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Catalogue of the Greek, Roman, and Byzantine Weights from Ödemiş Museum (Türkiye)

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Catalogue of the Greek, Roman, and Byzantine Weights from Ödemiş Museum (Türkiye)

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Abstract: This article examines 28 weights from the collection of the Ödemiş Museum, a local museum located in western Anatolia. Two of the weights are attributed to Colophon due to the presence of a parasemon, while two others were produced by Ionian cities during the Roman Imperial period and used in local markets. Some weights dated to the Hellenistic period cannot be attributed to specific cities due to the absence of a parasemon or ethnic, yet they are significant for the unit marks they bear. It is clear that the magistrate names found on some of the weights may offer noteworthy contributions to research in this field. The remaining weights are from the Roman and Byzantine periods and include examples of uncia and nomisma weights, along with their subunits.

Key words: Ödemiş, ancient weights, Byzantine weights, Colophon, Ionia

Zusammenfassung: Dieser Artikel behandelt 28 Gewichte aus der Sammlung des Ödemiş-Museums, einem lokalen Museum in Westanatolien. Zwei der Gewichte werden aufgrund eines Parasemons Kolophon zugewiesen, zwei weitere waren von ionischen Städten während der hellenistischen oder römischen Kaiserzeit hergestellt worden und fanden auf lokalen Märkten Verwendung. Einige in die hellenistische Zeit datierte Gewichte können mangels Parasemon oder Ethnikon keiner bestimmten Stadt zugeordnet werden, sind jedoch aufgrund ihrer Einheitszeichen von Bedeutung. Es ist offensichtlich, dass die auf einigen Gewichten genannten Magistratsnamen einen bemerkenswerten Beitrag zur Forschung auf diesem Gebiet leisten können. Die übrigen Gewichte stammen aus römischer und byzantinischer Zeit und umfassen Beispiele für Uncia- und Nomisma-Gewichte sowie deren Untereinheiten.

