of Alexander Jannaeus (sometime around 110–100 BCE).

This introduction on the Persian- and Hellenistic-period settlement of Yavneh-Yam may serve the greater context in which the clay handmade boat models recovered from the site will be addressed. In what follows, two complete and several fragments of additional boat models that came from Persian and mixed Persian-Hellenistic contexts at the site are presented and discussed. Following their description, which includes thin-section petrographic analysis and technological examination, we will consider the possible function and use of this group of votive objects.

Catalog of Boat Models

Cat. no. 1 (Fig. 3)

Type: Boat model (monoxylon)

Find context: Season 1993, Area A, L321, B3086/B3088

Locus 321 is an occupational layer (delimited by two walls) dated to the Persian period based on the pottery finds, among them a wheelmade open lamp and an Attic red-figure fragment.

State of preservation: Complete (after restoration of rim)

Measurements: max. H.: 7.2 cm; max. L.: 36.7 cm; W. 9 cm; min. T.: 0.4 cm

Color: Yellow-orange, Munsell 7.5YR 8/6

Technical observations: Handmade (knife-pared finishing on base)

Description: The boat model is in the shape of a dugout canoe (monoxylon) with infolded rim, a flat bottom, and a rounded yet projecting outward prow and stern.

Date: Persian

Cat. no. 2 (Fig. 4)

Type: Boat model (monoxylon)

Find context: Season 2005, Area A, L849, B7567

Locus 849 is an occupational layer dated to the late fourth century BCE based on the pottery finds, among them holemouth-rim basket handle jars.

State of preservation: Complete (after restoration of rim and other parts of body)

Measurements: max. H.: 5.5 cm; max. L.: 34.5 cm; W. 7 cm; min. T.: 0.4 cm

Color: Reddish-orange, Munsell 5YR 8/7

Technical observations: Handmade (knife-pared finishing on base)



FIG. 3

Ceramic handmade ship model, cat. no. 1. (Photos by S. Flit; drawings by N. Earon, Institute of Archaeology, Tel Aviv University; courtesy of the authors.)

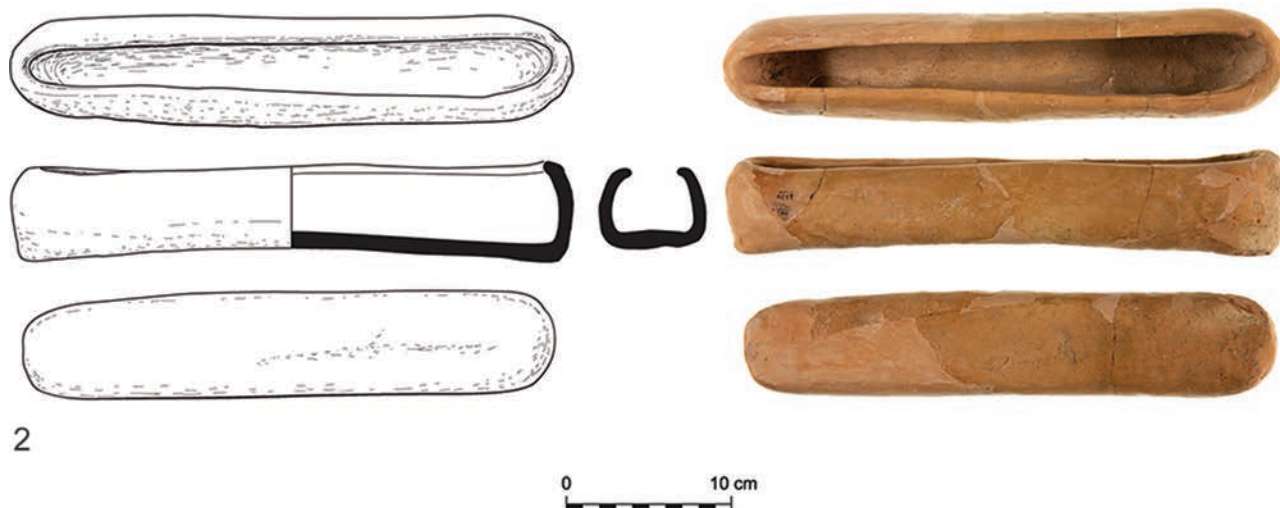


FIG. 4

Ceramic handmade ship model, cat. no. 2. (Photos by S. Flit; drawings by N. Earon, Institute of Archaeology, Tel Aviv University; courtesy of the authors.)

