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A Hellenistic Scale Weight from 'Akko

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A rare Hellenistic lead scale weight was retrieved from a Hellenistic-period accumulation layer (L121) excavated behind the moat counterscarp wall in the 'Akko Ottoman fortifications (see Gosker, this volume).[2] The well-preserved 'Akko Moat weight sheds new light on the iconography and metrology of a series of weights, as it is similar to a lead weight of the same series found underwater offshore from 'Atlit (Finkielsztejn 2016), and it exhibits some similar features to two other lead weights—one from an excavation at the 'Akko Post Office, and the other from the Moussaief Collection. The 'Akko Moat weight is described here, followed by a description of the three other weights, and a discussion on the dating and the metrology of the weights and the series,[3] and their historical context.

Keywords: Acre, Hellenistic period, weight, lead, metrology

The 'Akko Moat Weight (Fig. 1)

Reg. No.: L121, B1071
Form: Square.
Measurements: Obverse, 6.2 × 6.2 cm; reverse, 5.4 × 5.4 cm, 0.8 cm thick; mass before cleaning (reference mass), 267.97 g; mass after cleaning, 259.59 g.
Obverse: Three borders of the raised frame are decorated with eggs and darts, and a small lead patch attached to the back and the upper edge is visible. On the lower border of the frame there is a partly concealed inscription reading:
[Δ]ḮΟΝỴCΟĄḬΟΡĄ, [Δ]ιονυσο(…) ἀγορα(νόμου or -νομοῦντος)
[When] Dionyso(…) [was acting as] *agoranomos*.

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[2] I am grateful to Joppe Gosker of the Israel Antiquities Authority for inviting me to publish the weight, and to Zaraza Friedman of Haifa University and Elie Haddad of the Israel Antiquities Authority for the terminology of ancient ships and the identification of important details.

[3] On scale weights in the Hellenistic Levant, see Finkielsztejn 1998; 2007; 2010; 2012; 2014; 2015; 2016; 2022; Kushnir-Stein 1997; 2011.

Fig. 1. The ‘Akko Moat weight: (a) and numbered details of the ship (b).

Specifying the office in the verbal form of the second restoration suggested here is very common in Coele-Syria, although it is sometimes missing (Finkielsztejn 2010:188–191, Table 8.1, No. 11; 2012:139, No. 26; 143, No. 33). In the upper quarter of the field, a year is written in large letters, according to the Greek alphabetical numeral system, introduced by the L-shaped device for the word ἔτος, “year”: L ΖΣ, i.e., “[Year] ζσ’ (*zeta, sigma*)”, i.e., Year 207.

In the center, the prow of a ship sailing to the right is represented (Fig. 1:b), and in the ship, there is a construction of two superimposed rectangles (1), the upper one shorter than the lower one that is partially hidden by the gunwale on the deck (2); Zaraza Friedman identified these rectangles as two bulwarks, or one clinker-built bulwark. The front part of the hull (3), partly hidden by a relatively large round shield (4) attached to the gunwale, is on the left. The keel (5) is visible below the two rams at the bottom of the ship, the lower ram (6) apparently ending in a ram’s head looking ahead. The upper ram, *proembolion* (7), seems to end in two prongs. The thick stem post (8) is prolonged by an *acrostolium*, the rounded, and usually decorated, tip of the prow (*aphlaston*), here turning in toward the ship. The foresail, *artemon* (9), appears to be reduced to its mast sloping to the right, with the cleats to facilitate climbing, without a depiction of the sail. The mast is actually replaced by a filleted palm branch—the cleats being leaves—that seems to rise from inside the ship between the two letters of the year. Two ribbon ends (10) are visible to the right of the palm branch, floating above the *acrostolium*; such ribbon ends are usually represented (for example, on wreaths) as thicker and rounded at the tip, sometimes with a hanging thread (see below). To the left top of the palm branch, a trapezoidal element rounded at the top, may be a loop of the knot that attached the ribbon to the palm. In the lower right corner below the prow, there is a large wedge (∠).

Reverse: Plain. Flat sides with a large depression in the center. The transition between the reverse and the sides is rounded.

Sides: Plain.