Schlagwörter: Ödemiş, antike Gewichte, byzantinische Gewichte, Kolophon, Ionien

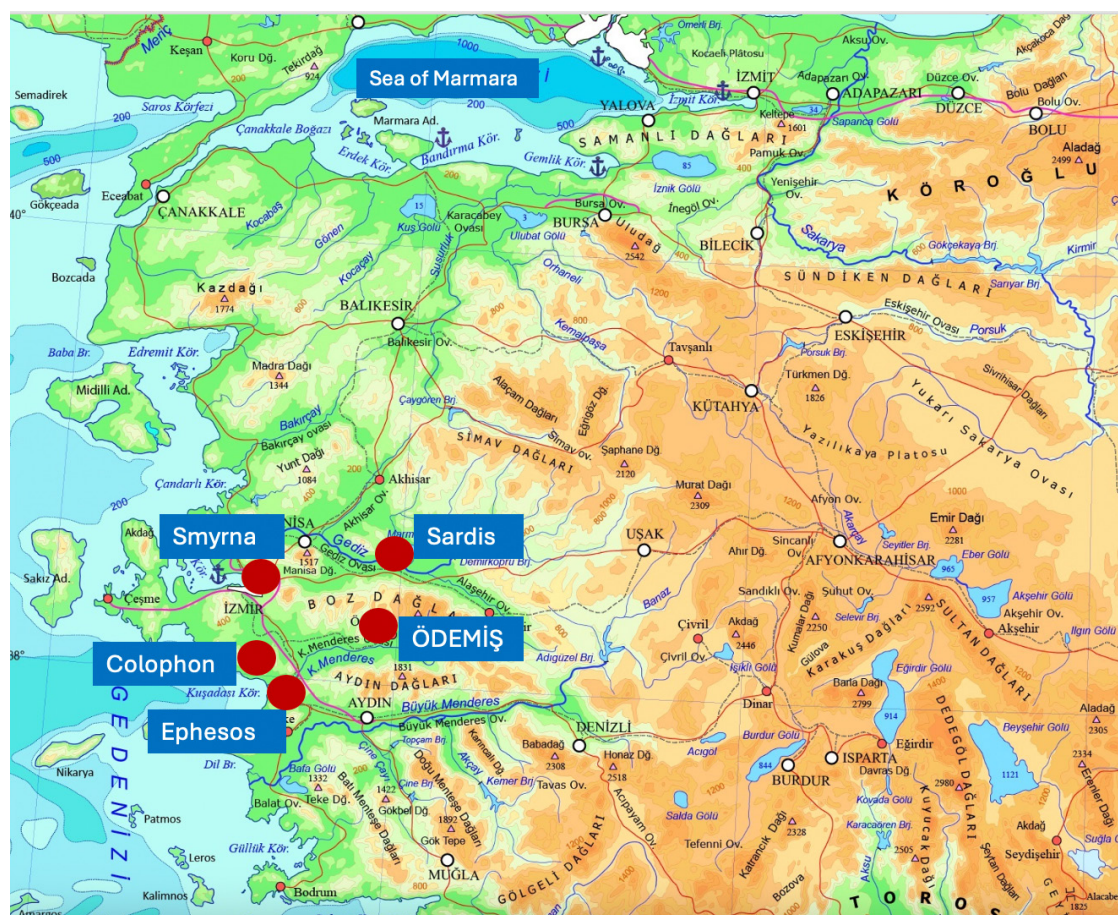
Introduction

The Ödemiş Museum is located in the town of Ödemiş in Western Anatolia, approximately 110 kilometers southeast of İzmir. Within an hour's drive from the museum lie the ancient cities of Smyrna, Sardis, Colophon, and Ephesos (**Map**). This article focuses on 28 balance weights from the museum collection, excluding a few pieces that are heavily corroded or damaged beyond identification¹. All of the weights entered the museum through purchase or confiscation; none originate from archaeological excavations. Twelve of the weights are dated to the Hellenistic period, and two of these (**nos. 1–2**) are attributed to the city of Colophon due to the presence of a lyre motif, a parasemon of the city². With the

exception of a few, all Hellenistic weights bear a unit mark, making their denominations identifiable; for those lacking unit marks (**nos. 7, 8, 11**), proposed units are offered based on their actual weights. Two weights (**nos. 13–16**) were produced and used by city-states under the rule of the Roman Empire and the remaining (**nos. 17–27**) belong to the Roman and Byzan-

¹ I would like to thank Museum Director Feride Kat for granting me permission to study the weights in the collection, and museum specialist Ayşen Coşkuntuna Gürsel for her assistance throughout my work. I am also grateful to Hüseyin Sami Öztürk for sharing his insights on several of the weights.

² For the Colophonian weights see Tekin 2016, 111–113. Also, Pondera, »Colophon«: pondera.uclouvain.be.



Map showing some archaeological sites near Ödemiş

tine era. Five square Byzantine weights (**nos. 19–23**) are placed immediately after the double truncated flattened-sphere weights, as they are slightly earlier in date than the disc-shaped examples (**nos. 24–27**). The last one (**no. 28**) is a mastoid weight dated to the very end of the 1st century AD or early Imperial period; it was placed at the end because of its form. As expected, the Hellenistic weights conform to

the Greek standard based on the *mna*, while the Imperial-period weights follow the Roman system, which is based on the *libra*³. It is clear that the magistrate names found on some of the weights, such as Pandok..., Menekrates, and Bagas, can provide a noteworthy contribution. The identification, description, comments, and dating of each weight are provided at its respective entry in the catalogue⁴. Since

³ As for the dating; since weights continued to be used for long periods after their production – as long as the standards did not change – it is very difficult to date them precisely. Therefore, a more flexible dating is usually applied, based on parameters such as parasemon, ethnic, unit name, variations in weight within the same unit, or form. This approach typically favors broader chronological categories, such as the Hellenistic Period, Roman Imperial Period, or Early Byzantine Period. More precise dating may become possible only when the number of weights recovered from stratified archaeological contexts increases. For now, however,

we are compelled to adopt a more relative and tentative dating method. As for the identification of the units, determining the unit of a weight is relatively easy when a unit mark is inscribed, as such marks are typically verified by checking the object's mass against the expected standard. For weights lacking such unit marks, the unit is suggested based on how closely the weight aligns with a recognized system and its standards.

