

The Tricky Challenge of Collecting Ancient Greek Weights: Two Case Studies

Charles DOYEN (F.R.S.–FNRS / UCLouvain)

Workshop “Building Digital Corpuses: Aims, Tools, and Methods”
(Louvain-la-Neuve, December 12–13, 2016)



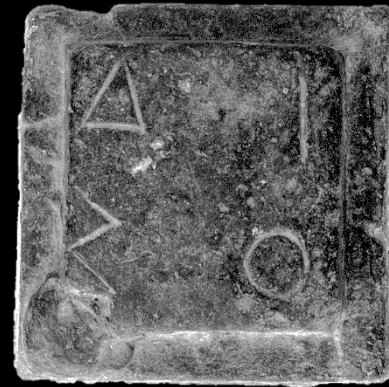
Case Study #1: The Olympic Weights



Talent = 60 Minas



4 Minas



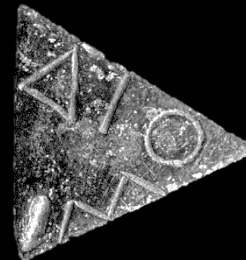
2 Minas



1 Mina



$\frac{1}{2}$ Mina



$\frac{1}{4}$ Mina



$\frac{1}{8}$ Mina

Weight Increase



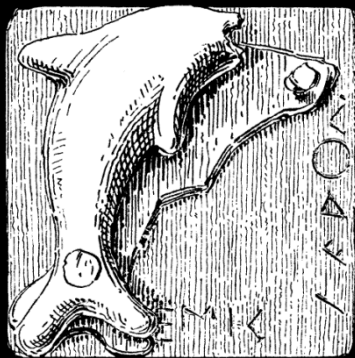
Mina = 100 drachmas
(435 g)



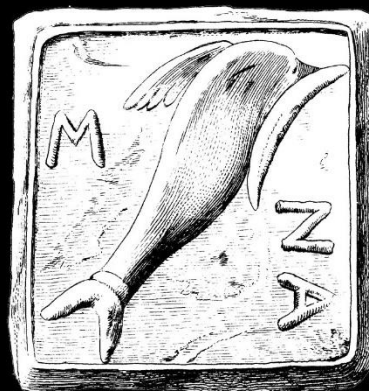
Mina = 105 drachmas
(454 g)



Mina = 112 drachmas
(487 g)



Mina = 100 drachmas
(435 g)



Mina = 105 drachmas
(454 g)



Mina = 112 drachmas
(487 g)



The Olympian Weights

First German Excavations in Olympia (1875–1881)

ca. 250 weights brought to light

ca. 185 weights
conserved
in Olympia

ca. 65 weights
transferred
in Berlin
as “duplicates”

Convention.

Les Gouvernements
de l'Empire d'Allemagne
et du Royaume hellénique
desirant entreprendre, d'un
commun accord des fouilles
archéologiques sur le territoire
de l'ancienne Olympie en
Grèce et ayant résolu de
conclure, une, convention, à

L'Envoyé Extraordinaire et Ministre
Plénipotentiaire de Sa Majesté
l'Empereur d'Allemagne
à Athènes, ainsi que M. le
Professeur E. Curtius, Délégué
officiel, d'un côté, et M. Jean
Pélysse, Ministre des Affaires
Étrangères de Sa Majesté Hellénique,
ainsi que M. P. Eustratiades,
Conservateur des antiquités de
l'État, dûment autorisés par
leurs Gouvernements respectifs
ont signé la présente Convention
et y ont apposé les sceaux de leurs
armes.

Fait à Athènes, en double
expédition, le treize (13/25) Avril,
mil-huit-cent-soixante-quatorze.

E. del Wagner

J. Pélysse

Ernst Curtius

Prothodios
Morganiotis

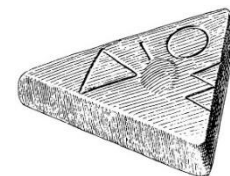
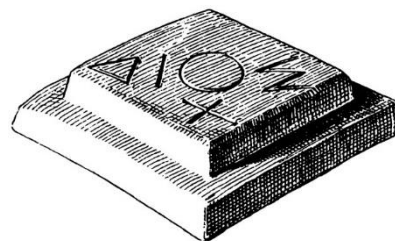
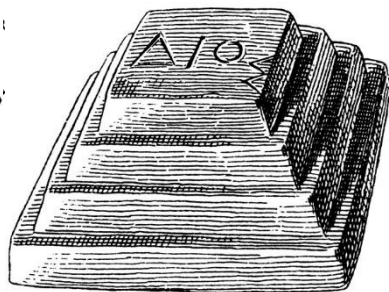
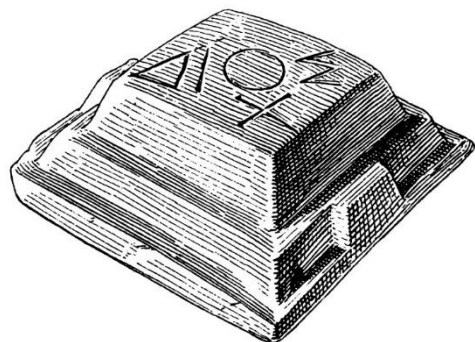