Preservation: The obverse is almost perfectly preserved. The frame is folded at three corners and in the center right of the bottom, partly concealing the base of the inscription letters. A crack in the metal weight—probably created in the molding process—runs from below the shield to between the two parts of the ram. The plain surface of the reverse is mostly smooth due to centuries of corrosion underwater; there may be traces of letters or a scratch, but this is improbable.

Other Lead Weights

Three weights may be compared to the ʻAkko Moat weight (Fig. 2): ʻAtlit Weight No. 2; the ʻAkko Post Office weight, and an unprovenanced weight from the Moussaieff Collection.

ʻAtlit Weight No. 2 (Fig. 2:1).

The clear depiction of the elements on the ʻAkko Moat weight permits correcting the description of a weight found underwater near the shore of ʻAtlit, where the protruding elements of the prow and several details were worn away by centuries of corrosion underwater (Finkielsztejn 2016:8–9, No. 2, Fig. 7:2). The "furled foresail (*artemon*) […] separating the two letters of the year" described in the publication is actually the filleted palm branch. I wrote there: "Between the base of the *sigma* and the top of the upper branch of the wedge (∠) there are two parallel oval elements, perhaps the foresail in a full wind", but it is now clear that these are the two floating ribbon ends tied to the palm branch. Of course, there was an incoherence in my description of the foresail being both furled and floating! I did not identify the partly visible shield on the left, and the lower part of the construction inside the boat (bulwark), the gunwale, the hull, and the inner parts of the rams appeared melted together. The reverse displays eight protruding intersecting lines, composed of × and + with a circle at the crossing point, a feature absent on the reverse of the ʻAkko Moat weight, but present on the ʻAkko Post Office weight (Fig. 2:2; see below). This feature—more often a network of crisscrossed lines covering all the obverse—is not a device, but it was aimed at preventing the abrasion of lead to lower the mass of the weight as a fraud.

The device with all its details is similarly represented on both weights, but the proportions and some details differ: the ʻAtlit prow is squatter, the *acrostolium* shorter, the loop of the knot at the left top of the palm is oval (rather than trapezoidal) and more realistically rendered, and the keel is closer to the frame. It is therefore evident that the two obverses were not made in the same mold, and the elements were probably engraved by two different artists, based on an official designed model. Both weights definitely belonged to the same

Fig. 2. Lead weights from ‘Atlit (1), the ‘Akko Post Office (2) and from the Moussaieff Collection (3; Kushnir-Stein 2011).

series. The year on the ‘Atlit No. 2 weight is ‘L ΔΣ’, [Year] δσ', i.e., 204, three years before the ‘Akko Moat weight (for the era, see *Years and Eras*, below). The weights differ in that the name of the *agoranomos* appears on the ‘Akko Moat weight, awkwardly positioned along the lower frame to preserve all the device’s details; notwithstanding the wear of the ‘Atlit No. 2 weight, it is unlikely that it had an inscription on the frame. The name of the *agoranomos* was possibly required by the city administration, although it does not appear in some series. As overseer of the [city] market, the *agoranomos*’ duties included, first and foremost, controlling the accuracy of the standard measures (and their copies to the sellers), used for mass, capacity and linear measurements, kept in his office (the *agoranomion*) or in a city temple (as in the Athenian Law, *IG* II^2, 1013; see Finkielsztejn 1999:59, with references; 2006:18; 2010:180; 2015:58; 2022:79–81, where the date of the Athenian Law is narrowed to SE 205–207, i.e., 108–105 BCE). It is presumed that the name on a weight is of a magistrate, even when the administrative office of *agoranomos* is not specified (Finkielsztejn 2012:133).

‘Akko Post Office Weight (Fig. 2:2)[4]

Reg. No.: IAA No. 71.987
Form: Square. A loop, located on the lower edge below the inscription, was broken.[5]
Measurements: 4 × 4 × 0.3 cm; mass: 65.74 g (after cleaning, if cleaned).

