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ANMED 22 2024, 18-22

Three Six-Libra Lead Weights from Ionia

Oğuz TEKİN

Abstract

In this article, a total of three lead six-libra weights are analyzed, one of which is in the Tire Museum, another in the Ephesus Museum, and the third in the Eskinazi collection. The production style, unit marks, and inscriptions on the weights indicate that they belong to the cities of the Ionian region.

Keywords: Six-libra, ancient weights, Ionia, Ephesus, Tire Museum

In recent years, there has been an increase in the number of weights recorded in the libra unit (including upper and lower units) that have entered museums, private collections, auction catalogs, and been found in archaeological excavations, subsequently recorded in the Pondera Online database. During the Roman Imperial period, the libra served as the main unit of weight, and many libra weights bear inscriptions on their reverses identifying officials (magistrates) responsible for overseeing the agora, such as agoranomos, paraphylax, and hipparchos. With additional epigraphic data, it is possible to determine the cities where these magistrates served. Furthermore, depictions or symbols on the weights provide information about the places where the weights were produced and used. One of the most crucial pieces of information for identifying the city to which weights belong is the stamps struck onto them (often on their handles) by market officials for verification purposes. These stamps must have been struck either during production or later during inspection. Repetitions of the same magistrates' names on both the reverses and control stamps help in identifying illegible or difficult-to-read names. Identifying the city to which a weight belongs certainly requires knowing where the weight was found; however, this is primarily the case for weights discovered in official archaeological excavations. Since weights could potentially have traveled from one place to another (whether in modern times or antiquity) after their production and use periods, caution is necessary when considering information about their "place of origin" transmitted by third parties. In terms of numerical density of surviving weights to the present day, Ephesus takes the place of Hellenistic Cyzicus; the number of surviving weights from Imperial period Ephesus is unmatched by any other city. The abundance of Ephesus-produced weights in regional museums such as İzmir, Ephesus, Ödemiş, and Tire substantiates this claim.

Following this brief introduction, I would like to discuss three examples of six-libra units each[1]. One is in the collection of the Tire Museum, one (just mold) was found in the vicinity of Metropolis and is currently in the collection of the Ephesus Museum, and the third is in the collection of İzak Eskinazi. All three are in the six-libra unit and from Ionia.

Collection	Masses	Masses of Libra Equivalents
Tire Museum	2108.1 g	351.35 g (Fig. 1)
Ephesus Museum (from Metropolis)	"1900 g"	"316.66 g" (Fig. 2)
Eskinazi Collection	2095 g	349.16 g (Fig. 3)

In fact, one of the the reasons I wrote this article is to correct my misinterpretation of the example in the Eskinazi collection as five-mna / seven-libra[2], and upon later seeing the example from the Tire Museum and the previously published mold-example from Metropolis[3], to clarify that the weight in the Eskinazi collection should also be six-mna[4].

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[1] I would like to thank Yavuz Selim Güler, Eleni Theodorou, Charles Doyen and Selen Kılıçarslan for reading the article before printing and sharing their views.

[2] Tekin 2024, no. 61 (=Pondera 18264)

[3] Meriç 1981, no. 8.

[4] I should note that my identification of the weight in the Eskinazi collection as a six-libra was influenced by similar

First, I would like to explain why I interpreted the weight in the Eskinazi collection as five-mna / seven-libra in my previous article. On the example in the Eskinazi collection, there are both mna and libra unit names accompanying with the letters E and Ϡ (Fig. 3). Due to the presence of two different unit names (mna and libra) on this example weighing 2095 g, measuring 132 x 166 x 16 mm, I had assumed that the letters E and Ϡ on the weight also each carried a numerical value, and each of them was a reference to MNA and LITRA separately; that is 5-mna and 7-litra. Therefore, the example from the Tire Museum and the previously published mold-example from Metropolis reveal that the letter I had thought to be a numeric one referring to 7 (Ϡ) is actually part of ἕξ, which signifies 6. The representation of Ξ as Ϡ is not commonly encountered, especially on weights. It was the form of the Ϡ in the Eskinazi example that was a little different from the standard form of Ξ, which led me to think of it as zeta! It was a mistake of me! On the other hand, the writing of Ϡ with a diagonal line addition is known from various epigraphic material, but this line runs mostly from the top right to the bottom left; whereas on the Eskinazi example (as well as on the Tire example) it is from top left to bottom right. This may have been done deliberately (so zeta could be written in both forms), or it may have been a fault of the engraver, accidentally engraving it in reverse. Consequently, the letters E Ϡ on the Eskinazi example indicate ἕξ (6), referring to a heavy six-libra italike (libra of 349.16 g x 6). Given that ἕξ (= 6) is accompanied by the libra name on the examples from Tire and Metropolis, there is no doubt that these examples are six-libra weights. And MNA represents "one-mna" since it is indicated in singular form and it can be dated to the late 2nd or 3rd century AD due to its high mna and libra weight. The depiction of the Ephesian Artemis on the handle stamp (Fig. 3, detail photo) and the depiction of two standing stags on either side of a thymiaterion on the reverse indicate that this weight should be attributed to Ephesus.

