

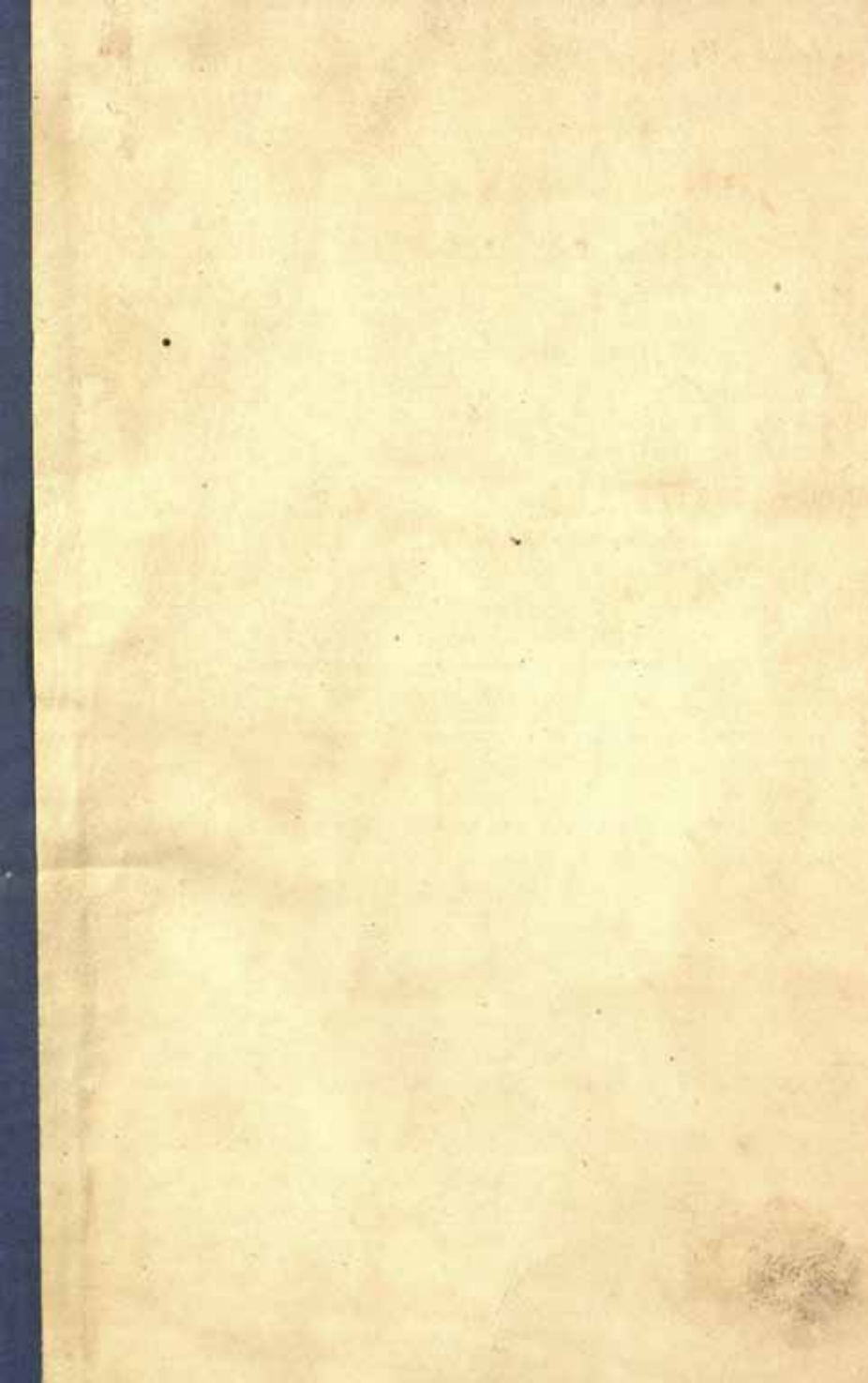
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NUMISMATIC CHRONICLE
AND
JOURNAL OF
THE ROYAL NUMISMATIC SOCIETY

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THE
NUMISMATIC CHRONICLE
AND
JOURNAL
OF THE
ROYAL NUMISMATIC SOCIETY

EDITED BY

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OLIVER CODRINGTON, M.D., F.S.A., M.R.A.S.

AND

G. C. BROOKE, B.A.

1725

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I.

GREEK COINS ACQUIRED BY THE BRITISH
MUSEUM, 1914-1916.

(SEE PLATES I-III.)

As in previous accounts of the acquisitions of the British Museum, I omit from this paper the coins which are to be included in catalogues now in preparation, even although in the present circumstances the appearance of these volumes is likely to suffer considerable delay. What is probably the most important acquisition of the three years, the selection of Sabaeen and Himyarite coins from the collection of the late Col. W. F. Prideaux, is excluded on this ground.¹ Certain recent acquisitions, which have found a place in other articles in the *Numismatic Chronicle*, it is obviously unnecessary to republish here. Of these I may mention the series of 48 silver coins of Athens, Aradus, Soli, Aspendus, Miletus, Sinope, Byzantium, and Persia, all from the "Cilician Find",² which the Museum owes to the generosity of Mr. E. T. Newell; and certain coins of the colony of Pisidian Antioch, which I have myself described.³

¹ Meanwhile I may be allowed to refer to my article on the "Ancient Coinage of South Arabia" in the *Proceedings of the British Academy*, vol. vii, in which some of these coins are discussed.

² *Num. Chron.*, 1914, pp. 1-33.

³ *Ibid.*, pp. 299-313.

ETRURIA.

Vetulonia?

Obv.—Female head r., hair tied in a knot; behind, downwards, 


Rev.—Plain (traces of rosette of pellets and possibly some other ornament).



Æ. 21 mm. Wt. 122.9 grains (7.96 grammes).
[Pl. I. 1.]

The inscription on the obverse, unfortunately incomplete, appears to be Va[tl], i. e. Vetulonia. Both fabric and (in a faint degree) style recall Syracusan coins of the middle of the fourth century; nevertheless I am inclined to date the coin not earlier than the third century. Indeed, the head on the obverse may have been suggested by the head with waved hair on the bronze of Agathocles (*B. M. C.: Sicily, Syracuse*, Nos. 422 ff.).

BRUTTIUM.

Croton.

Obv.— (sic) on l. upwards. Tripod. Border of dots.

Rev.— on l. downwards. Tripod. In exergue,  Border of dots. Incuse circle.