Description: The boat model is in the shape of a dugout canoe (monoxylon) with infolded rim, a flat bottom, and a rounded prow and stern.

Date: Persian-Hellenistic

Cat. no. 3 (Fig. 5, no. 3)

Type: Boat model

Find context: Season 1997, Area A, L757, B7161

Locus 757 is a destruction layer dated to the second half of the fourth century BCE.

State of preservation: Broken, preserving about one-sixth of the original size

Measurements: max. H.: 5.8 cm; max. L.: 16.2 cm; W. 5.1 cm; min. T.: 0.4 cm

Color: Reddish-orange, Munsell 5YR 8/7

Technical observations: Handmade (knife-pared finishing on base)

Description: The boat has a cut rim, flat bottom, and a rounded yet projecting outward prow or stern.

Date: Second half of the fourth century BCE

Cat. no. 4 (Fig. 5, no. 4)

Type: Boat model

Find context: Season 1997, Area A, L757, B7161

Locus 757 is a destruction layer dated to the second half of the fourth century BCE.

State of preservation: Broken, preserving about one-sixth of the original size

Measurements: max. H.: 5 cm; max. L.: 2.2 cm; W. 6.6 cm; min. T.: 0.6 cm

Color: Reddish-orange, Munsell 5YR 8/7

Technical observations: Handmade (knife-pared finishing on base)

Description: flat bottom and a rounded prow or stern

Date: Second half of the fourth century BCE

Cat. no. 5 (Fig. 5, no. 5)

Type: Boat model

Find context: Season 1992, Area A, L106, B1015

Locus 106 is a fill with Persian and Hellenistic pottery fragments.

State of preservation: Broken, preserving about one-sixth of the original size

Measurements: max. H.: 2.6 cm; max. L.: 4 cm; W. 6.1 cm; min. T.: 0.6 cm

Color: Reddish-orange, Munsell 5YR 8/7

Technical observations: Handmade (knife-pared finishing on base)

Description: flat bottom and a rounded prow or stern (similar to cat. no. 4 and may relate to the same vessel, which would probably have looked like cat. no. 2)