Now, considering the example from Tire[5]; this weight is square-shaped, with raised and beveled edges and a handle at the top (Fig. 1). It weighs 2108.1 g. and measures 125 x 125 x 15 mm. On the obverse of the weight, the unit is inscribed: ΛΕΙ / ΤΡΑΙ / E Ϡ, indicating it is in the six-libra unit (libra of 351 g x 6). Since there is no mention of "agoraia" on the weight, it can be considered a heavy libra italike. The stamp on the handle of the weight shows a standing figure. It would be reasonable to expect this figure to be the cult statue of Artemis Ephesia, but it gives the impression of a standing male figure facing left, holding an object in his right hand, and with his left arm hanging down. On the reverse side, although some words can be discerned from the five lines of text, they cannot be fully read. But it is clear that it gives the name of a certain Marcus Aurelius Clarus served as eirenarch. It reads:

Τ[Ω]Ν / ΠΕΡΙ ΜΑΡ / ΑΥΡΚΛΑΡ / ΟΝΕΙΡΗΝΑ / ΡΧ[Ω]Ν

Τ[ῶ]ν Περὶ Μαρ[κον] Αὐρ[ηλιον] Κλάρον εἰρήναρχ[ω]ν

This weight from Tire Museum may be attributed to Ephesus when we consider the herringbone pattern on the edges and the style of the obverse inscription and fabrication of the weight but I am not sure. However, it can at least be plausibly claimed to belong to one of the cities of Ionia. It can be dated to the late 2nd-3rd centuries AD.

In the Ephesus Museum, only the mold of the weight found during the Metropolis excavation (with some other molds in different units on a stone) has survived to the present day[6]; later, this mold was filled with lead to create a weight by the authors of its publication (image not shown here) (Fig. 2). Like the Eskinazi and Tire weights, it also bears the unit letters ΕΞ with ΛΕΙΤΡΑΙ above. The recreated six-libra from Metropolis weighs "1900 g"; however, caution is needed when assessing its weight due to its modern production[7]. When evaluated alongside other weights in half libra, libra, and two-libra units produced from molds found in the Metropolis excavation and processed in the museum's laboratory, it is understood that these examples indicate weights that are proportional to each other and represent an average weight of 312.9 g for a libra. It must be emphasized again, though, that caution is necessary when considering the weights themselves as they are of modern production and the weights of the handles has not been taken into account.

Additionally, the herringbone decoration seen on the edges of the Tire and Eskinazi examples is notable,

examples I later encountered in the Tire Museum and the Metropolis example published in Meriç 1981, along with the information on this weight available on the Pondera site.

5 Now registered in Pondera 18283.

6 The current six-libra mold is one of the molds of ten molds with different units carved on stone measuring 28 x 25 x 9 cm. (=Pondera 17883)

7 The estimated weight of the Metropolis example stated in Meriç 1981 should be more than 1900 grams due to the modern reproduction method. It appears that the handle was not taken into account during reproduction, hence the weight turned out to be lower. The new production is observed to be without a handle. However, the mold clearly shows the place for the handle.

whereas the Metropolis example lacks this edge decoration. This to some extent indicates a production/design difference between the Tire and Eskinazi examples and the Metropolis example.

In the above three examples in the six-libra unit, the libra is valued at "italike"; however, sometimes libras around 490-500 g can also be found. For instance, in a 2980 g weight from Nikomedia where the unit symbol is indicated as six-libra agoraia[8], the libra value is 496.66 grams. This indicates that libra agoraia (commercial libra) is 1.5 times the libra italike (12 unciae for libra italike and 18 unciae for libra agoraia). However, the ratio of mna to libra italike or libra agoraia can vary significantly depending on the period.

In the Roman Imperial period, the value represented by mna is a topic that requires separate consideration. Especially in cases where the unit number is not specified for mna but is specified for libra names on the same weight, there is a need to explain the ratio between mna and libra. It would be appropriate to mention some examples where mna and libra names appear on the same weight. For instance, in the collection of Istanbul Archaeological Museums, a Perinthos weight weighing 1500 g is inscribed "Mna Perinthia" on one side and "Pentalitron" as the unit name on the other side[9]. In this case, the Perinthos mna equals five libras.

There is another Perinthos weight, weighing 1666 g, which bears only the unit name "MNA" without the mention of libra[10]. This absence of the libra name indicates that it represents a Perinthos mna weighing 1666 g.

Two weights from Cyzicus, both featuring the same depiction (Herme), housed in Bandırma Museum[11] and the British Museum[12], are noteworthy. The Cyzicus weight in Bandırma Museum bears the inscription KYZI MNA, whereas the British Museum example is inscribed KYZI ΛΕΙ. This indicates that one is in mna unit, while the other is in libra unit. The example bearing the name mna weighs 1082.20 g, whereas the one with libra weighs 322.4 g. Thus, libra corresponds to the standard weight (libra italike), while mna has a weight exceeding 1000 g. Considering the fabrication and similarity of both weights (Bandırma and British Museum), they can be dated to the same period, probably to the late 1st century BC to the 1st century AD.