Obverse: Prow on the left, and a three-line inscription above to the right, and below the prow, with a different style of letters from the ‘Akko Moat and ‘Atlit No. 2 weights. It reads:
L HΣ / H / ZΩIΛ, L ησ’ / η’ / Ζωιλ(…)
[Year] 208 / [letter *eta* for figure] ‘8’ / Zoil(…) [the name of the *agoranomos*]

The figure ‘8’ is the denomination of the weight (see *Metrology*, below). The far most common name starting with Ζωιλ(…), one is Ζωΐλος, Zoilos, normally in the genitive on weights, Ζωίλου, “of Zoilos”.

Reverse: Eight protruding intersecting lines, composed of × and +, the tips joined by two parallel vertical lines, similar to the ‘Atlit No. 2 weight.

Sides: Very thin, plain.

Preservation: Very good.

The composition on this weight differs from that of the ‘Akko Moat and the ‘Atlit No. 2 weights, in style and orientation of the prow, the details of which are rather sketchily represented, and in its whole inscription. It therefore does not belong to the same series. However, since it was found in ‘Akko, it is relevant for the metrological analysis, and possibly for the history of the weights (see below).

Moussaieff Collection Weight (Fig. 2:3).

This unprovenanced weight, published by Kushnir-Stein (2011:47–48, Fig. 7, No. B7, n. 8), exhibits some similarities to our series, but also differences in the device style.

Form: Irregular rectangle.
Measurements: 5.1 × 4.2/4.6 × 0.6 cm; mass: 139 g (after cleaning, if cleaned).

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[4] This unpublished weight was found in the excavation at the ‘Akko Post Office directed by Eliezer Oren. An initial plan to publish it with Pierre-Louis Gatier was not implemented. Rachel Barkay, former curator of the Bank of Israel collection, where the weight was on loan, kindly invited me to examine it.

[5] The addition of a metal loop, not aligned with the orientation of the inscription, is often observed; it is most probably evidence for the addition of metal to adjust the weight mass to the reference standard, rather than a lug to hold the weight.

Obverse: A damaged frame. The obverse displays a prow of roughly similar composition to that of the ʻAkko Moat and ʻAtlit No. 2 weights, also oriented to the right. The construction inside the ship (bulwark) comprises only one level, represented by a rectangle running above and all along the gunwale and ending in a triangle protruding parallel to the inner side of the stem post. The right edge of a possible, badly depicted and worn shield may be distinguished, but the identification is doubtful since it does not protrude above the line of the gunwale. The front of the hull is slanted, and the keel protrudes forward beyond the stem post. The rams are not adjacent, and their attachment to the hull may only be on their left end. The upper ram, *proembolion*, has a long end protruding and curving down beyond the hull. It may end in a ram's head looking ahead. The lower ram is curved down and seems to end in sketchily depicted prongs. The stem post is comparatively narrow, attached to the top of the hull, close to the edge of the gunwale. The inward-turned *acrostolium* has the same thickness as the stem post; the foresail, *artemon,* displays rounded protrusions along the mast, and no sharp ones that could represent cleats or palm leaves. Rather, there are irregular thickenings on both sides of the mast, and a sort of loop at the top right. It appears that it is actually an *artemon*, with its mast and furled sail. In all, the device, with the concave end of the prow and the three different protruding elements (the *acrostolium* and the two rams), appears significantly different in style and depiction to the ʻAkko Moat and ʻAtlit No. 2 weights.

To the upper left of the *artemon* there is a large Σ (*sigma)* proportionally similar to that on the two- above-mentioned weights of the series, and also to that on the other dated weights from ʻAtlit (Table 1; Finkielsztejn 2016:10, Nos. 4 and 6). No other letter appears on the right side. The *sigma* is not preceded by the device L for "year", that appears on the other weights and, in effect, on almost all the weights from the Southern Levant. Right above the gunwale there is indeed a relatively small horizontal line with an even shorter vertical one at its left end, that may have been intended to represent the L-shaped device, but the middle of the whole line was eroded. Kushnir-Stein suggested that it was followed to its right by a very unclear letter Γ, *gamma*, stuck to the lower end of the mast. The suggested letter could also be I, *iota*, stuck to what seems to be a small piece of the furled sail. However, magnification casts doubt on the possibility of an extra letter that would have been engraved so close to the device. I suggest that this is an element of the furled foresail. As for the L, it may have been forgotten, and then added below the *sigma*. It is possible that the decision to engrave a large *sigma*, similar to those on the ʻAtlit weights (Finkielsztejn 2016:8–10, Nos. 4 and 6; see below) and on the ʻAkko Moat weight, left insufficient room to the left of the *sigma*. But the L could have been slightly smaller to fit into its usual location. The field inside the frame to the left of the *sigma* is plain and flat, without traces of an engraved letter or symbol, nor signs of abrasion of one cast on the already-made weight. The traces of a supposed L are minimal, and it was possibly not an L-shaped symbol at all. Therefore, I suggest that the year was indicated only by the letter Σ, *sigma*, σʼ, i.e., 200 Seleucid Era, 113/2 BCE, seven years before the ʻAkko Moat Weight.