Date: Persian-Hellenistic

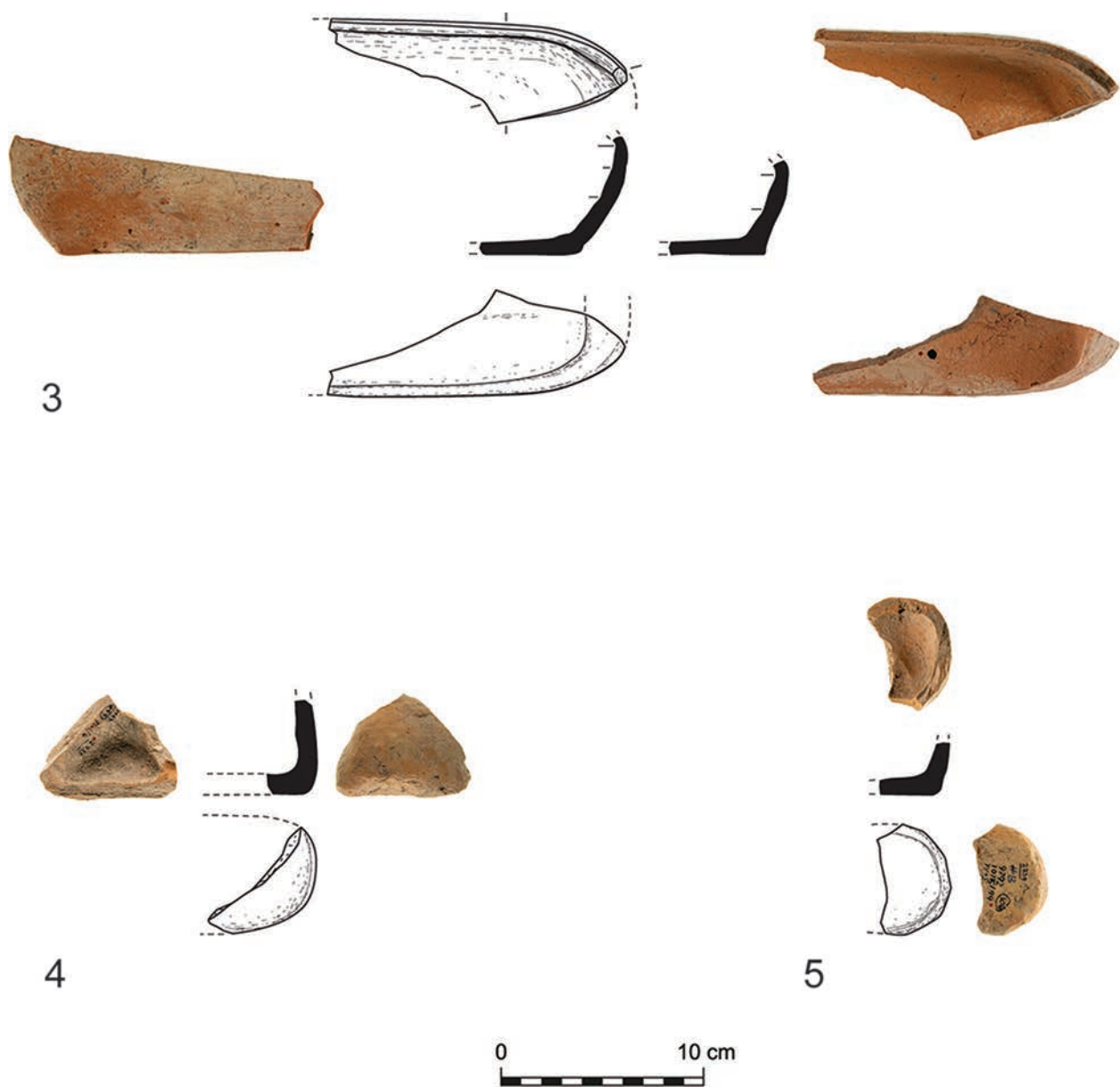


FIG. 5

Ceramic handmade ship model, cat. nos. 3–5 (broken, partially preserved). (Photos by S. Flit; drawings by N. Earon, Institute of Archaeology, Tel Aviv University; courtesy of the authors.)

In addition, no less than additional 12 fragments of rim and/or body (not exceeding 10 cm in length and 5 cm in width) of ceramic handmade boat models were documented in the excavations of Area A (Fig. 6). Their context dated to either the Persian and/or Hellenistic periods. Six came from the same locus (849; see cat. no. 2 for context) from two different baskets (7468, 7567; Fig. 7, no. 6), and

they may have belonged to two different vessels because of differences in their rim shape (incurved vs. infolded rim). These six fragments are divided between two rim and body fragments (resembling our cat. nos. 1 and 2) and four body fragments; all seem to be made from Phoenician ware, judging from eye inspection (5YR 8/7 in color). The remainders are five (incurved) rim and body fragments