⁴ A few remarks can be made regarding the arrangement of the weights. The sequence begins with those dated to the Hellenistic period, namely **nos. 1–12**. These are organized internally according to their units, from



the weights in the Ödemiş Museum – a local museum – were found in the nearby area (at least, that is what the acquisition records indicate) and brought to the museum, they are potentially informative for the weight repertoire of the region of Ionia.

Hellenistic Weights

- 1) Inv. no. 2605 (**fig. 1**). Lead, 264.37 g, 61 x 53 x 9 mm. Square in form with plain profile but edges are slightly concave. Colophon. $\frac{1}{2}$ mna (*hemimnaion*, mna of 528.74 g). On the top, lyre; on the bottom left and right, H – M which stands for Ἡμίμναϊον. The bottom is plain. It dates to the Hellenistic period. Published⁵.



the largest to the smallest. However, the first two weights (**nos. 1 and 2**) are placed at the very beginning of the entire sequence because they are attributed to the city of Colophon based on the parasemon they bear. Since their attribution is certain, they are prioritized. The remaining Hellenistic weights lack any parasemon or ethnic identification, making it impossible to attribute them to any specific city. They are therefore arranged solely by their units (and naturally their weights), from largest to smallest. In other words, they are all essentially anonymous weights, used in the marketplace but without any indication of which city's market. They bear only unit marks – or sometimes not even that – though their unit can usually be estimated based on their actual weight. Thus, except for the first two, the weights in the Hellenistic group are ordered by unit. The section titled

»Weights Under the Roman Empire and Byzantine« follows the same logic – weights are grouped according to their units. However, an additional criterion is also applied here: form. Weights of similar forms are grouped together: for example, barrel-shaped, discoid, or square ones. This is because form can sometimes be significant for chronological or comparative purposes. Placing a barrel-shaped example at the beginning and another of the same form at the very end – just because their units differ – would have been less appropriate. This may also be seen as a matter of preference. The mastoid weight (**no. 28**) is listed last, not because it is the heaviest, but because its shape and possibly its function differ from the others.

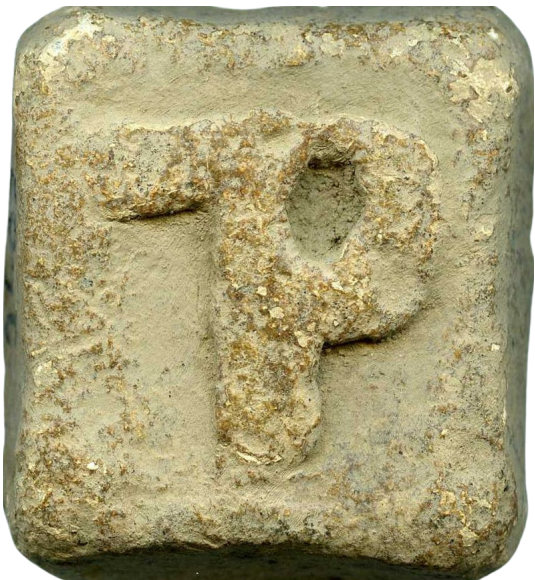
⁵ Tekin 2016, Table 41, no. 2, fig. 227 = Pondera 13283: pondera.uclouvain.be/artifact/13283.





- 2) Inv. no. 2478 (**fig. 2**). Lead, 47.61 g (current autopsy but during the earlier weighing, it was 47.55 g), 22 x 24 x 10 mm. Square in form. Colophon. Two staters (*distateron*, *stater* of 23.80 g). On the top, lyre and Δ on the bottom left corner, which stands for Διστάτηρον; all in relief. The bottom is plain. It dates to the Hellenistic period. Published⁶.

- 3) Inv. no. 1793 (**fig. 3**). 159.52 g, 41 x 38 mm. 1/3 mna (*triton*, mna of 478.56 g). Square in form with slightly raised edges. On the top, anchor and TP in ligature which stands for Τρίτον; all in relief. The bottom is plain. It dates to the Hellenistic period. Unpublished.



- 4) Inv. no. 2607 (**fig. 4**). Lead, 149.18 g, 38 x 35 x 13 mm. 1/3 mna (*triton*, mna of 447.54 g). Square in form with slightly raised edges and plain profile. On the top, TP in ligature and in relief, which stands for Τρίτον. The bottom is plain but deep scratch. It dates to the Hellenistic period. Unpublished.