Table 1. The Weights and Their Standards[i]

	ʻAkko Moat	ʻAtlit No. 2	ʻAkko Post Office	ʻAtlit No.4	ʻAtlit No.6	Moussaieff
Year BCE (SE)	106/5 (207 SE)	109/8 (204 SE)	105/4 (208 SE)	117/6 or 116/5 (196 or 197 SE)	118/7 (195 SE)	113/2 (200 SE)
Measurements (cm)	Obv. 6.2 × 6.2 Th 0.8 Rev. 5.4 × 5.4	Obv. 6.2 × 6.0 Th 0.8 Rev. 5.2 × 5.0	Obv. 4.4 × 4.3 Th 1.0–0.5 (0.75) Rev. 3.5 × 3.2	Obv. 5.9 × 6.1 Th 0.7 Rev. 5.4 × 5.4	Obv. 8.0 × 7.8 Th 0.9 Rev. 6.5 × 6.5	Obv. 5.1 × 4.4 Rev. Th 0.6 -
Mass (g)	259.59 267.97 NC	239.20	65.74	244.40	504	139.00
Standard calculated weight g	519.18 (× 2) 535.94 (× 2) NC	478.40 (× 2)	525.92 (× 8)	488.80 (× 2)	504.00 (× 1)	566.00 (× 4)
Standards Suggested						
"Phoenician" drachm 3.6 g × 144 = 518.40 g	+ 0.78 g (+ 0.15%) + 17.54 g (+ 3.38%) NC	- 40 g (- 7.71%)	+ 7.52 g (+ 1.45%)	- 29.6 g (- 5.71%)	- 14.4 g (- 2.78%)	+ 47.60 g (+ 9.18%)
"Southern Levant" mina 4.35 g × 128 = 556.80 g	- 37.62 g (- 6.76%) - 20.86 g (- 3.75%) NC	78.40 g (- 14.08%)	- 30.88 g (- 5.55%)	- 68.00 g (- 12.21%)	- 52.80 g (- 9.48%)	+ 9.2 g (+ 1.65%)

[i] Abbreviations: SE = Selucid Era; Obv. = obverse; Rev. = reverse; Th = thickness; NC = not cleaned.

The symbol in the form of a wedge (∠), appearing on the ʻAkko Moat and ʻAtlit No. 2 weights, is missing. No other symbol or letter replaces it.

Reverse: Plain.

Sides: Plain.

Preservation: Good. The reverse is not significantly worn or corroded, but there are some small lead protrusions, some in the form of drops, and a slanted line that seems cast, but no symbol or letter can be discerned.

Seleucid Era and Dating

According to the available evidence, the era used for inscribed *instrumenta*—weights, volume tables (*sekomata*), sealings of documents and amphora stamps—in the southern Levant/Coele-Syria (possibly from the reign of Seleucus IV, but certainly from Antiochus IV) was the Seleucid Era (SE; Finkielsztejn 2022). Its starting year is 312/1 BCE, the beginning of the reign of Seleucus I, founder of the dynasty. Therefore, the year of the