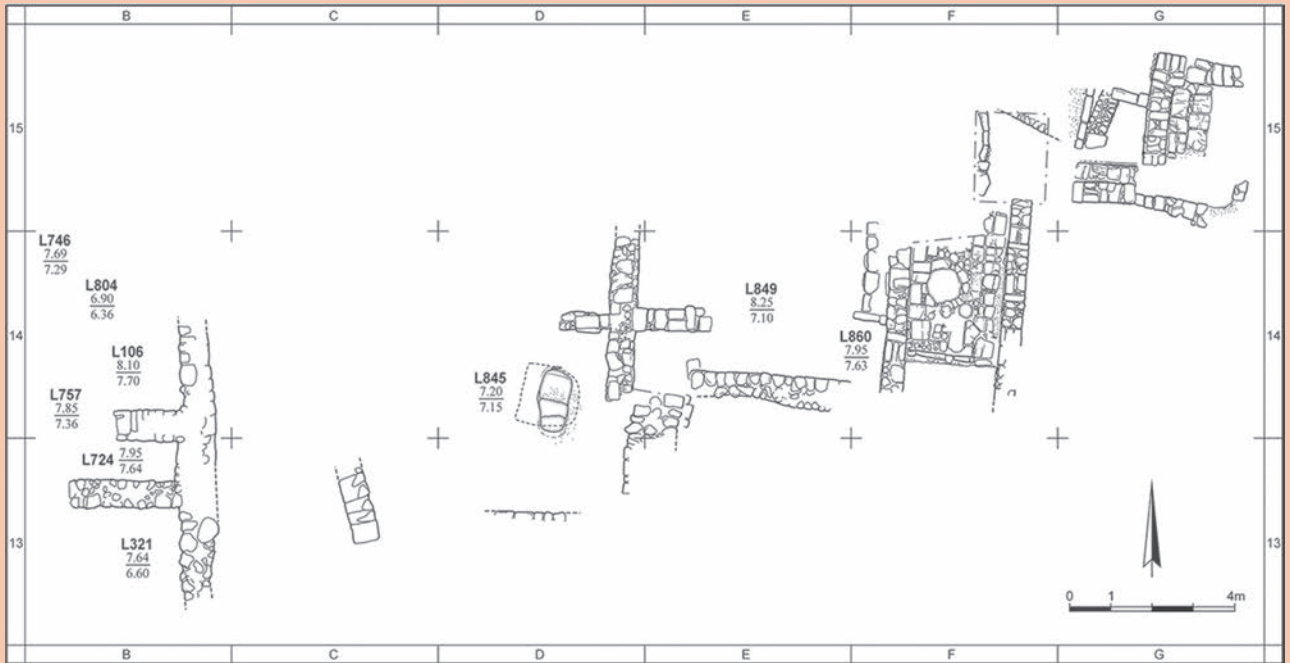


FIG. 6
Yavneh-Yam, plan of Area A. (Drawing by S. Pirsky; courtesy of the authors.)

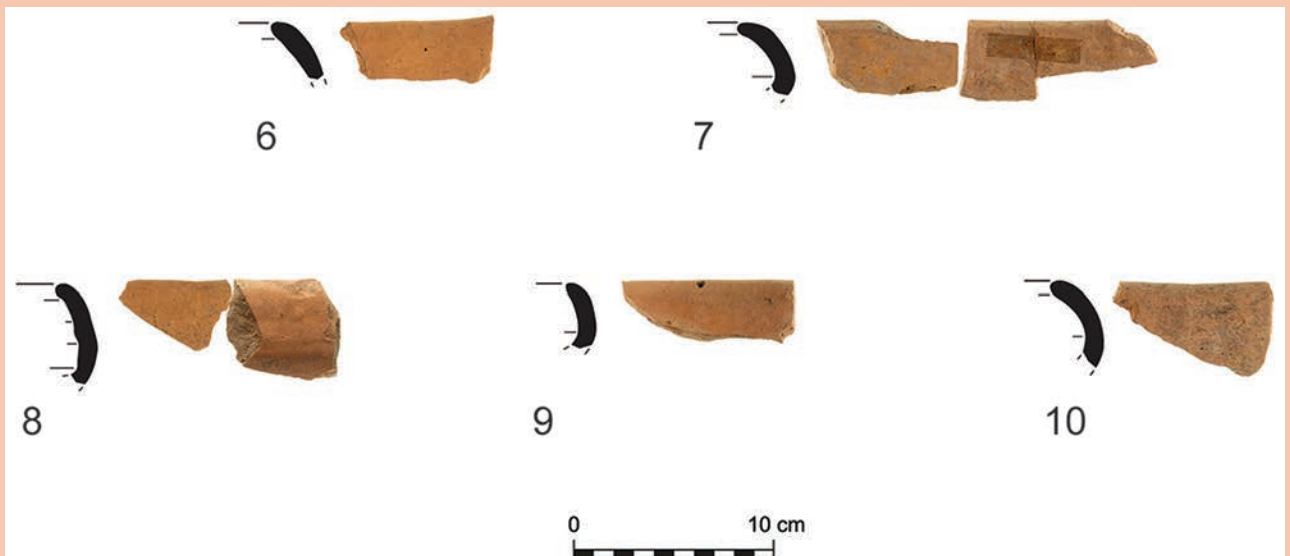


FIG. 7
Ceramic handmade ship model fragments. (Photos by S. Flit; drawings by N. Earon, Institute of Archaeology, Tel Aviv University; courtesy of the authors.)

(L106/B1030, L724/B7051 [Fig. 7, no. 7], L746/B7157 [Fig. 7, no. 8], L804/B7295 [Fig. 7, no. 9], L860/B7565 [cf. Fig. 7, no. 10]) and one body fragment (L845/B7422). These six fragments may have belonged to two or more vessels given differences in their ware, whose color is quite similar (5YR 8/7). They too seem to be made from Phoenician ware, according to eye inspection. Their contexts are attributed either to occupational layers of Persian-period date (L804, L845, L860) or of the second half of the fourth century BCE (L724, L746), or to a fill of Persian-Hellenistic date (L106).