⁶ Tekin 2016, Table 41, no. 13 = Pondera, 13294: pon-dera.uclouvain.be/artifact/13294.

- 5) Inv. no. 2606 (**fig. 5**). Lead, 126.32 g, 42 x 42 x 9 mm. $\frac{1}{4}$ mna (*tetarton*, mna of 505.28 g). Square in form with slightly raised and concave edges. On the top, TE in relief which stands for Τέταρτον. The bottom is plain. It dates to the Hellenistic period. Unpublished.



- 6) Inv. no. 2608 (**fig. 6**). Lead, 91.15 g, 32 x 34 x 9 mm. $\frac{1}{4}$ mna (*tetarton*, mna of 364.6 g). Square in form. Its weight is quite low for a tetarton. The edges are raised on both sides. On the top, TE in reverted ligature and in relief, which stands for Τέταρτον. The bottom is plain. It dates to the Hellenistic period. Unpublished.

- 7) Inv. no. 2001-12 (**fig. 7**). Lead, 99.80 g, 35 x 32 x 10 mm. $\frac{1}{6}$ mna? (mna of 598.8 g). Square in form with slightly beveled edges. On the top, quiver and bow in relief. The denomination is not certain. The bottom is plain. It dates late 2nd–1st centuries BC. Unpublished.





- 8) Inv. no. 2474 (**fig. 8**). Lead, 89.35 g, 41 x 39 x 7 mm. 1/6 mna? (mna of 536.1 g). Square in form. On the top and bottom, A square composed of thick bands enclosing an X-shaped pattern made of equally broad bands reaching from corner to corner; the legend ME. ΠΑΝΔΟΚ is inscribed within each of the bands⁷. The name may refer to a certain Pandokos but not certain⁸. The weight seems to correspond to 1/6 mna (mna of 536.1 g), but it's not certain, too. It dates to the Late Hellenistic period or to the very beginning of the Roman Imperial period. This weight was previously published by Lafli and Buora; however, the inscription was unfortunately misread as METPON ΑΔΟΚΙ[ΔΟΥ] and misinterpreted as measure of Andokides⁹.

⁷ For a weight with a similar form and decoration but bearing a different magistrate's name (Menekrates), see. Pondera, 16393: pondera.uclouvain.be/artifact/16393.

⁸ It is difficult to say anything definite about the full form of the name here. The name Pandokos is attested in epigraphic sources from the Thessaly region (e.g. SEG 51, 711), but in this case, we can only speak of a similarity in names;

anything beyond that does not seem possible. Moreover, we know that in the case of weights, individuals responsible for market supervision did not always hold the title of *agoranomos*; people from other official posts could also assume this role. Therefore, it would not be appropriate to draw any conclusions about the specific office in this context.

⁹ Buora – Lafli 2021, 240 f. no. 5.



- 9) Inv. no. 2524 (**fig. 9**). Lead, 82.44 g, 40 x 35 x 9 mm. 1/6 mna (*hektemorion*, mna of 494.64 g). Square in form with plain profile. On the top, denominational mark E which stands for ἑκτη, in relief. The bottom is plain. It dates to the Hellenistic period. Unpublished.



- 10) Inv. no. 2522 (**fig. 10**). Lead, 80.01 g, 27 x 28 x 10 mm. 1/6 mna (*hektemorion*, mna of 480.06 g). Square in form with plain profile. On the top, denominational mark E which stands for ἑκτη, in relief. The bottom is plain. It dates to the Hellenistic period. Unpublished.

- 11) Inv. no. 1757 (**fig. 11**). Lead, 73.27 g, 40 x 41 x 5 mm. 1/6 or 1/8 mna. Square in form. Identical monogram within four circular stamps: ΑΙ. The bottom is plain. It dates to the Hellenistic period. Unpublished.