Æ. ↓ 19 mm. Wt. 118.6 grains (7.69 grammes).
[Pl. I. 2.]

Early in the period 480–420 B. C. The monogram on the reverse does not seem to represent another city in alliance with Croton, as the subsidiary inscriptions on Crotoniate coins of this period often do.

This coin, as Mr. S. W. Grose reminds me, is from the same dies as Sir Hermann Weber's specimen (*Num. Chron.*, 1896, p. 5, No. 6, Pl. i. 7), and probably

also that in the Hirsch Catalogue xv, No. 777.⁴ In addition to the usual rings above, the tripod on both sides is ornamented with rings, containing pellets, below the bowl. The latter feature is not uncommon, and appears to be merely a development of volute terminations to ribs ornamenting the inner sides of the legs of the tripod.⁵

Obv.—N I Eagle standing r., head reverted.

Rev.—[Q]PO on l. upwards; tripod; on r. a small Nike flying to place wreath upon it. Slightly concave field. [Pl. I. 3.]

AR. ↑ 21 mm. Wt. 95.2 grains (6.17 grammes).
From the Caprotti Sale, 263, and A. C. Headlam Sale, 229. Presented by Mr. S. W. Grose.

This is one of the coins described by Mr. Grose in *Num. Chron.*, 1915, p. 181, and attributed by him to the brief period of independence from Rome, 280–277 B.C. It is clear that he is right in correcting the reading Φ I, given in both the Sale Catalogues above mentioned, to N I.

SICILY.

Syracuse.

Obv.—Quadriga r., horses pacing, driven by bearded charioteer, and crowned by Nike flying r. Border of dots.

Rev.—ΟΞΥΡΑΚ ΟΞΙ Ο Ν Head of nymph r.; eye full; hair dotted, the end taken up and confined by broad fillet; wears necklace; around, four dolphins. Traces of incuse circle.

⁴ Mr. Grose compares also Drouot Sale Catal., 22 Juin, 1906, No. 139, which is described as reading IA, and attributed to Croton and Aitna. He adds that AI seems to occur on the later eagle type stater, Hirsch Katal. xx, No. 83, and Corghi Coll. (Sambon), Paris, 1896, No. 220, under tripod; also under eagle, Paris Sale (M. Delestre), Mar. 24, 1902, No. 367.

⁵ See many instances in Anson, *Num. Graeca*, i, Pl. xvii ff.

R. ← 25 mm. Wt. 265.6 grains (17.21 grammes).
[Pl. I. 4.] From the Prowe Collection (Egger
Katal. xlv, lot 81, Taf. iii).⁶

Differs from the usual coins of Gelon's time in the broad fillet which confines the hair; cp. Du Chastel, No. 13, and Egger Katal. xlv, Taf. ix. 338.

Obv.—Slow quadriga (or biga?) r., above which is Nike flying r. to crown the horses; in exergue, olive-branch.

Rev.—ΩΞΥΡΑ[K]ΟΞ I [O] Ν Head of nymph r., hair in bag with top drawn together; around, four dolphins.

R. ↓ 33 mm. Wt. 261.9 grains (16.97 grammes).
[Pl. I. 6.] Presented by Sir Arthur Evans.
From Dr. A. C. Headlam's Collection.⁷

Dr. Headlam has already discussed the remarkable points about this very rare variety of a well-known class of Syracusan tetradrachm. It may further be observed that the coin is restruck (note, for instance, the traces of the old type on the extreme right of the obverse), though on what I am unable to say. This would account for the unusual spread of the flan.

THRACE.

Anchialus.

Obv.—QAVTMAΣIMEIN OCEVCEBHCAY Bust
r. of Maximinus laureate, undraped.

⁶ The following other lots from this important sale have found their way into the British Museum: 278 (Perinthus), 313 (Plotinopolis), 967 (Magnesia and Ephesus), 1472 (Hypaepa), 1612 (Acmonia), 1813 (Peltae), 1972 (Perga and Ephesus), 2008 (Andeda), 2055 (Etenna), 2081 (Sagalassus), 2146 (Aegene), 2304, 2305 (Uncertain), 2342, 2350 (Ancyra), 2376 (Ariaramnes).

⁷ Sotheby's Sale, 1916, lot 54. Published by Dr. Headlam, *Num. Chron.*, 1908, p. 1, Pl. i. 2. Sir Arthur Evans inclines to an earlier date than 424 B.C.

Rev.—**ΟΑΓΧ ΙΑΛ Ε ΩΝ** Dolphin r. ; above, a fish l. on its back ; below, a similar fish r.

Æ. ↑ 25 mm. Wt. 131.4 grains (8.51 grammes).
[Pl. I. 8.]

A good specimen of No. 604 in the Berlin Corpus.

LYSIMACHEIA.

Obv.—Head of young Herakles r., wearing lion-skin.

Rev.—**ΛΥΣΙΜΑ** on l. downwards, **ΧΕΩΝ** in exergue ; Nike standing l., holding wreath in outstretched r., palm-branch in l. ; in field r. two monograms, **Α** and **Σ**

Æ. ↑ 17 mm. Wt. 67.2 grains (4.35 grammes).
[Pl. I. 9.] Presented by Mr. W. H. Buckler, with six others similar.

These seven coins were selected for the Museum from what was evidently a small find which had been in the possession of the late Mr. A. O. van Lennep of Smyrna. The interest of them lies in the fact that they are all restruck on Seleucid coins of the following types :

Obv.—Head of Apollo r., laureate.

Rev.—**ΒΑΣΙΛΕΩΣ** on r. downwards, **ΑΝΤΙΟΧΟΥ** on l. downwards. Tripod.

Similar restrikes have been noted by von Sallet.⁸ These types are found on bronze coins of Antiochus I, II, and III. It is natural to assume that these coins were overstruck after the evacuation of Lysimacheia by Antiochus III in 190 B.C. But the only coin of these types which has been attributed to Antiochus III is of a much larger module,⁹ and it would seem that

⁸ Berlin *Beschr. d. ant. Münzen*, i, p. 268, No. 24.