Petrography and Technological Examination

Macroscopic Description

Six samples of boat models were analyzed by thin-section petrographic analysis (hereafter TSPA),² and fifteen sherds were documented macroscopically with a digital microscope on fresh breaks. The surfaces are typically yellow-orange to reddish-orange, occasionally with a reddish core and yellow-orange to reddish-orange outer zones. The following fashioning steps were involved in their production: First, their bases were shaped from an oval clay slab. One large coil was subsequently added around the slab and stretched following a vertical translation movement with discontinuous symmetric pressure (e.g., coiling technique by drawing, see Roux 2019: 55). Finally, the incurved or infolded rim of the boat was added with an additional small coil shaped during a leather-hard stage. One particular model possesses a slanted rim, cut when the clay was still leather-hard (referred to as YY₃). Their outer and inner surfaces were either smoothed on wet or leather-hard clay. Additionally, all models display diagnostic features of shaving on leather-hard clay. This technique was especially applied at their bases to produce a more even surface and a streamlined junction with their lower walls. Imprints of vegetal matters are visible on the base of some models (YY₁–YY₂), as well as over-thicknesses due to an excess of water during the smoothing process.

TSPA Description

Samples were grouped into one main petrofabric, which was further divided into two sub-fabrics (A₁–2). The matrix of petrofabric A₁ is compact, carbonatic, and light brown /

yellowish in XPL (brown/tan in PPL), non- to slightly optically active. The fabric is very well sintered, and voids occurred rarely. The silt fraction comprised rare subrounded and equant quartz (less than 1%), rare fine calcite crystals of about 10µm (less than 1%), and hornblende, epidote, and plagioclase. Hematite appears as small spherical reddish or orange particles (10–150 µm, 5%) or as stains within the matrix. Sand-sized inclusions comprise rare subangular and equant quartz grains, often polycrystalline with an undulose extinction (up to 50 µm and between less than 1%), and occasional, subrounded micritic and biogenetic limestone fragments (~1%, up to 200 µm). Very rare non-optically active, orange-colored spherical grains of glauconite appear between 1% and 3%. Common planktonic foraminifera are present, such as species of Globigerinida (*Acarinina* sp.), sometimes filled with iron-rich minerals as well as very rare small coralline algae (*Amphiroae* sp., up to 50 µm). Other planktonic and benthic foraminifera present decarbonated internal structure, precluding the determination of their genera and age. The decomposed carbonate components suggest a firing temperature above 750°C for most samples. Fine ostracod shell and angular foliate mollusc fragments are rare. Lighter colored streaks of fine fossiliferous calcareous clays are sometimes visible within the matrix. Minor variations pertaining to the granulometric fraction size can be observed for group A₁.

Petrofabric A₂ is clayey, carbonatic, orange-tan to tan in XPL and PPL. This variant comprises the same silt and sand inclusions as the above-described petrofabric A₁. However, two elements differ with the presence of fine-grained chert at different levels of erosion (~3%, up to 120µm) and common subangular to subrounded quartz grains, polycrystalline with an undulose extinction (up to 150µm, ~15%). Given the presence of both chert and the rounded nature of the quartz (indicating a coastal environment), it is unlikely that the quartz was added as a temper to the clay mixture.

Interpretation

Only one sample belongs to petrofabric A₂ (YY₁), while five samples are assigned to A₁ (YY₂–6), in addition to the fifteen sherds analyzed through stereomicroscopy.³ The evidence from TSPA indicates that the origin of both petrofabrics, A₁ and A₂, can be located on the