‘Akko Moat weight: 207 SE corresponds to 106/5 BCE, and that of ‘Atlit No. 2 weight: 204 SE corresponds to 109/8 BCE. The date of the ‘Akko Moat weight lowers the period of use of the specific device with *artemon*/palm by three years. For the ‘Akko Post Office weight: 208 SE corresponds to 105/4 BCE. Although the name Zoilos is very common, Pierre-Louis Gatier suggested that the *agoranomos* responsible for the control of weights and measures may have been Zoilos, the tyrant of Dora and Straton’s Tower (Flavius Josephus, *Antiquities* XII, 202–204). We do not know when Zoilos began his public career, which ended in his defeat in 103/2 BCE by Ptolemy Lathyrus, who handed over his cities of Dora and Straton’s Tower to Alexander Janneus, son of John Hyrcanus I and his successor as ruler of Greater Judea in that year. If the weight was cast in ‘Akko, Zoilus could have been a prominent and rich citizen promoted to *agoranomia* there. Alternatively, he could have been the magistrate in Dora and Straton’s Tower, as the result of benefactions as *evergetes*, and thus could have later gained full control over these cities. This would mean that he was not a tyrant for long—between 105/4 and 103/2 BCE—unless additional weights cast earlier under his control are found in the future.[6] The ‘Akko Post Office weight could have been brought to ‘Akko from one of Zoilos’ two cities. That would mean that he was a ruler, with or without the office of *agoranomos*, as was the case for Antiochus IV, who is named (with all his honorific titles) on a lead scale weight (see Finkielsztejn 2012:146, No. 36, with references therein). The abbreviation of his name would be due to the size of the weight. Admittedly, all these suggestions are speculative and need more evidence than furnished by a single artifact. The two other dated weights from ‘Atlit date much earlier than the ‘Atlit No. 2 weight and the two ‘Akko weights: ‘Atlit No. 4 is dated 196 or 197 SE (117/6 or 116/5 BCE) and ‘Atlit No. 6 is dated 195 SE (118 BCE; Finkielsztejn 2016). Although these two weights exhibit different devices, the style of their inscriptions, year, and similar denominations, as well as their common weight standard, bear strong similarities.

The similarity of the date style of the Moussaieff weight and the general appearance of its device to the series discussed here, suggest that its year also follows the Seleucid Era: 200 SE, namely 113/2 BCE.

METROLOGY

This discussion relates to issues concerning the identification of the standard used for the ‘Akko Moat and the ‘Atlit weights.

The data are summarized in Table 1. The wedge-shaped device (∠) has been identified as representing half of the standard in the context of inscribed weights (see Finkielsztejn 2016:8–13, including n. 13). Therefore, the scale weights represent as follows: a standard on ‘Atlit No. 6 weight, with the value probably indicated by one of its two cast A, *alpha*); a half-standard, indicated by the wedge (∠), on the ‘Akko Moat, ‘Atlit No. 2 and ‘Atlit No.

[6] These remarks on Zoilos are proposed jointly by P-L. Gatier and the author.

4 weights; a quarter of the standard, not indicated on the Moussaieff weight; and an eighth of the standard, represented by the figure 8, indicated by the letter H, *eta* on the ʻAkko Post Office weight. The calculated masses of the standards for the two ʻAkko and three ʻAtlit weights (in the order of the denominations) are 504.00 g, 519.18 g [535.94 g before cleaning], 478.40 g, 488.80 g, and 525.92 g. For the Moussaieff Weight, the calculated standard is 566 g.

Two reference standards can be proposed to correspond to the masses of our weights, the calculated values of their standards, and the known provenance of five of the weights: (1) the Phoenician *mina*, based on 144 Phoenician drachms of 3.6 g, i.e., 518.40 g; (2) the Southern Levantine *mina*, imposed by Antiochus IV, based on 128 Attic drachms of 4.35 g, i.e., 556.8 g (see Doyen 2014:284–289, for the identification of the southern Levantine standard of 556.8 g; Finkielsztejn 2010:181–184, 187–190, Table 8.1, *passim*, for calculated standards of 551–555 g, very close to the 556.8 g standard). The former standard is evidenced with certainty for two series: Byblos in the first century BCE, and the Herodos Series, the origin of which is not clearly located (see Finkielsztejn 2015:74-76, for the evidence for the "Phoenician drachm" standard).