OLYMPIA

DIE ERGEBNISSE
DER VON DEM DEUTSCHEN REICH
VERANSTALTETEN AUSGRABUNG

IM AUFTRAGE
DES KÖNIGLICH PREUSSISCHEN MINISTERS DER GEISTLICHEN
UNTERRICHTS- UND MEDICINAL-ANGELEGENHEITEN
HERAUSGEGEBEN
VON
ERNST CURTIUS UND FRIEDRICH ADLER

TEXTBAND V
DIE INSCRIFTEN



DIE INSCHRIFTEN

VON

OLYMPIA

3D190

BEARBEITET

VON

WILHELM DITTENBERGER UND KARL PURGOLD



VERLAG ADOLF M. HAKKERT - AMSTERDAM
1966

[reimpr. d. 1896]

The Olympian Weights

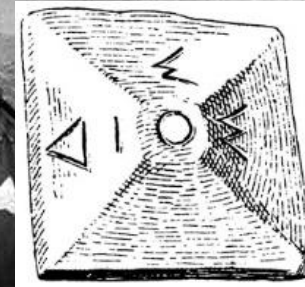
ca. 65 weights
transferred
in Berlin
as “duplicates”

ca. 10 weights
are missing

+

Interchange
of labels

Inv. nrs. 4905, 7271, 13835



Pergamon Museum, Berlin

1945

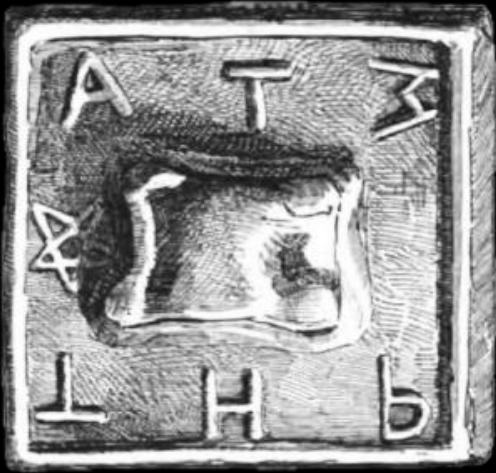


1958



Pushkin Museum, Moscow

Case Study #2: The Athenian Weights



Stater



$\frac{1}{3}$ stater



$\frac{1}{4}$ stater



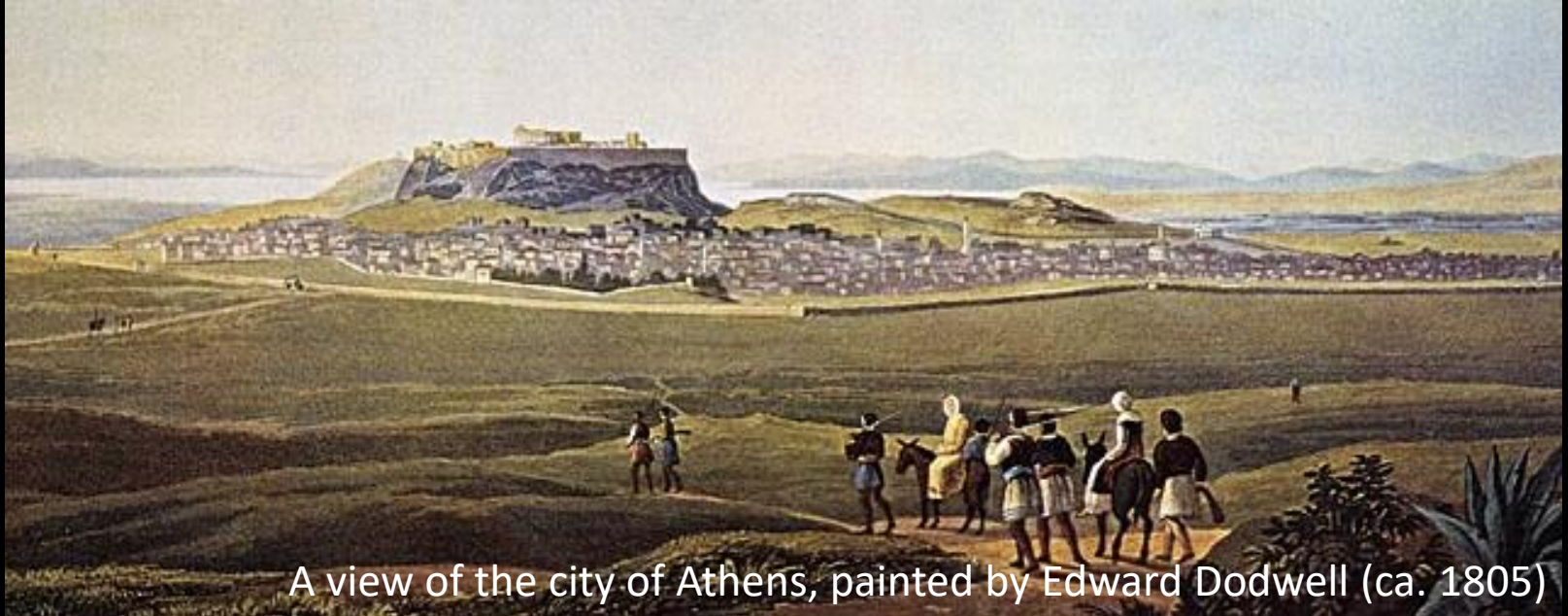
Mina = $\frac{1}{2}$ stater



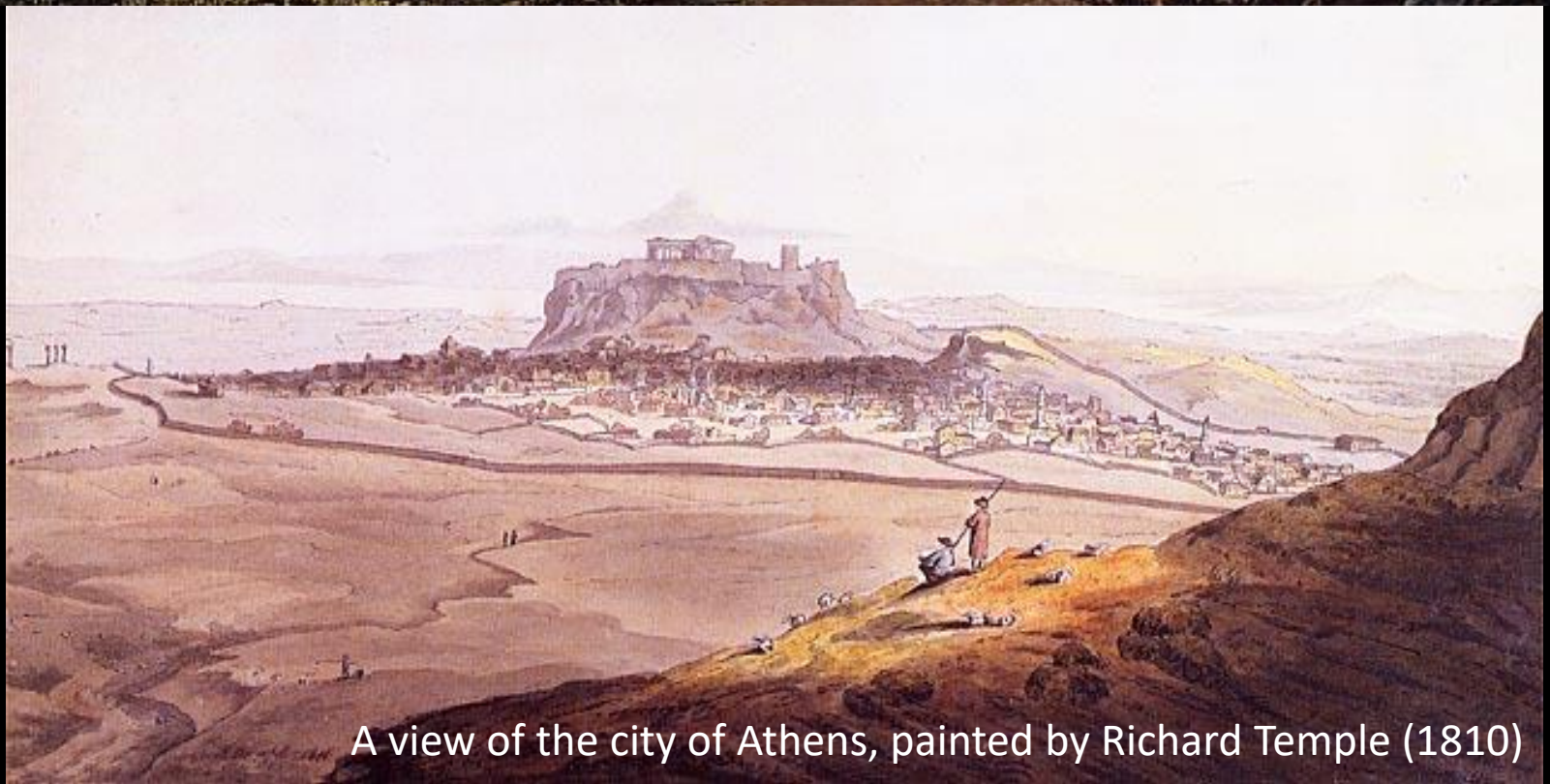
$\frac{1}{6}$ stater



$\frac{1}{8}$ stater



A view of the city of Athens, painted by Edward Dodwell (ca. 1805)