To summarize, during the Roman Imperial period (1st-3rd centuries AD), especially for the Aegean world or Western Anatolia, there were two types of libra: one being the "italic libra" and the other its 1.5 times, known as the "market libra"[13]. That is, it can also be considered as a 12-uncia Italian libra and an 18-uncia commercial libra. It is evident that the standard equation involving mna occasionally or periodically broke down. Particularly in libra italike examples, we observe light libra weights going down to 250 g[14], while heavier librae up to 350 g[15] are also seen. Librae labeled as unit name ΛΕΙΤΡΑ, but are below the standard mass, may have been intentionally manufactured for fraudulent purposes unless there is a reasonable explanation otherwise. In this case, the 250 g "libra" may be considered a counterfeit of the actual 324/327 g "libra" of Italike, and the 350 g "libra" as counterfeit samples of the 486 g (27 gx18) "commercial libra". However, this is not a typical occurrence; it is a possibility but not a certainty. The libra values of the three six-libra weights discussed in this article are approximately 350 g and indicate a heavy libra Italike containing 13 unciae. A mere 1 uncia weight difference does not imply that these examples are commercial librae. It is understood that during the Roman Imperial period, the masses of the mna units were quite high, with periodic variations that tended to increase, ranging from over 1000 g to 1500-2000 g[16]. The six-libra weights discussed in this article, weighing approximately 2000 - 2100 g, can be dated back to the late 2nd or even 3rd century AD. Despite advancements in maintaining a certain standard in libra weights during the Roman Imperial period, there are still unclear points regarding the mna unit. It appears that the depreciation of mna's value progressed proportionally with its increase in weight (*vice versa*). Compared to the Late Hellenistic period's 450-500 g mna, it is evident that Imperial period mna weights reached three or even four times the weight of Late Hellenistic mnas. The high weight of Imperial period mnas can be attributed to periods characterized by economic crises and reforms (or adjustments) aimed at controlling the situation during

8 Haensch and Weiß 2005 (=Pondera 3671)

9 CPAI 2, no. 79 (=Pondera 1770)

10 Weiß 2005, 408–412, 435–436, fig. 1a-b (=Pondera 13581)

11 Tekin 2022, fig. 3 (=Pondera 14315)

12 Weiß 1990, 123, pl. 13, 1.21; Tekin 2022, 126, fig. 4 (=Pondera 1526)

13 See for the ratios of italike and agoraian librae, Doyen 2024.

14 See CPAI 3.1, no. 436 (=Pondera 2420) and see other examples at Pondera.

15 See CPAI 3.1, no. 439 (=Pondera 2423) and see other examples at Pondera.

16 Although exceptional, Tieion weights could reach a high weight of approximately 4900 g (equivalent to 10 commercial libra), demonstrating their potential heaviness if the monogram / ligature actually refers to mna! See, Akyürek Şahin and Uyar 2009, 139, inv.no. 289, figs. 8-10 (=Pondera 13914)

those times. Therefore, a more detailed study of dated and location-specific weights is needed. This will allow for a clearer understanding of the weight increase scale of Imperial period mnas. Although significant progress has been made compared to previous years, it is true that we are still at the beginning stages of understanding shifts in the weight system (and standards) and the regulations put in place.

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FIG. 1
Six-libra,
2108.1 g,
125x125x15 mm.
Tire Museum.
Photo: Oğuz Tekin

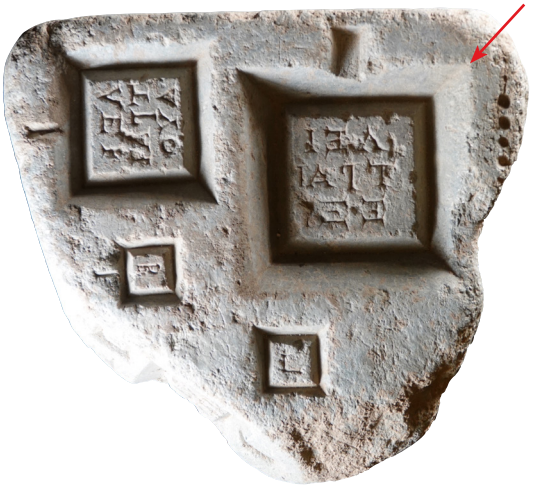

FIG. 2
Six-libra mold; the large
one at the top right.
From Metropolis,
now in Ephesus Museum.
Photo: Metropolis
Excavation Archive.

30 cm

FIG. 3
Six-libra, 2095 g, 132x166x16
and detail photo of the handle with
cult statue of Artemis Ephesia.
İzak Eskinazi Collection.
Photo: Gültekin Teoman