southern Lebanese coast. This assumption is supported by the common presence of Globigerinida *Acarinina* sp., a rounded multichambered genus, found in deposits dating from the Paleocene into the Eocene period (Haynes 1981: 318, 343; Bettles 2003b: 145). The latter is not found in the Middle/Upper Eocene boundary but appears frequently in Early to Middle Eocene calcareous formations in the Levant. They are usually identified in areas extending from north of Sidon to south of Tyre (Boudagher-Fadel and Clark 2006). Additionally, outcrops of foraminiferous marls of various date of deposition are found throughout the Levantine coast. The lithology of southern Phoenicia during the Paleogene period corresponds to a “chalky-marly-globigerinal” facies (Beydoun 1977: 332), fitting the petrofabric identified. In southern Lebanon, the Paleocene is overlain by cherty, marly, chalky limestones of the Lower Eocene, which in turn are superimposed by chalky Middle Eocene marls (Dubertret 1963; Bettles 2003a, 2003b). The presence of chert in petrofabric A2 is also indicative, as chert is connected with either Senonian or Eocene exposures in the region. Lower Eocene appears to contain frequent chert bands (Beydoun 1977). Such exposures are found predominantly between Tyre and Sidon and north of Tripoli. In the coastal area of the ‘Akkar Plain between Tripoli and Tartous, it is commonly accompanied by mafic minerals of volcanic origin (Goren, Finkelstein, and Na’aman 2004: 110). Accordingly, the absence of volcanic fragments still points toward a production between Tyre

and Sidon, such as petrofabric A1. Hence, it is plausible to assume that both petrofabrics were made from Lower Eocene clays from this region.

The use of this clay type was identified within the Tell-el Burak Iron Age II–III ceramic assemblage (Schmitt et al. 2018: Group A1) as a local production. The use of foraminiferous marls (and especially Neogene marls) for pottery production is well-documented in the region (Bettles 2003a, 2003b; Goren, Finkelstein, and Na’aman 2004: 134–36; Badreshany and Genz 2009; Waiman-Barak 2020, Group 2a; Waiman-Barak and Gilboa 2016, Fabric B; Waiman-Barak et al. 2017, Group B; Griffiths 2003a, 2003b; Ownby 2010; Ownby and Griffiths 2009). During the Persian period, a similar fabric was used for pottery production at Sidon, Sarepta, and Tyre, and especially fabric FC1A from Sarepta kilns (Bettles 2003a, 2003b). To summarize: all ship models were made from Paleogene (most likely Lower Eocene) fossiliferous marls from southern Phoenicia, more precisely from between Sidon and Tyre, and were imported to Yavneh-Yam (Table 1).

Discussion

The complete clay boat models from Yavneh-Yam most closely resemble two clay boat models of monoxylons (i.e., canoes made from a single piece of timber) from collections published by Basch (1987: 56), which presumably

TABLE 1 SAMPLES AND AFFILIATED PETROFABRICS.

No.	Area, Locus	Basket	Dating	Petrofabric	Suggested Provenance	Fig.
YY1	Area A, L321	B3086/B3088	Persian	A2	Southern Phoenicia between Tyre and Sidon	Fig. 3
YY2	Area A, L849	B7567	Persian-Hellenistic late fourth century BCE	A1	Southern Phoenicia between Tyre and Sidon	Fig. 4
YY3	Area A, L757	B7161	Persian second half of the fourth century BCE	A1	Southern Phoenicia between Tyre and Sidon	Fig. 5, no. 3
YY4	Area A, L757	B7161/6	Persian second half of the fourth century BCE	A1	Southern Phoenicia between Tyre and Sidon	Fig. 5, no. 4
YY5	Area A, L106	B1015	Persian-Hellenistic	A1	Southern Phoenicia between Tyre and Sidon	Fig. 5, no. 5
YY6	Area A, L849	B7468/B7567	Persian-Hellenistic late fourth century BCE	A1	Southern Phoenicia between Tyre and Sidon	Fig. 7, no. 6

originate from a tomb near Gaza (said to be dated to the second millennium BCE) and from the area of Lake Bardawil on the north coast of the Sinai Peninsula (said to be dated to the thirteenth/twelfth century BCE).⁴ The model from Gaza is 40 cm in length, 8 cm in width, and 5.5 cm high, while the model from Bardawil is 36 cm in length, 8 cm in width, and 4 cm high. The original provenance and context of these models, however, is not clear. Another comparable example, both in shape and size (ca. 30 cm in length), of a clay boat model was recovered from the sea off Tel Ashkelon and attributed to the Persian period (Galili and Sharvit 2000: 84*, fig. 174:2 [on p. 113]).