⁹ Babelon, *Rois de Syrie*, Pl. x. 9.

the coins which were used as blanks for these restrikes were of the class generally attributed to Antiochus II.¹⁰

After the above had been written Dr. Rudolf Münsterberg's publication of coins "aus van Lenneps Nachlass"¹¹ came to hand. He found in Mr. van Lennep's collection coins of Lysimacheia of five or six different classes, all apparently from the same find, and among them no less than sixty-seven pieces of the kind described above; the seven given by Mr. Buckler to the British Museum were doubtless among them at the time. Dr. Münsterberg noted that nearly half of the sixty-seven were restruck on coins of Antiochus. He also pertinently observes that the attribution of these coins to Antiochus II is by no means convincing, and inclines, from the roughness of the execution of the Herakles-Nike types, to assume that they were struck during the reign of Antiochus III. That they were not, as I have supposed above, all made after the evacuation of 190 B.C., is shown by the fact that one of them is countermarked **ANTIOXOY**.

MACEDON.

Demetrius Poliorcetes.

Obv.—Head of Demetrius r., with bull's horn; diademed. Border of dots.

Rev.—**ΒΑΣΙΛΕΩΣ** r. downwards, **ΔΗΜΗΤΡΙΟΥ** l. downwards. Poseidon standing l., r. foot on rock, l. hand resting on trident; in field l. **Ξ**; between legs **Π** in wreath. Border of dots.

¹⁰ *B. M. C.: Seleucid Kings*, Pl. v. 9. The anchor which occurs as a symbol on the reverse of this group is not however discernible in any of the restrikes.

¹¹ *Num. Zeit.*, 1915, pp. 108 ff.

Æ. ↑ 31.5 mm. Wt. 266 grains (17.24 grammes).
 [Pl. I. 10.] From the Cumberland Clark
 Collection, lot 139.¹²

The Sale Cataloguer remarks on the unusual style of the portrait. It is, however, very like the head selected by Imhoof-Blumer¹³ for enlargement as a specially fine portrait of Demetrius. The type, it may be observed, shows an approximation to the head of Seleucus I.,¹⁴ and is indeed nearer to that than to the ordinary head of Demetrius, which is shown, for instance, on the coin illustrated on Pl. I. 11.¹⁵

Under Philip V or Perseus.

Obv.—Head of young Herakles r. in lion-skin.

Rev.—**MAK E** above, [**Δ**]**ONΩN** in exergue; bridled horse pacing r.; in field r. **Α**; between fore-legs, **Π**

Æ. ↑ 18.5 mm. Wt. 92.2 grains (5.97 grammes).
 [Pl. I. 12.]

A slight variety of Gaebler, *Ant. Münzen von Makedonia und Paionia*, i, p. 33, No. 36.

BOEOTIA.

Tanagra.

Obv.—Boeotian shield; incuse square.

Rev.—**T A** Forepart of horse r., wreath round shoulders; below, bunch of grapes; incuse circle.

¹² At the same sale the British Museum acquired lots 141 (see below), 145 (Philip V), 348, 349 (Cyrene).

¹³ *Porträtköpfe*, Taf. i. 4.

¹⁴ *Ibid.*, Taf. i. 3, iii. 8.

¹⁵ *Rev.* Poseidon, with monograms **Ε** and **Μ**; ↓, wt. 266.2 grs. (17.25 grms.); also from the Cumberland Clark Collection, lot 141.

Lead. 33 mm. Wt. 403.6 grains (26.15 grammes).
 [Pl. I. 13.] From Hirsch's Auction, Katal.
 xxxiii, lot 707, Taf. xvii.¹⁶

This is evidently not a lead tessera, as it is called in the Sale Catalogue, but an impression from the dies of a stater of the period 387-374 B.C.¹⁷ It is interesting as revealing the square shape and small size (not more than 26 mm. sq.) of the obverse or anvil die. A stater with similar reverse type and symbol has been described by Imhoof-Blumer.¹⁸

ATHENS.

The class of curious little bronze coins which M. Svoronos¹⁹ has identified as the *κόλλυβοι* of the fifth century was represented in the British Museum by only three specimens; one with *obv.* crab, *rev.* sole of r. foot (Svoronos 478), was amongst the unidentified coins, and was recognized by M. Svoronos himself on his last visit to England; the other is included under Aegina in *B. M. C.: Attica*, p. 143, No. 223; a third, *obv.* bucranium, *rev.* X, was also among the unidentified coins, and does not seem to be described by M. Svoronos. The generous donation of thirty-three specimens by Mr. J. Anderson of Athens has to some extent filled the gap, though it must be remembered that M. Svoronos enumerates 645 varieties of this coinage. As specimens I illustrate the following:

¹⁶ At this sale the British Museum also acquired lots 127 (Laüs) and 612 (Aeneia).

¹⁷ Cp. the Lycian trial-piece in lead, *B. M. C.: Lycia*, Pl. xliii. 1.

¹⁸ *Num. Zeit.*, iii, p. 381, No. 70 (without illustration).

¹⁹ *Journal Internat.*, xiv, 1912, pp. 123-60.

Obv.—Pomegranate.

Rev.—Lion (?) lying r.

Æ. \nearrow 0.65 mm. Wt. 4.3 grains (0.28 gramme).
[Pl. I. 5.]

Obv.—Ram's head r.

Rev.—Tall altar (?) between caduceus on l., Σ on r.

Æ. \leftarrow 0.65 mm. Wt. 4.4 grains (0.29 gramme).
[Pl. I. 7.]

An interesting little hoard of thirty-nine Athenian "owls", found in the Ptah-temenos at Memphis, has been presented by the British School of Archaeology in Egypt through Prof. Flinders Petrie. Five of the coins are of the fifth-century type, with the eye in full; the remainder have the eye in profile. Although the average state of preservation is poor, the hoard is interesting for various reasons. One is the remarkably good style of a certain number of the specimens, showing no trace of archaism; they might almost have been made in an Attic colony [Pl. I. 15, 16]. There is, however, nothing else to indicate that they did not issue from the Athenian mint. One, which looks barbarous, is apparently struck from a badly worn die. On a large number there are punch-marks; a seven-rayed star, in one case with blobs at the ends of the rays, a kind of quatrefoil, a four-pointed star, and other marks that suggest letters, may be noted; but for the most part, unfortunately, the corrosion of the surface renders the marks illegible. In general character they may be compared with the counter-marks on Persian sigloi, but there appears to be no more than a family resemblance to those which I have

noted on the latter series. In addition to punch-marking, the coins have been submitted to the most drastic tests of genuineness; many of them show not only the usual stabs, but large holes which have been drilled almost through the coins; in one case the weight has been thus reduced to 219.3 grs. (14.21 grms.). That such testing was justified is proved by one specimen which is a mere shell of silver, the whole of the interior having disappeared, leaving only traces of the copper of which it was apparently composed. Yet this coin shows, punched on the cheek of Athena, what looks like a pair of signs of some Oriental script; which suggests that punch-marks were sometimes impressed on plated coins in order to divert suspicion.