- 12) Inv. no. 2525 (**fig. 12**). Lead, 42.86 g, 37 x 36 x 38 mm. 1/12 mna (*dodekaton*, mna of 514.32 g). Triangular in form. On the top, Ω in relief. The triangular form resembles a Δ . So, Δ and Ω ($\Delta\Omega$) refer to the $\Delta\omega\delta\acute{\epsilon}\kappa\alpha\tau\omicron\nu$ in unit. The bottom is blank. It dates to the Hellenistic period. Unpublished.



Weights under the Roman Empire and Byzantine Period



- 13) Inv. no. 1631 (**fig. 13**). Lead, 422.7 g, 70 x 69 mm (+ handle 20 mm). *Litra agoraia*? Square in form with raised edges and handle above. The inscription on the top is illegible, but it is likely to be a word related to the litra ($\Lambda\iota$ /TPA). There is a stamp on the handle but illegible. On the bottom, illegible inscription in relief and in four lines: [...]A / [...] / [...]A/ΓΟΡΑ which gives the name of a certain *agoranomos*. It may be dated to the Early Roman Imperial period. Unpublished.

- 14) Inv. no. 1632 (**fig. 14**). Lead, 420.7 g, 68 x 62 mm + handle 32 mm. *Litra agoraia*. Square in form with slightly raised edges and pierced handle on the top. On the top, AI / BACMENEK/ PATOYC in relief and in three lines. The bottom is plain but AI BA/C MEN/EKPA/TOYC in square stamp. In other words, the same legend appears to be repeated both on the top and within the stamp on the bottom: Αἰ(λίου) Βάσ(σου) Μενεκράτους. So, it gives a certain Menekrates who served as magistrate responsible for issuing the weight. It dates to the 2nd century AD. This weight was previously published by Laflı and Buora¹⁰; however, the inscription was unfortunately misread as ΑΙΤΡΑC / ΜΕΝΕΚΡΑΤΟYC and the authors erroneously reported the weight of the object as 325 grams. Perhaps they assumed the object to be a *litra* and, accordingly, expected its weight to conform to that standard or they measured its weight incorrectly. However, the weight in question corresponds not to the standard *litra italike*, but rather to the heavier market *litra*.



¹⁰ Buora – Laflı 2021, 239 f. no. 4.





- 15) Inv. no. 2007-03 (**fig. 15**). Lead, 26.05 g, 28 x 30 mm. One uncia. Square with raised and beveled edges; handle is broken.
On the top, A in relief. On the bottom, ΑΥΡΗ / [Β]ΑΓΑΚ / [.]ΑΚ[.] in three lines. It gives the name of a certain Aurelios Bagas as magistrate. It dates to the AD 2nd–3rd centuries. Unpublished.



- 16) Inv. no. 2006-7 (**fig. 16**). Lead, 48.98 g, 34 x 39 x 10 mm. Two nomismata (nomisma of 24.49 g).
Square in form with raised edges. On the top, denominational mark B in relief. On the bottom, illegible inscription in three lines. It dates to the 2nd–3rd centuries. Unpublished.

- 17) Inv. no. 2003-12 (**fig. 17**). AE 160.77 g, 33 x 27 mm.
Six unciae (uncia of 26.8 g).
Flattened sphere doubly truncated in form. Centring points on the top and bottom. Silver-inlaid on the top with the denominational mark 8 Ç. The bottom is blank. It dates to the AD 3rd–5th centuries¹¹. Unpublished.



- 18) Inv. no. 2700 (**fig. 18**). AE 28.15 g, 19 x 14 mm.
One uncia. Flattened sphere doubly truncated in form. Centring points on the top and bottom. Silver-inlaid on the top with the denominational mark 8 A. The bottom is blank. It dates to the AD 3rd–5th centuries¹². Unpublished.

- 19) Inv. no. 2217 (**fig. 19**). AE 78.92 g, 34 x 33 x 9 mm.
Three unciae (uncia of 26.30 g).
Square in form with slightly beveled edges.
On the top, engraved and punched with the denominational mark Γο Γ which stands for three unciae and cross above. The bottom is blank. It dates to the AD 5th–6th centuries. Unpublished.



¹¹ For similar ones see CPAI 3/2, nos. 6–11 (= Pondera 18317, 18321, 18386 respectively: pondera.uclouvain.be/artifact/18317, pondera.uclouvain.be/artifact/18321, pondera.uclouvain.be/artifact/18386).