Other remotely comparable examples of boat models are known, and there are several studies that provide extended lists of finds and parallels for this type of objects from Late Iron Age contexts in Phoenicia and Cyprus (Kahanov 2004; Edrey 2019: 124–30). According to Kahanov (2004: 173), a few simple boat models discovered at the Phoenician cemetery in Achziv, “probably represent small fishing boats which were naturally widespread along the shore.”⁵ He further suggested that “small fishing boats were part of the daily scenery of the local community, either for those who remained on shore, or as a daily occupation of fishermen. These people naturally chose boat models in their burial rituals, sometime towards the end of the 7th or the beginning of the 6th century BCE.”

For later periods, one should mention in particular a few simple clay boat models from Persian-period contexts at Tell Akko (Raban 2003). In Raban’s view, an absence of any signs of fittings on the hull of one of the boat models from Akko (like in our case) possibly alludes to a fishing boat or to a container for a cargo transported in tow.⁶

In Dor, an example of a ceramic handmade boat-like object is considered to belong to a Hellenistic (or earlier) context (Erlich 2010: 136, no. 99). Compared to our objects, however, this one has a more articulated shape of a ship. Tell Keisan in the Akko plain has also yielded two Hellenistic ceramic handmade examples, which also have a much more defined shape with an articulated prow (Paraire 1980: 343, 348, nos. 60–61, pl. 106). Another broken example of a ceramic handmade ship-like object was recently discovered at Tell Iẓṭabba during the German-Israeli excavations (Lichtenberger and Tal, forthcoming). Ceramic (and made of other materials) boat models are

also known from Hellenistic contexts outside Palestine, for example from Smyrna in the Aegean (Besques 1971–1972: 185, D 1353, pl. 261b), Ikaros (Failaka Island) in Kuwait (Mathiesen 1982: 25–28, nos. 47–63), or Seleucia on the Tigris in present-day Iraq (van Ingen 1939: 338, no. 1588, pl. 82:608). Those objects, however, are usually very articulated in their modeling and have a pointed and upraised stern and prow along with other technical details of a boat.

Boat models are often considered votive artifacts. In the Greek world they are known from as early as Middle Bronze Age Crete (Johnston 1985: 12, 13, 23, BA 9, BA 11). Given their discovery in sanctuaries and their mentioning in inscriptions as votive gifts to the gods (Johnston 1985: 2, 126–27), their religious connotation and use in ritual contexts seems assured. Indeed, Johnston’s analysis of boat models in ancient Greece suggests that three-quarters of the models had originated from islands (which placed a greater emphasis on seafaring and votive protection by the maritime gods, see Mikalson 2005: 23), and about two-thirds of those with a known provenance were votive offerings. The recovered clay boat model from the sea off Tel Ashkelon may support this interpretation. Admittedly, as many of these models are without known or secured provenance, the number of models used as votive offerings in the pre-Classical, Classical, and Hellenistic periods remains unknown. However, while the dedication of boat models as votive offerings seems to have continued through to the end of the Hellenistic period, it is likely that these models were also given secondary functions in religious rituals and ceremonies of the time. Boat-like objects, moreover, could have functioned as utensil vessels for liquids and/or lamps. The hull of these objects has an appropriate shape from which to pour libations of wine or oil. It can be added that many elaborate drinking vessels of the Classical and Hellenistic periods were made in the shape of a boat’s prow (see on this, Johnston 1985: 50, 76, 92). Boat models could also be used as lamps, making them practical in religious processions, especially those that took place at night (Apuleius, *Metamorphoses* 11.4.10; see also Michaelides 2009, with references) and in which the lamp is described as a golden boat (*aureum cymbium*). The lit fire in such cases could have held a cultic connotation for the purpose of the offerings. It is no coincidence that there are many

boat-shaped lamps or boat-inspired lamps in the archaeological record in the Roman and Byzantine periods.