A view of the city of Athens, painted by Richard Temple (1810)



Athen mit Umgebung, Johann August Kaupert, 1875 (detail)

The British Museum Collection



ca. 370 weights, mainly from Athens, of which three private collections:

- Burgon Collection (1842): 44 weights
- Blacas Collection (1867): 131 weights
- Woodhouse Collection (1866 and 1868): 105 weights

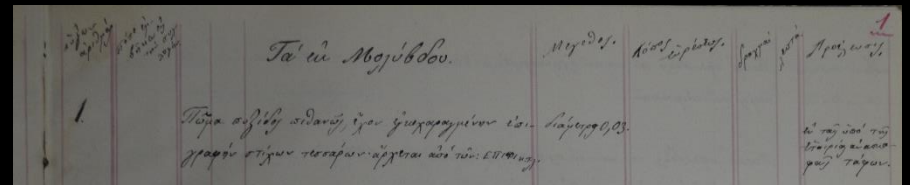
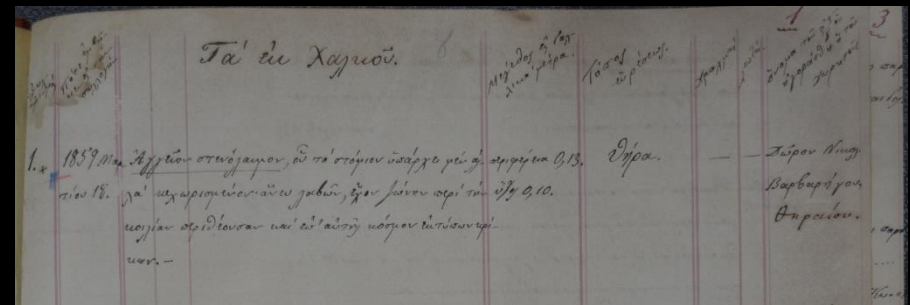
The Archaeological Society Collection (1866–1894)



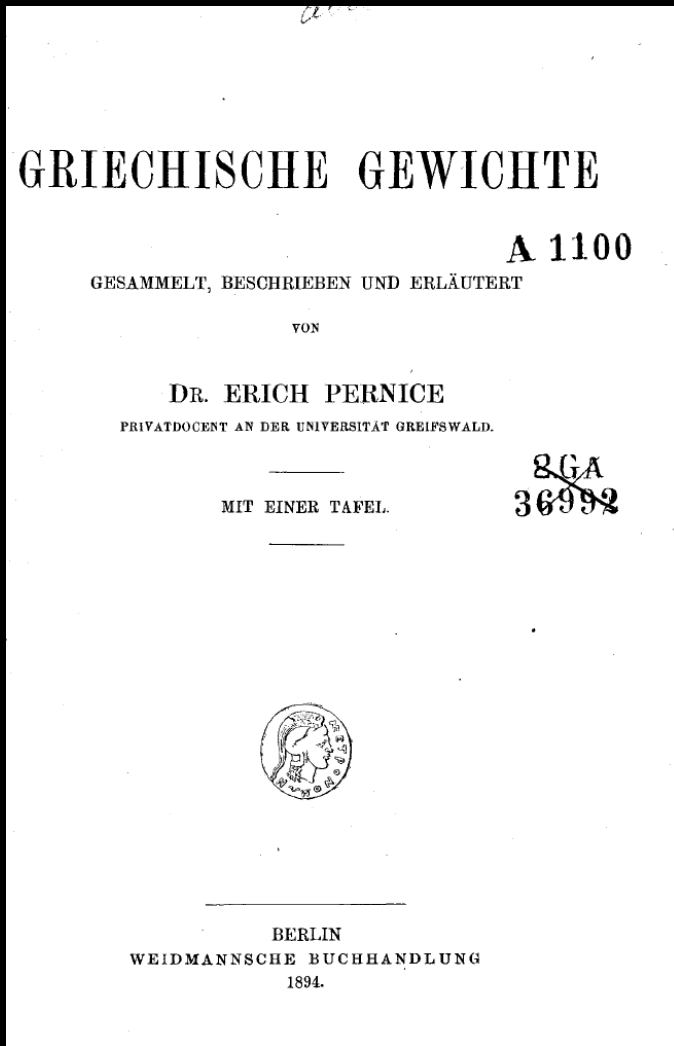
566 weights, mainly from Athens:

- 125 bronze weights
- 441 lead weights

+ dozens of marble weights



Erich Pernice's Corpus of Weights



830 ancient weights and 76 Byzantine weights, mainly originating from Athens:

- 436 weights conserved in the Archaeological Society of Athens
- 138 weights seen in the antiquities trade and in private collections in Athens and Piraeus
- 149 weights conserved in the British Museum
- 57 weights conserved in the Antikensammlung, Berlin
- 126 weights conserved in other private and museum collections across Europe

The British Museum Collection in Pernice's Corpus

Poole, R. S. 1863

A. — TABLE OF MR. BURGON'S WEIGHTS FROM ATHENS.
All these weights are of lead, except Nos. 15 and 38, which are of bronze.

No.	Weight, Grs. Troy.	Inscription.	Type.	Con- dition. ⁵	Value, Attic Com- mercial. ⁶	Excess or deficiency.	Value, Attic Solonian. ⁷	Excess or deficiency.
1	9,980	MNA AΓOP	Dolphin.	A	Mina	.	.	.
2	9,790		Id.	D	(Mina)	- 190	.	.
3	7,171	MNA	Id.	A	.	.	Mina	.
4	7,048		Id.	d	.	.	(Mina)	- 123
5	4,424		Diota	B	.	.	MINA?	- 356.6
6	3,874		Tortoise	B	.	.	MINA?	+ 238.5
7	3,482	ΔEMO	Id. ¹	B	.	.	Mina	- 103.5
8	3,461		Turtle	B	.	.	Mina	- 124.5
9	3,218	TETAPT	Tortoise	A? or D?	.	.	MINA	- 367.5
10	2,959		Half diota	d	.	.	MINA?	+ 90.6
11	2,865	MO	Turtle	B	.	.	MINA?	- 8.4
12	2,210	ΔEMO	Half diota	C	.	.	MINA	- 180.3
13	1,872		Half turtle	B	.	.	MINA	+ 79.2
14	1,770	EMITETAP	Half tortoise	B	.	.	MINA	- 22.7
15	1,698		Crescent	B?	1/2 Mina?	- 298	.	.
16	1,648		.	B	1/2 Mina?	- 348	.	.
17	1,603	Γ' M	.	B? or D?	1/2 Mina?	- 393	.	.
18	1,348	B	.	A	.	.	2 deca- drachms.	- 86.2
19	1,281	MO	Quarter diota ²	B	.	.	MINA?	+ 35.8
20	1,172	ΔH	Crescent	B	.	.	MINA?	- 23.1
21	1,171		Crescent	B	.	.	MINA?	- 24.1
22	1,082		Half Turtle ³	B	1/10 Mina?	+ 84	MINA?	- 113.1
23	1,045	ΔEMO	Crescent	B	.	.	MINA?	- 150.1
24	988	ΔEMO	Diota in wreath ⁴	B	.	.	MINA?	+ 91.6
25	923.5	ΔEMO	Owl, A. in field ⁴	C	.	.	MINA	+ 32.1
26	924		Half crescent and star	B	.	.	MINA	+ 27.6
27	915.5		.	D?	.	.	Mina	+ 19.1
28	910.5		.	B	.	.	Mina	+ 14.1
29	901		Quarter diota	B	.	.	Mina	+ 4.6
30	889	Δ . . O	.	d	.	.	Mina	- 7.3
31	884	ΔH OΓΔO	.	C?	.	.	Mina	- 12.3
32	889		Rose	C?	.	.	Mina	- 27.3
33	859	ΔEMO	Uncertain obj. in wreath ⁴	d	.	.	Mina	- 37.3
34	845		Half crescent	B	.	.	1/2 Mina?	- 51.3
35	756.5	Δ	.	D?	4 didrachms	- 41.9	.	.
36	541.5		.	B	.	.	8 drachms?	- 32.1
37	527.5	Γ	.	B	1/2 of 1/2 mina?	+ 28.5	.	.
38	450		.	B?	6 drachms?	- 49	6 drachms?	+ 19.7
39	411		.	B	4 drachms?	+ 11.8	6 drachms?	- 19.2
40	388		.	B?	4 drachms?	- 11.2	5 drachms?	+ 29.4

¹ Countermark, tripod.