Obv.—Head of Athena r., wearing crested Corinthian helmet.

Rev.—^A
⊙ E Kithara.

Æ. † 18.5 mm. Wt. 42.3 grains (2.74 grammes).
[Pl. I. 14.] Presented by the Rev. J. A. Vanes.

This combination of types is new to the British Museum. M. Svoronos would attribute the coin to the Athenians in Delos. The head of Athena appears to be rather late in style.

MYSIA.

Cyzicus.

Obv.—Dog l., on tunny-fish.

Rev.—Mill-sail incuse square.

El. 21 mm. Wt. 250.5 grains (16.23 grammes).
[Pl. II. 1.] Cp. *Nomisma*, vii, Pl. iii. 12.

Lampsacus.

Obv.—**ΛΑΜΥ** Female head r., horned, laureate, hair taken up behind.

Rev.—Forepart of winged horse r., with curved wing; above, **A**; traces of incuse circle.

Æ. † 10.5 mm. Wt. 19.1 grains (1.24 grammes).
[Pl. II. 2.]

This coin is similar to *B. M. C.: Mysia*, p. 84, Nos. 55, 56, in the description of which the horned nature of the head has not been noticed.²⁰ The head cannot be Nike; nor is it a female Pan or Satyr, since the ear is human; nor a Maenad or young Dionysos,²¹ since the wreath is clearly not ivy. It may be meant for a river-nymph.²² Another possibility is Io, whose representation on coins of Larisa Phriconis and Lesbos has recently been discussed by Imhoof-Blumer.²³

Parium?

Obv.—**QTRAIANVSAVC** Head of Trajan r., laureate. Uncertain countermark. Border of dots.

Rev.—**QPLOTIN - - - ARCIANEAVC** Busts of Plotina (on l.) and Marciana (on r.) confronted. Border of dots.

Æ. † 17.5 mm. Wt. 37.3 grains (2.42 grammes).
Presented by Dr. W. Leaf and Mr. F. W. Hasluck, who obtained it at Bairamitch in the Troad.

²⁰ Imhoof-Blumer, *Monn. gr.*, p. 249, No. 111, is perhaps a similar coin.

²¹ See Imhoof-Blumer in *Num. Zeit.*, 1915, p. 98.

²² Cp. the horned female head, crowned with reeds, on a Sicilian coin of uncertain attribution, *B. M. C.*, p. 240, No. 1.

²³ *Op. cit.*, p. 105 f.

A similar coin in the Paris collection is published by Vaillant²⁴ and Cohen.²⁵ Both give the reverse legend as **PLOTINA ET MARCIANA AVG.**²⁶ Cohen says that the piece has been attributed to Parium, perhaps because of the countermark which appears on the neck of the emperor in the Paris specimen: the capricorn of Parium. The countermark on the new specimen is unfortunately quite obscure.

TROAS.

Abydos.

Obv.—Head of Apollo r., laureate, with long hair.

Rev.—**ABY** on l. upwards; eagle standing r.; in field, r., facing bust, wearing low kalathos(?).

Æ. ↑ 23 mm. Wt. 91.6 grains (5.94 grammes).
[Pl. II. 3.] Presented by Dr. W. Leaf and Mr. F. W. Hasluck, who obtained it in the Troad.

This seems to be of rather finer style than the usual run of bronze coins of Abydos, and approaches in quality the silver illustrated by Wroth (*B. M. C.: Troas*, Pl. i. 9; period 320–280 B.C.). The little bust which serves as symbol is doubtless the archaic Artemis of Abydos, whose complete cultus figure is seen on later coins.²⁷ The symbol "head of Juno? to r." described by Leake²⁸ may be the same goddess.

²⁴ *Num. Col.* (1695), p. 152.

²⁵ *Monn. fr. sous l'Empire romain*², ii, p. 96.

²⁶ Vaillant in his engraving; but in his text he prints **PLOTINA AVG MARCIANA AVG.**

²⁷ Imhoof-Blumer in *Nomisma*, viii, p. 2, Taf. i. 2–5.

²⁸ *Num. Hellen., Asiatic Greece*, p. 1, bottom.

ÆOLIS.

Autocane.

Obv.—Head of Zeus r., laureate.

Rev.—ΑΥΤΟΚ - Head of Athena r. in crested Corinthian helmet.

Æ. → 10 mm. Wt. 18.8 grains (1.22 grammes).

[Pl. II. 4.] Presented by Prof. C. W. Oman.

Cp. Imhoof-Blumer, *Monn. gr.*, Pl. E 22 (with the inser. in front of the head).

Temnos.

Obv.—Head of young Herakles r., wearing lion-skin.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on r. downwards. Zeus, nude to waist, seated l., r. holding eagle, l. resting on sceptre; in field l. AM and oinochoe with vine-branch.

Æ. ↑ 20.5 mm. Wt. 62.3 grains (4.04 grammes).

[Pl. II. 5.]

The drachm corresponding to the tetradrachms of Müller's Class VI (942-66).

UNCERTAIN OF IONIA.

Obv.—Star in wreath(?) and another type beside it, obliterated.

Rev.—A square and an oblong incuse, the latter being a secondary punch-mark which has obliterated an original square incuse.

El. 14 mm. Wt. 84.6 grains (5.48 grammes).

[Pl. II. 6.] From the Kessissoglou Collection (Sotheby's, Dec. 8, 1915, lot 192). Presented by Mr. Henry Oppenheimer.

This appears to be an unpublished piece. It is unfortunate that the impression of the second incuse has flattened out the corresponding portion of the obverse, so that half the type is obliterated.

IONIA.

Smyrna.

To the kindness of Mr. W. H. Buckler the Museum owes no less than fifty-five bronze coins of Smyrna of various dates, including eighteen Homereia. I mention the following as giving magistrates' names which are lacking in Münsterberg's *Beamtennamen*.²⁹

Obv.—Head of Apollo r., laureate.

Rev.—[Ι]ΜΥΡΝΑΙΩ[N] on l. upwards; ΛΥΣΙΑΣ on r. upwards. Tripod.

Æ. \searrow 16 mm. Wt. 68.3 grains (4.43 grammes).

Obv.—Head of Apollo r., laureate.