The ʻAkko Moat weight, before cleaning, corresponds to a calculated standard that is still too far from the Antiochus IV standard: 267.97 g × 2 = 535.94 g, is in effect at about the same distance from the masses of both standards, (556.8 + 518.4):2 = 537.6 g, and consequently the reference standard cannot be determined. On the other hand, it would appear meaningful that the discrepancy of the ʻAkko Moat weight after cleaning, with the Phoenician drachm standard is significantly low, almost nil, as compared to that with the Antiochus IV standard (- 6.76%; see below). The ʻAtlit weights—for which we have only the masses after laboratory cleaning—all appear significantly underweight, as a result of the wear due to the many centuries of exposure to sea currents and sand. Their reference standard may be defined by their discrepancies to each of the theoretical ones. The half-standards are more damaged than the standard itself, since thinner lead artifacts are probably more seriously affected. However, their inscriptions and devices are still clearly legible on both sides, which means that the mass of lead transformed or lost was not significant enough to deeply affect the reliefs on the weights. The discrepancies between the masses of these weights and the two identified standards show that they are definitely closer to the lighter standard of 518.4 g, since it is impossible that they lost the amount of metal that is calculated for the Antiochus IV reference standard. Therefore, the discrepancies of the ʻAkko Moat weight after cleaning, mentioned above, appear meaningful, and confirm its integration into the Phoenician drachm weighing system. The ʻAkko Post Office weight appears also to be based on the Phoenician drachm. However, its calculated *mina* appears overweight, as is commonly the case when multiplying the mass of smaller denominations of a standard, which results in an increasing mass effect, from denominations of one-eighth to one-sixty-fourth and less.

The Moussaieff weight, weighing 566.00 g, can easily be based on the Antiochus IV *mina* of 556.8 g, with a discrepancy of + 1.65% to the standard. It does not seem to fit into

the ʻAkko–ʻAtlit series, clearly distinguished by the different appearance of its *artemon*, not replaced by a filleted palm but featuring an actual mast with the furled sail, as well as the global different style of the device.

The result of this metrological study, based mostly on calculations of the preserved masses of the weights, is that the standard of the ʻAtlit and ʻAkko weights seems to connect the ʻAkko weights to the Phoenician drachm, which would be evidence for a Phoenician identity of the city of origin of the weight, maybe ʻAkko. However, no chemical and physical analyses have been undertaken that could specifically explain the corrosion processes of the weights during their period underwater—possibly transforming the molecules of the metal into a lighter weight without damaging the features on the surface of the artifact—as opposed to the corrosion processes in various earth compositions on land. Such analyses may help to clarify which one of the two cultural influences—the Phoenician or the Seleucid—imposed on the Southern Levant by Antiochus IV, led to the use of the weight standard in ʻAkko-Ptolemais. This leaves open the possibility that the weights found in ʻAkko and in the sea off ʻAtlit were based on the Antiochus IV *mina*, still in use in the period attested by their dates. It is easier to accept this possibility for the ʻAkko Post Office weight, for which the higher discrepancy with the 556.8 g *mina* remains close to 5%, a percentage allowed in common limited use-wear of a weight.[7]

THE DEVICE AND ITS HISTORICAL CONTEXT

The different features depicted on the weights may shed light on their historical context. An internet search[8] for the thick stem post and *acrostolium* features of the device produced very few parallels on coins, in two groups: (1) Phoenician coins minted in Arados, dated 196/5 BCE and 119/8 BCE, and in Marathos, dated 187/6 BCE, with a similar general appearance of the prow;[9] (2) Roman coins dated 91/0 BCE, with a palm branch over the prow, and 90/89 BCE, with a palm behind and perpendicular to the *acrostolium*, or a Nike standing on the stem post and holding a palm branch; these coins have a Janus head on the

[7] Another contemporary standard—the Attic *mina* based on 138 Attic drachms, 138 × 4.35 g = 600.3 g—is unlikely. Although its use is evidenced in Nysa-Scythopolis, a Graeco-Macedonian city destroyed by John Hyrcanus I in 108/7 BCE or earlier, where the Attic *mina* could have been used due to its location and Seleucid administrative organization (weights to be published by the author; see Finkielsztejn 2022:90–92, for the possible use of that given Attic *mina* in Maresha, and for the date of its later abandonment by Athens for a standard of 150 × 4.35 g = 652.50 g; Finkielsztejn 2022:79–81), the discrepancy with the masses of the weights studied here appears much too important. The discrepancy of ±5% is suggested by Kletter (1998) for stone weights of the kingdom of Judah and appears to be also acceptable for larger metal weights.