² Countermark, prow.

³ Turtle, headless?

⁴ Countermark.

⁵ Explanation of signs: A, Scarcely injured. B, A little weight lost. C, More than a little lost. D, Much weight lost. d, Much corroded. E, Very much weight lost. When two signs are given, the former is the more probable. ⁶ The weight of the Commercial Attic mina is here assumed to be about 9,980 grs. ⁷ The weight of the Solonian Attic mina is here assumed to be about 7,171 grs. The heavier talent is indicated by capital letters.

Murray, A. S. 1868. Numismatic Chronicle, n. s. 29, p. 57-73.

II.

GREEK WEIGHTS IN THE BRITISH MUSEUM.

WHEN Mr. Poole¹ published, in 1863, forty specimens of Greek weights acquired at Athens by Mr. Burgon, he almost exhausted the collection of the British Museum. Since then it has been augmented by the following items:—(I.) 8 specimens purchased from Mr. Merlin at Athens in 1866, of which several had already been published;² (II.) 50 added by the Blacas collection; (III.) 48 in the collection of the late Mr. Woodhouse, of Corfu, which has finally reached the Museum. The two latter collections are mostly inedited. In both cases, too, a difficulty sometimes arises as to where specimens were found, though usually it is presumed that those coming from Mr. Woodhouse were found in Corfu.

The state of preservation is such as might be expected from a material like lead; the loss is very unequal, and often difficult to estimate.

While making these preliminary remarks I may state the denominations and relative value of the unit, and of the several fractions employed by the Greek systems of coinage.

¹ Smith's "Dict. of Bible," art. *Weights*.

² Schillbach, "Annali del. Instit. di Corresp. Archæol.," vol. xxxvii., 1865.

The British Museum Collection in Pernice's Corpus

A. — TABLE OF **MR. BURGON'S** WEIGHTS FROM ATHENS.
All these weights are of lead, except Nos. 15 and 38, which are of bronze.

No.	Weight, Grs. Troy.	Inscription.	Type.	Con- dition. ⁵	Value, Attic Com- mercial. ⁶	Excess or deficiency.	Value, Attic Solonian. ⁷	Excess or deficiency.
7	8,482	ΔΕΜΟ	Id. ¹	B	. .	. .	¼ Mina	- 108.5

125) London, Brit. Mus. Oben in Relief
Schildkröte und Stempel mit Dreifufs. Be-
zeichnet ΔΕΜΟ. Vgl. Madden, Jewish coinage
S. 257 n. 7. Ziemlich gut erhalten. Aus Athen.
Gewicht 225,63 gr. 902,52 gr.

126) London, Brit. Mus., ehemals **bei Bur-**
gon. ΔΕΜΟ. Vgl. Numism. chron. 1868
S. 68 n. 103. Soutzo étal. 8. 454 n. 70. Gewicht 225,38 gr. 902,52 gr



1842.07,28.507
3478.3 grains = 225.4 g
(new measurement 227 g)

102.	242.22 (= 8840, Burgon)	Tortoise	} ¼ Attic dim- noun (Solo- nic).
103.	225.38 (= 8480 „)	ΔΕΜΟ	
104.	223.83 (= 8456 „)	ΔΕΜΟ	
105.	219.80 (= 8396, Blacas)	„	
106.	210.23 (= 8246, Burgon)	TETAPT	

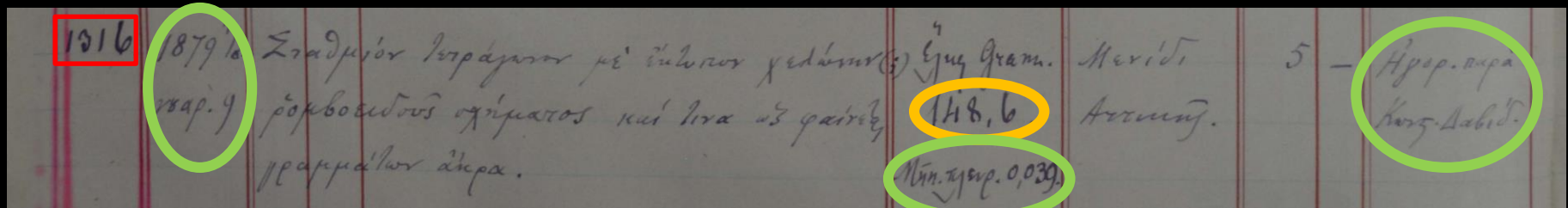
The Archaeological Society Collection in Pernice's Corpus

566 ancient weights, mainly from Athens > 436 weights published by Pernice

– 125 bronze weights > 89 weights published by Pernice

– 441 lead weights > 347 weights published by Pernice

+ dozens of marble weights > 18 weights published by Pernice



Oben in Relief eine ganze Schildkröte.