Rev.—ΙΜΥΡΝΑ[ΙΩΝ] on r. downwards; ΜΗΝΟΦΑ on l. downwards. Hand in caestus.

Æ. \uparrow 15 mm. Wt. 37.4 grains (2.42 grammes).

Obv.—Head of Kybele r., turreted.

Rev.—ΙΜΥΡΝ - - on r. downwards; ΠΛΑΤΩ on l. downwards. Altar.

Æ. \uparrow 11 mm. Wt. 20.4 grains (1.32 grammes).

Obv.—Head of Apollo r., laureate.

Rev.—[Ι]ΜΥΡ on r. downwards; ΕΡΡΥ on l. downwards. Lyre (chelys).

Æ. \uparrow 11 mm. Wt. 16.8 grains (1.09 grammes).

Obv.—Head of Apollo r., laureate.


Rev.—[Ι]ΜΥΡΝΑ[ΙΩΝ] on r. downwards; ΕΡΜΟ
ΛΑΟΣ | ΠΑΡΜΕΝΙΟΝ | ΤΟΣ (sic) on l.
downwards. Homer seated l.



Æ. 20 mm. Wt. 139.2 grains (9.02 grammes).

²⁹ *Num. Zeit.*, 1912, pp. 37 ff.

CARIA.

Alabanda.

Obv.— AVT KAI T AIA·ADPIANO C·ANTΩN!
NOC·EVCE Bust r. of Pius, laureate, undraped. Border of dots.

Rev.— ΕΠΙ·Γ·ΑΝ  ΙΟΝΑΙ Α ΝΔΡΩΝΟCΑΡΧ
ON and in ex. [ΑΛ]ABANΔΕ [Ω]N Young Dionysos, draped, standing to front, head l., l. resting on thyrsos, r. holding kantharos, to which a panther leaps up. Border of dots.

Æ. ↓ 39.5 mm. Wt. 491.4 grains (31.84 grammes).
[Pl. II. 8.] Presented by Mr. W. H. Buckler.

On the magistrate, whose name seems to have been Gaius Iulius Anicius Andron, see Imhoof-Blumer, *Kleinas. Münzen*, i, p. 107, No. 10.

Alinda.

Obv.—Head of young Herakles r., wearing lion-skin.

Rev.—ΑΛΙΝΔΕ - on r. downwards. Herakles, nude, standing to front, holding club upwards in r., lion-skin on l. arm; in field l. Γ; all in oak-wreath.

Æ. ↑ 22.5 mm. Wt. 109.7 grains (7.11 grammes).
Broken. [Pl. II. 7.]

A smaller denomination (2.08 grms.) of silver of this mint is published by Imhoof-Blumer.³⁰ Our coin, which is not complete, was probably an Attic didrachm, the smaller denomination being a hemidrachm. The standing Herakles recurs in the same position as a type on coins of Imperial date, and was probably a local statue.

³⁰ *Kleinas. Münzen*, i, p. 106, No. 1, Taf. iv. 5.

Iasus.

Obv.—Heads of Artemis and Apollo r., jugate. Border of dots.

Rev.—[IA]Σ ΕΩΝ above, - ΠΟΛΕΜΟΥ below ; Hermias swimming r. assisted by dolphin.

Æ. ↑ 19.5 mm. Wt. 90.2 grains (5.84 grammes).
Presented by Rev. J. A. Vanes.

The magistrate's name ΕΥΠΟΛΗΜΟΥ (*sic*) is recorded by Sestini³¹ on a coin of these types.

Neapolis ad Harpasum and Harpasa.

Obv.—ΘΑΥ·Κ·Γ·ΟΝΙΒ·ΤΡΕΒΩΝΙ ΑΝΟΓΓΑΛΛΟΣ
Bust of Trebonianus Gallus r., laureate, wearing paludamentum and cuirass.

Rev.—ΘΕΠΙΚΑΝΔΙΔΟ ΝΡΤΟΔΝΕΑΠΟΛΕΙΤΩ,
and in ex. ΑΡΤΑΧΗΝΩΝ | ΟΜΟΝΟΙΑ
Figures of Ephesian Artemis (on l., facing) and Athena (on r., to front, head l., r. resting on spear, l. on shield).

Æ. ↓ 36.5 mm. Wt. 166.9 grains (10.81 grammes).

An alliance coin between these two cities under Gordian, with similar reverse type, has been published by Sestini.³²

PISIDIA.

Sagalassus.

Obv.—Head of young Herakles r., wearing lion-skin ; border of dots. Double-struck.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on r. downwards ; Zeus nude to waist, seated l., r. holding eagle, l. resting on sceptre ; beneath seat, bucranium ; beneath r. hand, ΣΑΓΑ

Α. ↑ 31.5 mm. Wt. 259.1 grains (16.29 grammes).

[Pl. II. 9.]

³¹ *Mus. Hed.*, ii, p. 226.

³² *Descr. num. vet.*, p. 345 ; Mionnet, v. 351. 277.

Sagalassus as a mint for Alexandrine coins appears to be new. The coinage has generally been supposed to begin in the time of Amyntas, with silver and bronze of autonomous types. But this coin, though it belongs to one of the latest classes of Alexandrines (Müller VI), can hardly be later than about 100 B.C. The bull's head is one of the types of the early autonomous bronze.³³

CILICIA.

I group together here some small coins, acquired from different sources, which seem all to belong to the earlier half of the fourth century, and to have been struck by the Persian governors at Tarsus or other Cilician mints.

Obv.—Bearded male head l., laureate (Ba'al Tars?).
Linear border.

Rev.—Head of beardless Herakles l., wearing lion-skin.
Linear border. Concave field.

R. $\frac{1}{4}$ 11 mm. Wt. 10.2 grains (0.66 gramme).
[Pl. II. 10.]

The head of the obverse closely resembles in style that of Kronos on the stater of Mallus, *B. M. C.*: *Lycaonia*, &c., Pl. xvii. 2.

Obv.—Lion's head l., with open jaws; truncation marked by row of dots between plain lines.

Rev.—Head of Bes r. in dotted incuse square.

R. $\frac{1}{4}$ 11 mm. Wt. 14.3 grains (0.93 gramme).
[Pl. II. 11.] From the Prowe Sale, Egger
Katal. xlv, lot 2304, Taf. xxxv.

Obv.—Female head, with flowing hair, facing, inclined to l.; wears necklace. Border of dots.

³³ *B. M. C.*: *Lycia*, &c., p. cvii.

Rev.—Two nude wrestlers engaged, as on coins of Aspendus.