[vain.be/artifact/18321/](https://pondera.uclouvain.be/artifact/18321/), pondera.uclouvain.be/artifact/18386/

¹² For similar ones see CPAI 3/2, nos. 31–40.



- 20) Inv. no. 1045 (**fig. 20**). AE 23.8 g, 29 x 28 mm. One uncia.
Square in form with plain profile.
On the top, engraved with a large cross flanked by the denominational mark Γ A. Originally inlaid but inlay is missing. The bottom is plain. It dates to the AD 5th–7th centuries. Unpublished.



- 21) Inv. no. 2214 (**fig. 21**). AE 4.17 g, 14 x 12 x 4 mm.
One nomisma. Square in form.
On the top, punched with the denominational mark N with three-dot motif (o) between legs¹³. The bottom is plain. It dates to the AD 4th–7th centuries. Unpublished.



- 22) Inv. no. 2117 (**fig. 22**). AE 3.95 g, 14 x 14 x 3 mm. One nomisma.
Square in form.
On the top, punched with the denominational mark N with o between each of the legs of the N. The bottom is plain. It dates to the AD 4th–7th centuries. Unpublished.



- 23) Inv. no. 2215 (**fig. 23**). AE 2.12 g, 9.5 x 1.00 x 3 mm. Twelve keratia (keration of 0.17 g). Square in form. On the top, punched I B; on the bottom, a motif of five punched dots¹⁴. It dates to the AD 5th–7th centuries. Unpublished.



¹³ For punched one-nomisma weights see CPAI 3/2, nos. 417 ff.

¹⁴ For punched twelve-keratia weights with five-dot motif on the bottom see CPAI 3/2, nos. 516 and 519.

- 24) Inv. 1648 (**fig. 24**). AE 51.70 g, 36 x 8 mm. Two unciae (uncia of 25.85 g). Discoid in form with double convex grooved profile; with raised rim and groove along the rim and centring points on the top and bottom. Punched on the top with the denominational mark Γο Β; above, cross. The bottom is plain but an X-shaped scratch. It dates to the AD 5th–7th centuries. Unpublished.



- 25) Inv. 2055 (**fig. 25**). AE 27.08 g, 27 x 7 mm. One uncia. Discoid in form with double convex grooved profile; with raised rim and groove along the rim and centring points on the top and bottom. On the top, punched with the denominational mark Γο Α (Gamma Omicron Alpha); wave motif above and below. Single and triple dot motifs in the field. The bottom is plain. It dates to the AD 5th–7th centuries. Unpublished.



- 26) Inv. no. 2007-10-A (**fig. 26**). AE 26.30 g, 27 x 16 mm. Six nomismata (nomisma of 4.38 g). Discoid in form with double convex grooved profile; with raised rim and groove along the rim and centering points on the top and bottom. On the top, engraved and punched with the denominational mark Ν Σ; above, cross; below, triangular shape. On the bottom, concentric circles extend from the center to the edges. It dates to the AD 5th–7th centuries. Unpublished.





- 27) Inv. no. 2411 (**fig. 27**). AE 25.75 g, 30 x 9 mm. Six nomismata (nomisma of 4.29 g). Discoid in form with slightly raised rim and plain profile; centring point on the top and bottom; too worn. On the top, engraved and punched with denominational mark N S. Concentric circles near the edge on the bottom. It dates to the AD 4th–6th centuries. Unpublished.



- 28) Inv. no. 2006-14 (**fig. 28**). Limestone, 1831.8 g, 16 x 6.6 cm (plus 7.5 cm high of dome-shaped protrusions). 5.5 librae? (libra of 333.05 g). Mastoid in form¹⁵. On one of the profile faces, there are two slanted lines placed side by side (two uprude scratches) and an X. It dates to the 1st century BC – early Roman Imperial period. Unpublished.

¹⁵ For mastoid weights and their function see Güler 2023; Kroll – Stefanaki 2020; Ersoy 2018.

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All photographs were taken by the author.

Most of the weights were illustrated in an enlarged 2:1 scale, the smaller objects in 3:1, cat. no. 28 is scaled down to 1:2, as its original size is too large.