206) Athen, arch. Gesellsch. n. 1316.

M
T

Ein wenig abgenutzt, ohne größere Be-
stofsung. Aus Menidi. Gewicht.

148,72 gr. 892,32 gr.

The Archaeological Society Collection in Pernice's Corpus

196

Burgon. Oben bezeichnet Γ . Vgl. Numism.
chron. 1868 S. 67 n. 59. Soutzo étal. S. 462
n. 326. Gewicht 73,83 gr.

793) Athen, arch. Gesellsch. n. 248.
 Oben bezeichnet $\begin{matrix} \Theta & \text{K} \\ \Delta & \\ \text{N} & \text{A} \end{matrix}$. An den Ecken be-
 stofsen, sonst gut erhalten. Gewicht . . . 68,01 gr.

794) Athen, ebenda n. 1172. Oben eingeschnitten III, unten eingeschnitten T oder $\perp$. Sehr gut erhalten, an den Ecken ganz wenig abgenutzt. Gewicht 48,99 gr.

795) **Athen, ebenda n. 1187.** Quadratisches Bronzestück. Oben in Relief das Hinterbein eines Vierfüßlers, links und rechts davon ΓΑ. Tadellos erhalten. Gewicht . . . 43,07 gr.

1187	1888	Հաճից արքայազն թիթ խնոր տղայի թիթ արքայազնից և զ' թիթառու ԴԱ.	Անից քե- րն Օ.ՕՅ հիշ թ. 43.	1/2 ն հ
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797) Athen, ebenda n. 2290. Quadratisches Bronzestück. Oben eingeschnitten AP, unten $\Delta \Omega$. Tadellos erhalten. Gewicht . . 36,23 gr.

798) Athen, ebenda n. 1178. Oben in Relief der Buchstabe A. Die Ecken etwas abgenutzt, sonst kleine Bestofsungen. Gewicht 33,675 gr.

799) Athen, ebenda n. 1179. Oben eingeschnitten II, unten E . Tadellos erhalten. Gewicht 32,07 gr.

800) Athen, ebenda n.1181. Rechteckiges Bleistück. Oben in Relief /// **7**, unten **4**. Sehr abgenutzt und beschädigt, auch von Ansatzschicht überzogen. Gewicht 31,57 gr.

197

801) Athen, ebenda n. 1186. Oben ein kleiner Buckel. Sehr gut erhalten. In der einen Ecke ein kleines Loch. Gewicht . . . 29,66 gr.

802) **Athen, ebenda n. 1187.** Oben eingeritzt IE<. Abgenutzt und ein wenig be-
stoßen. Gewicht 29,11 gr.

1187 18. Ταξιδιόν υπέρβατον με τα, πάλιν ταξ. Μον. αμφο
 θυρίδας έχον επί της εισόδου αμφοτέρων 0.021
 γωνιών γυμνάσια τε πέδιλα 1 ΕΞ. Πάγ. 29.

804) Athen, arch. Gesellsch. n. 1188.
Rundes dickes Bleistück. Oben eingepreßt ein
Flügelrad. Am Rande kleine Bestofsungen,
sonst gut erhalten. Gewicht 28,65 gr.

805) Athen, ebenda n. 2635. Oben ein
Stempel, darin in Relief ~~Λ~~. Sehr gut er-
halten. Gewicht 28,51 gr.

806) London, Brit. Mus., ehemals bei
 Argon. Oben bezeichnet H. Vgl. Numism.
 chron. 1868 S. 66 n. 38. Soutzo étal. S. 459
 n. 238. Gewicht 27,98 gr.

807) London, Brit. Mus., ehemals bei
Burgon. Oben bezeichnet IIII. Vgl. Numism.
chron. 1868 S. 66 n. 36. Soutzo étal. S. 460
n. 269. Gewicht 26,42 gr.

808) Athen, arch. Gesellsch. n. 2012.
Oben ein viereckiger Stempel, darin ein-
geritzt III. Sehr gut erhalten. Gewicht . . 21,91 gr.

809) Athen, ebenda n. 1162. Kugelabschnitt von Bronze. Auf der platten Fläche in Relief K. Gut erhalten, ein wenig korrodiert. Gewicht 21,40 gr.