A. ↓ 10 mm. Wt. 5.9 grains (0.38 gramme).
[Pl. II. 12.] From the Prowe Sale, Egger
Katal. xlv, lot 2305, Taf. xxxv.


Obv.—Head of Aphrodite r., hair bound with fillet or diadem with hanging ends, and hanging in club behind; wears necklace. Border of dots.

Rev.—Head of Ares r., bearded, wearing crested helmet; on r., inscr. ♀ in Aramaic (חרנית, Datames). Border of dots.

A. → 10.5 mm. Wt. 8.9 grains (0.58 gramme).
[Pl. II. 13.] Cp. Babelon, *Traité*, ii, t. ii,
p. 410, No. 608, Pl. cix. 3.

AEGEAE.

Obv.—Head of Herakles r., bearded, laureate. Border of dots.

Rev.—Club tied with fillet;²⁴ across field ΑΙΓΕ ΑΙΩΝ;
in field r., monogram 

Æ. ↑ 16 mm. Wt. 60.8 grains (3.94 grammes).
[Pl. II. 14.]

The same monogram occurs on *B. M. C.*: *Lycaonia*, &c., *Aegeae*, p. 20, No. 1. A coin with similar types, but with a monogram (consisting of Φ and Λ?) on the left instead of the right, was shown to me by a private collector in 1902; and another, with a monogram containing some of the same elements as that on our own coin, is in the Hunter Collection (Macdonald, ii, p. 526, No. 6).

Obv.—Portrait head of beardless man r., hair bound with taenia (laureate?). Border of dots.

²⁴ What I have called a fillet seems to be rather bulky; at the same time it appears to be exiguous for a lion-skin.

Rev.—A[Γ]E|AΙΩ|N in field l. Nike advancing l., carrying wreath in r., palm in l. Border of dots.

Æ. $\frac{1}{2}$ 17.5 mm. Wt. 44.6 grains (2.89 grammes).

[Pl. II. 15.]

This is one of the puzzling group of coins with portrait heads discussed by Imhoof-Blumer.³⁵ Taylor Combe had already recognized the head on one of the group as Alexander Balas. Imhoof-Blumer rejects this identification, and makes out a strong case for dating all these portrait coins, and others connected with them by various details, long after Seleucid times. He thinks that the head is intended always for the same person, and that a heroized king, possibly Alexander the Great. He misses in all of them the characteristic long chin of Alexander Balas. The present coin, however, seems to me to show precisely that characteristic; and all the heads seem to have a Seleucid character, whereas in none of them can I observe any of the characteristics of the well-known type of Alexander the Great. If then the heads represent heroized kings, I would suggest that they are some member or members of the Seleucid dynasty. That coins with the portrait of Antiochus IV were struck at Aegeae in that king's time has been shown by Imhoof-Blumer himself.³⁶ It is quite possible that Alexander Balas also bestowed some special favours on Aegeae. Possibly some connexion of this king with Cilicia is indicated by the fact that the Athena-Nikephoros type, which first occurs on Seleucid tetradrachms and bronze in his reign,³⁷ is exactly the same

³⁵ *Kleinas. Münzen*, ii, pp. 424 ff.

³⁶ *Ibid.*, Pl. xvi. 7.

³⁷ See Babelon, *Rois de Syrie*, p. cxxviii, and the rare tetradrachm, *B. M. C. : Seleucid Kings*, Pl. xv. 5. The bronze is common.

as occurs on later coins of Aegeae and various other Cilician cities, such as Pompeiopolis.

ELAEUSSA SEBASTE.

Obv.—Head of City-goddess r., veiled and turreted.
Fillet border.

Rev.—ΕΛΛΙΟΝΣΙΩΝ | ΤΗΣΙΕΡΑΣ on r. downwards, ΚΑΙ | ΑΥΤΟΝΟΜΟΝ on l. downwards; female figure standing l. holding tiller; in field l., between tiller and body, downwards, ΙΣΙ; outside inscription, Α and aphlaston; all in wreath.

R. ↑ 29.5 mm. Wt. 240.7 grains (15.60 grammes).
[Pl. II. 16.]

Another specimen of the very rare tetradrachm, hitherto only represented in the Waddington Collection.³⁸ The latter specimen differs from ours in the monogram and in the letters AN in the field l. between the tiller and the figure.

UNCERTAIN OF ASIA MINOR.

Obv.—Lion couchant r., jaws open.

Rev.—Incuse square, roughly divided into four squares.

R. 14 mm. Wt. 74.0 grains (4.80 grammes).
[Pl. II. 17.] From Egger's Auction, Katal.
xlv, lot 539, Taf. xv.

A half-stater of the "Babylonian" standard, Asiatic in style, and possibly from the south coast of Asia Minor.

LYDIA.

Daldis.

Obv.—Ο[Ο]ΥΕCΤΑCΙΑ ΝΟC ΚΑΙCΑΡ Bust of
Vespasian r., laureate, unclothed. Border of
dots.

³⁸ Babelon, *Inventaire Wadd.* 4703, Pl. xii. 15.

Rev.—ΟΕΠΙ·ΤΙΦΛΑΥ ΛΑΦΛΑΚΑΙΔΑΛΔΙ·

Kybele, wearing polos, seated l. on throne, beside which is a small lion seated l.; her l. elbow rests on tympanum; in her r. she holds phiale. Border of dots.

Æ. ↑ 25.5 mm. Wt. 149.8 grains (9.71 grammes).

[Pl. II. 18.] Presented by Mr. W. H. Buckler.

Quasi-autonomous coins of Daldis (Φλανιοπολιτῶν Καισαρέων Δαλδιανῶν) struck by the same magistrate (Τι. Φλάυιος Ὑλας) in the Flavian period, when the coinage begins, have long been known;³⁹ but this is apparently the first to be published with the portrait of Vespasian himself.

Hierocaesarea.

Obv.—ΟΘΕΑ ΡΩ ΜΗ Bust of Roma r., wearing crested helmet, cuirass, and mantle; in front, sceptre. Border of dots.

Rev.—ΟΕΠΑΡΤΕΜΙΔΩΡΟ ΒΑΡΧΙΕΡΟΚΑΙCΑΡΕ and in inner are on l., ΩΝ Artemis huntress r., with bow in l., drawing arrow from quiver with r., accompanied by hound. Border of dots.

Æ. gilt ↗ 26.5 mm. Wt. 128.6 grains (8.33 grammes). [Pl. II. 19.]