[8] An in-depth study of the coins is beyond the scope of the present excavation report but should be undertaken in the future.

[9] Arados: https://phoeniciancoins.files.wordpress.com/2017/08/sy-2.jpg; Marathos: https://phoeniciancoins.files.wordpress.com/2015/03/cn2.jpg; and see Duyrat 2005:156, 158 (*non vidi*).

obverse.[10] This small sample shows that the coins are roughly contemporary to the period of our weights, with also numerous examples of the type having been used at least about 90 years earlier. The Roman coins may be evidence for an influence of symbolism in the Levant, provided that the type was used earlier than the 90s BCE. The opposite influence is also likely.

ʻAtlit Nos. 2 and 6 weights were found in underwater Assemblage 4 in the vicinity of the area where the so-called ʻAtlit ram was discovered, together with 15 pyramid-shaped fishing sinkers, very common along the coast of Phoenicia up to the north of the region (Galili et al. 2016:3; Finkielsztejn 2016:14–22). Metrology contributes to dating the fishing sinkers at least between 106/5 to 102/1 BCE, contemporary to the ʻAkko and ʻAtlit weights. Assemblage 4 was found about 300–400 m from the shore, and the artifacts probably sunk with the ship carrying the ram. ʻAtlit No. 4 weight was found in underwater Assemblage 2, close to the shore, and the weight may have been lost in rescue operations.

Numerous scale weights from Arados and Marathos show evidence for the use of the Tyrian *sheqel* standard of 9.4 g (Finkielsztejn 2015:56–73, Arados and Marathos, 85–93, Tyre). Even if the standard of 518.4 g holds 55 Tyrian *sheqels*, it may be either fortuitous or intended for trade. There is no evidence so far of the use of such a multiple in the Hellenistic period (see above for the ascertained multiples in that period). The appearance of the weights of the two twin-cities is standardized, using only Phoenician letters and figures, and only a stylized Sign of Tanit or letters, especially the *tet*, but no devices. Therefore, the weights discussed here are not likely to have originated from these two twin-cities.

The palm branch is a symbol of victory in the Graeco-Roman civilization, primarily in the context of sport competitions, as evidenced by mosaics, for example, for charioteers, or women and men athletics.[11] In Delos, a Panathenaic amphora—an oil container given as a prize to champions of the Panathenaic Games—is depicted on a mosaic, set on a podium in front of a fileted palm branch with thread at the two ribbon ends, and a laurel crown (Bruneau 1972:27, 29, Figs. 31, 32, 34). In Maresha, in the painted Sidonian Apollophanes Tomb, the Panathenaic amphora on the right of the main burial also bears a ribbon (Peters and Thiersch 1905: Tomb I, frontispiece, 86). The palm branch is also very common in contexts of war or political victories. On the ʻAkko Moat weight, the replacement of the mast and sail of the boat by a fileted palm branch is most probably a symbol of victory, either in a naval decisive battle or by a coastal city.

However, the dates of the ʻAkko Moat and ʻAtlit No. 2 weights preclude linking them to the events identified as the War of Scepters, involving the Ptolemies and Alexander Janneus,

[10] Palm over the prow: https://farm4.staticflickr.com/3684/11258650706_d84e13720a_b.jpg; Palm perpendicular to the *acrostolium*: https://www.cointalk.com/threads/the-faces-of-titius.291216/; Nike with palm: http://www.wildwinds.com/coins/sear5/s0741.html.

[11] Charioteer: https://www.superstock.com/stock-photos-images/4435-7375; Women athletics: https://commons.wikimedia.org/wiki/File:Villa_romana_bikini_girls.JPG (Villa Romana del Casale, Sicily); Men athletics: https://blog.oup.com/2013/08/9-facts-athletics-ancient-greece/; and see Newby 2002:182-186.

that took place in the area in 103/2–101/0 BCE, three to six years after the weights were made. It is therefore necessary to identify a battle that took place in the Phoenician area around 109/8 BCE, the earliest year for the two weights, and a justification to represent it on weights for at least four years. This task lies beyond the scope of this excavation report and awaits further research.

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