The Archaeological Museum Collection



1895



566 ancient weights, mainly from Athens:

- 125 bronze weights (inv. nr. 1–1510)
- 441 lead weights (inv. nr. 1–3257)

+ dozens of marble weights



ca. 630 ancient weights

New inv. nrs. 8453–9080
(only one inventory, no distinction
according to the material)

The Numismatic Museum Collection



1912



ca. 750 ancient weights

New inv. nrs. 8453–9180
(only one inventory, no distinction
according to the material)



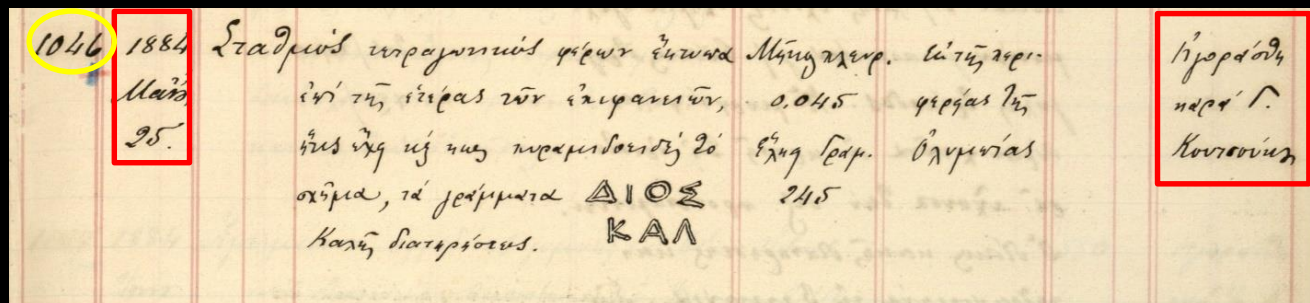
ca. 750 ancient weights

New inv. nrs. 1911–1912 ΛΘ' 1–751
(only bronze and lead weights;
only one inventory)

The Numismatic Museum Collection



Bought on May 25, 1884, from Γ. Κουτσούκου



Conserved in the Archaeological Society of Athens until 1895

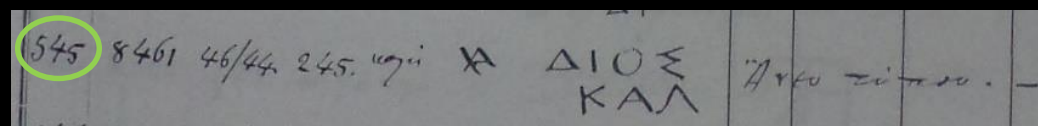
Inv.Nr.: 1046

Αριθμός: 8461
 Περιγραφή: Σταθμός με έκτυπον ΔΙΟΣ ΚΑΛ
 γραμμ. 245, πλ. 0,045
 Αριθμός Πρωτοκόλλου Παραδόσεως: 1234
 Αριθμός Πρωτοκόλλου Ευρετηρίου Αρχαιολογικής Εταιρείας: 1046
 Τόπος Ευρέσεως: Ολυμπία
 Παρατηρήσεις: Ηγοράσθη παρά Κουτσούκου
 Παρεδόθη τω Ι. Σβορώνω.
 Διαταγή Υπουργ. 6911, 16 Απριλίου 1912.



Transferred to the National Archaeological Museum of Athens in 1895

Inv.Nr.: 8461



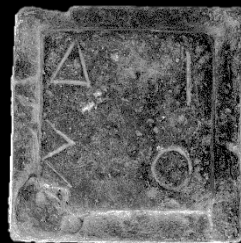
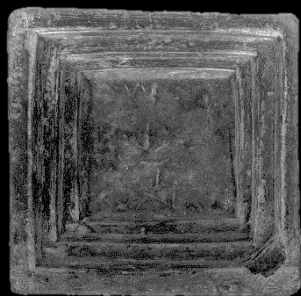
Transferred to the Numismatic Museum of Athens on June 30, 1912

Inv.Nr.: 1911–1912, ΛΘ', 545

Athenian Weights: Most Frequent Mistakes

- Misreading the inv. nr. (either in the catalogue or on the label)
e.g. 1553 instead of 1558
- Interchanging digits in the inv. nr.
e.g. 2678 instead of 2687
- Reading a label upside down (!)
e.g. 9688 instead of 8896
- Exchanging labels of very similar weights
- Confusing two similar inv. nrs. belonging to two separate catalogues (Br. vs. Pb.)
- Confusing inv. nrs. belonging to different museum collections
- Creating a duplicate by mistake





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Charles DOYEN (F.R.S.–FNRS / UCLouvain)

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