Of the time of Commodus, since coins of that emperor and of Crispina exist with the name of the same archon.⁴⁰ The Roma type appears to be new for this mint, and the sceptre attribute is also unusual.

PHRYGIA.

Temenothyrae.

Obv.—ΟΑΥΤΚΑΙΜΙΟΝΑ ΦΙΛΙΠΠΟΣ Bust of Philip Sen. r., laureate, wearing paludamentum and cuirass. Border of dots.

³⁹ Imhoof-Blumer, *Lydische Stadtmünzen*, pp. 60 f.; *B. M. C.: Lydia*, p. xlix.

⁴⁰ *B. M. C.: Lydia*, p. lix.

Rev.—**QNEIKOM AXOCAPXIEPEVCAPXA T** and, returning above exergual line, **O·B·**; in ex. **THMENOTHYP·EVCIN** Artemis in biga of stags r., holding bow in l., drawing arrow from quiver with r. Border of dots.

Æ. ↓ 49 mm. Wt. 955.4 grains (61.91 grammes). [Pl. III. 2.] Presented by Messrs. Spink & Son. See Spink's *Num. Circ.* xxiii, 1915, pp. 301 and 433; and cp. Fox, *Gr. Coins*, ii, Pl. vii. 136.

CAPPADOCIA.

Ariaramnes.

Obv.—Head r. wearing satrapal helmet. Border of dots.

Rev.—**APIAPAMNOY** Horseman r., galloping. r. raised wielding lance (?); below, **Δ** and **Ι**

Æ. ↑ 19 mm. Wt. 72.8 grains (4.72 grammes). [Pl. III. 1.] From the Prowe Collection, Egger Katal. xlv, lot 2376. Cp. Th. Reinach, *Trois Royaumes*, p. 30; Macdonald, *Hunter Catal.*, ii, p. 573.

UNIDENTIFIED KING.

Attalus Epiphanes.

Obv.—Head of Attalus Epiphanes r., diademed.

Rev.—**ΒΑΣΙΛΕΩ[Σ]** on l. downwards, **ΑΤΤΑΛΟΥ** in ex., **ΕΠΙΦΑΝΟΥΣ** on r. upwards. Eagle standing r. on taenia (?),⁴¹ beating its wings; in field r. **ΙΥ**

Α. ↑ 15.5 mm. Wt. 59.8 grains (3.88 grammes). [Pl. III. 5.]

This drachm reveals to us the existence of an otherwise unknown king. In style, arrangement of inscription, &c., it recalls the Cappadocian coinage. There is, however, no Cappadocian king of the name.

⁴¹ Such it appears to be, rather than a serpent.

M. Théodore Reinach, to whom I referred the coin for identification, hopes to deal with it elsewhere, and I gladly leave to him the solution of the problem. The coin seems to be too early for the Attalus who was dynast of Paphlagonia⁴² in 64 B.C., to whom M. Reinach was at first inclined to attribute it.

CYPRUS.

Citium.

Obv.—Herakles r., with club and bow, as on other coins of Azbaal.

Rev.—[𐤅𐤁𐤏𐤕] in Aramaic; lion r., bringing down stag; dotted incuse square.

AR. ← 24 mm. Wt. 168.8 grains (10.94 grammes).
[Pl. III. 3.] Presented by Sir Hamilton Goold-Adams, G.C.M.G.

Most of the Citian coins of this type in Sir Hamilton Goold-Adams's collection show, like this one, the stag's hind-quarters raised well above the ground, whereas on all the specimens in the British Museum Catalogue the stag has been brought down altogether. Mr. Jelajian also possesses a specimen of the new variety.

I note here a few other points of interest relating to the Cypriote coinage, kindly communicated to me by Sir Hamilton Goold-Adams and by Mr. Jelajian.

Amathus. The large silver coins conjecturally attributed to Amathus (*B. M. C.*: *Cyprus*, p. xxv) are found in the neighbourhood of the ancient site.

⁴² *Recueil*, i, p. 126; *C. R. de l'Acad. d. Inscr.*, 5 Juin 1914. M. Reinach has since written to me that he considers it not absolutely out of the question that the coin may belong to an unknown Attalus of the second century, to be intercalated between Morzios (mentioned in 189 and 179 B.C.) and Pylaemenes (mentioned in 133 ff. B.C.).

Soli. Several specimens of B. M. C., p. lxii (*p*), Pl. xx. 19, found recently, all come from the neighbourhood of Soli, not Marium.

Salamis. Specimens of the diobol and obol of Euanthes (B. M. C., p. xcvii, Nos. 3 and 6) have been found at Kythrea, near the site of Kithri.

Cyprus under the Romans. Three other specimens of the coin of Tiberius (B. M. C., p. cxx, No. 1) have been shown to me as found in Cyprus.

Mr. Jelajian also possesses the following:

Obv.—Q - - - ΑΥΓΟΥΣΤΟΣ Bust of Caracalla r. (details obscure). Border of dots.

Rev.—ΟΚΟΙΝΟΝ ΚΥΠΡΙΩΝ Eagle to front, head l., wreath in beak, wings spread. Border of dots.

Æ. 26.5 mm.

Obv.—QANTΩΝΕΙΝ - - ΑΥΓΟΥΣΤΟΣ Bust of Caracalla r., bearded, laureate, wearing paludamentum and cuirass. Border of dots.

Rev.—QΑΥΤΟΚΑΙΣΤΡ-ΣΕ ΠΤΙΜΙΟΣΓΕΤΑΣ Bust of Geta r., with slight beard, laureate, wearing paludamentum and cuirass. Border of dots.

Æ. 27.5 mm. Coins of this class are found in Cyprus.

Obv.—Capricorn r.; above, star.

Rev.—Scorpion l.; above, star.

Æ. 17 mm. Cp. Mionnet, v. 110. 1 (Commagene). These coins are found in quantities in Cyprus.

SYRIA.

Antiochus I.

Obv.—Head of Antiochus I r., diademed.

Rev.—ΒΑΣΙΛΕΩΣ r. downwards, ΑΝ ΤΙΟΧΟΥ l. downwards. Apollo, nude, booted, seated l. on omphalos, holding two arrows in r., l. resting on bow; in exergue, ΑΣ ΑΝ

Æ. ↑ 28.5 mm. Wt. 263.6 grains (17.08 grammes).

[Pl. III. 4.]