The examples from Yavneh-Yam should preferably be understood in the context of their discovery at a harbor site (similar to the above-mentioned examples from Ashkelon and Dor). The Yavneh-Yam examples came (mostly) from occupational layers that perhaps represent part of a domestic repertoire together with the numerous local and imported pottery vessels discovered in Area A's Persian- and Hellenistic-period occupation. Alternatively, these partially excavated structures may belong to the harbor administrative facilities, located in a strategic place at the saddle of the promontory. In any event, we do not find any evidence in support of Edrey's suggestion to consider the remains of a partially preserved rectangular room at Yavneh-Yam Area A (see Fig. 6; with one of the reported boat models found nearby) a possible Persian-period temple (Edrey 2019: 113). The boat models might have been dedicated as votive offerings at certain events, or alternatively they suggest their owners' connection to seafaring. The resemblance of this assumed cultic practice with that known from the Greek islands and mainland (above) is no surprise given the eastern Mediterranean *koiné* that connected Levantine Phoenician settlements in both the Achaemenid and Hellenistic periods (see, e.g., Martin 2017). One may hypothesize that these clay boat models were kept in the buildings close to Yavneh-Yam's harbor and were intended for casting into the sea when seafarers left the harbor to secure protection from reefs and storms, and to ensure a safe return home (*ex voto*). They can be considered part of the Phoenician sailing crews' belongings (see, e.g., Atkins 2009), as may be deduced from the clay boat model that came from the Ashkelon seabed (above). This would be in line with the idea initially suggested by Culican (1976), and later supported by other scholars (e.g., Raban and Kahanov 2003; Castellvi et al. 2007; Artzy and Sheizaf 2019), that the Phoenician figurines attested at seabed locations in Shavei Zion or Tyre most probably represent "votive offerings as part of rituals meant to secure divine protection from the turbulent waters of the Mediterranean during the Persian period" (Edrey, Erlich, and Yasur-Landau 2020: 251). Still, as many of these clay boat models came from coastal sites, it also seems plausible to suggest a ritual performed on the beach in order to protect those who went out to the open

sea. Finally, since some of these models came from tombs (although not in our case), their use as burial goods might as well hint at the occupation of the deceased or suggest a symbolic function in connection with the afterlife.

The fact that we find the monoxylon boat type (one of the primal water vessels of humankind) imitated in the clay models rather than the far more sophisticated ships of the Persian and Hellenistic periods, deserves an explanation. Such fashioning of boat models that copied the simplest boat type might signal their owners' self-perception as seafarers intimately connected to an ancient past, whose shared identity was deeply rooted in seafaring. At any rate, the Phoenician clay boats found in secure Persian-Hellenistic contexts at Yavneh-Yam provide important additional information for any future attempt to decipher ritual practices related to the Phoenicians' seafaring activity in the Mediterranean.

Notes

Acknowledgments: This article was completed after the untimely death of Prof. Moshe Fischer (on August 22, 2021). Moshe had led the excavations of Yavneh-Yam (1992–2011), and their results are being prepared for publication by a team headed by the current authors (AF, IT, OT). We have benefited from Moshe's very many files of documentation of the finds recovered from the site while authoring the current contribution.

1. The site is mentioned as a harbor of inland Iamneia also in the gazetteers of Avi-Yonah (1976: 67–68), where it is named "Jamnitarum Portus," and *TIR* (1994: 150), where it is called "Iamnia Paralios." However, neither one of these names occurs in any of the ancient sources known by us. It seems that they are archaistic translations of the Greek name: Ἰαμνεϊῶν λιμῆν into Latin, respectively Greek.
2. For the methodology of TSPA, see Goren, Finkelstein, and Na'aman 2004: 9–17 with references therein. We are indebted to D. Ben-Shlomo for permission to use his lab's equipment.
3. This particular boat model (YY1) has been previously investigated by Gorzalczy (2005: 210, no. 27 "votive vessel"), who already hinted at a Phoenician origin for this vessel.
4. Both dates are obviously highly speculative. For wooden prototypes of the models of canoes (monoxylons) carved from a single tree trunk, see Basch 1976.
5. Another ceramic example is known from a looted Late Iron Age tomb at Achziv, which was also reused during the Hellenistic period (Dayagi-Mendels 2002: 39–40, Tomb ZR III, no. 20). Based on thin-section analysis, this broken handmade ship-like object (preserved length ca. 13 cm) is considered to have come from Cyprus (Dayagi-Mendels 2002: 155, no. 19).
6. For more articulated Phoenician examples from the Persian period, see Raban and Kahanov 2003.

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CPE III	Ameling, W., H. M. Cotton, W. Eck, B. Isaac, A. Kushnir-Stein, H. Misgav, J. Price, and A. Yardeni, eds. 2015. <i>South Coast 2161–2648</i> . Vol. 3 of <i>Corpus Inscriptionum Iudaeae/Palaestinae</i> . Berlin: de Gruyter.	KAI	Donner, H., and W. Röllig. 2002. <i>Kanaanäische und aramäische Inschriften</i> . Vol. 1. 5th ed. Wiesbaden: Harrassowitz.

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