This is from the same obverse die as three other specimens,⁴³ the monograms on the reverse of which are \mathbf{N} and \mathbf{N} . Mr. E. J. Seltman, who has published the coin elsewhere,⁴⁴ regards it, for reasons which do not appear to me to be convincing, as having been struck not by Antiochus I, but by Antiochus III, and at Alabanda-Antiochia, in the period 197-189 B.C. I do not recognize the idealization of the portrait to which he refers, and both fabric and style appear to me to be early. Apollo, as Mr. Macdonald points out to me, wears boots, as on the coins of Antiochus I and II published by him in *J. H. S.* 1903, Pl. i. 4, 5.

Demetrius I.

Obv.—Head of a mastiff-like hound with long pointed ears, l. Border of dots.

Rev.— $\mathbf{\Sigma\Lambda\text{C}\text{I}\text{A}\text{E}\text{O}\text{C}}$ r. downwards, $[\Delta]\mathbf{HMH\text{T}\text{P}\text{I}[OY]}$ l. downwards. Bust of animal with long pointed ears, resembling a karakal, r.; below, monogram $\mathbf{\Sigma}$

Æ. \uparrow 20 mm. Wt. 126.8 grains (8.22 grammes).
[Pl. III. 6.] Presented by Mr. R. J. Whittall.

Mr. Lydekker, to whom casts of this unusually fine specimen of an interesting coin⁴⁵ were submitted, can only describe the animals as above. He is especially doubtful about the creature on the reverse, which is certainly different from that on the obverse. The coin belongs to a curious little group with animals' heads, which suggest that Demetrius took an interest in natural history.⁴⁶

⁴³ Macdonald, iii, Pl. lxiv. 3; *B. M. C.*: *Seleucid Kings*, Pl. iii. 5; and Hirsch Katal. xviii, Taf. xxxix. 2502.

⁴⁴ *American Journal of Num.*, 1913, pp. 121 ff., Pl. vi. 1.

⁴⁵ *Cp. B. M. C.*: *Seleucid Kings*, p. 49, No. 59, Pl. xiv. 13.

⁴⁶ *Ibid.*, p. 49, Nos. 57 ff.; Babelon, *Rois de Syrie*, Pl. xvi. 12, 13. Lion, Boar, Griffin, Stag, and the two animals on the present coin.

PARTHIA.

Orodes II (III).

Obv.—Bust of Orodes III l., with flowing beard; wears diadem, necklace, and cuirass.

Rev.—[B]ΑΣΙΑΣ[ΩΣ] | ΒΑΣΙΛ ΩΝ above, ΑΡΣΑ
ΚΟΥ | ΣΥΣΡΕΣΤΟΥ on r. downwards,
ΔΙΚΑΙΟΥ below, [Σ]ΠΙ+ΑΝΟΥΣ | [±ΙΑ]
ΗΛΛΙΝΟΥC (*sic*) on l. downwards; in exergue,
ΔΥΣΤΡΟΥ Orodes II seated l., holding
bow in r., l. resting on sceptre; behind him,
downwards, ΖΙΤ

R. ↑ 27.5 mm. Wt. 225.6 grains (14.62 grammes).
[Pl. III. 7.]

Up to the present the only known coin of this king has been the tetradrachm in the Berlin Cabinet,⁴⁷ struck in the same year (317 = A. D. 5-6), but in the month Embolimus instead of Dystros. The portrait is unusually good for the period. A blistering of the metal has affected the reverse (behind the figure).

Mr. Ellis Minns's discovery of an Orodes who reigned about 80 B. C.⁴⁸ makes it necessary to add one to the numeration of the previously known kings of that name.

SPAIN.

The Museum series of ancient Spanish coins has been enriched by no less than 229 silver and bronze coins, representing a very large number of mints; these have all been presented by Mr. W. H. Buckler. Among the less common varieties may be mentioned the following:

⁴⁷ Gardner, Pl. v. 1; Wroth, *B. M. C. : Parthia*, Pl. xxiv. 5.

⁴⁸ *Parchments of the Parthian Period from Aeroman*, in *J. H. S.*, xxxiv, p. 40.

Obv.—QBA<V Λ<VC Bust r., diademed, wearing round head-dress. Plain border.

Rev.—QHZA HAC Ear of corn.

Æ. ↓ 12 mm. Wt. 12.8 grains (0.83 gramme).
[Pl. III. 9.] Presented by Mr. J. Anderson of Athens.

The inscription on this apparently unpublished coin is obviously βασιλεὺς Ηζαυας.

Chaleb.

Obv.—O++AH8BA<IΛ<V+ Bust r., crowned, between two ears of corn; inner dotted circle.

Rev.—O++AIO<OIOIENENΛ+ Bust r., diademed, with round head-dress between two ears of corn; inner dotted circle.

Α. ↑ 18 mm. Wt. 24.3 grains (1.57 grammes).
[Pl. III. 10.] From Col. W. F. Prideaux's Collection, *Num. Chron.*, 1884, p. 217, No. 1, Pl. x. 12; Littmann, *op. cit.*, i, p. 53, No. 3.

Both the authorities named give the obverse legend as reading ++AIIH8, &c.; but the apparent I is due to double-striking of the H. Another specimen acquired in 1910 reads clearly ++AH8.

Esbael.

Obv.—C+LAX+Λ<Λ+Λ<C+CIH Similar obv. to preceding, but small Λ over the crown.

Rev.—C+BAC+Λ<Λ+ECB+ΛHA Similar rev. to preceding.

Α. ↑ 15.5 mm. Wt. 24.0 grains (1.56 grammes).
[Pl. III. 11.] From Col. W. F. Prideaux's Collection, *Num. Chron.*, 1884, p. 214, No. 6, Pl. x. 8.

I may refer to Littmann (*loc. cit.*) for the further discussion of the group of coins to which this belongs,

remarking that he is inclined to read all this group (omitting the crosses) as follows:

Obv.—BACCINBAXABA

Rev.—ECBAHΛBACABA

and to interpret the legends as βασιλεὺς Σι(ώ)ν, βα(σι)λεὺς Χαβα(σηνωῶν) on the obverse, and Εσβαηλ βα(σι)λεὺς Σαβα. Prideaux had already read the name Esbael and compared it with that of the Ethiopian king Ellesbaa. Littmann does not believe in the existence of a king Bachasa, and there is much in his contention that, since the inscription occurs in conjunction with the names of Esbael, Ezana, and Βισι Ανασφειωρ, it cannot conceal the name of a king. On one coin it occurs alone, repeated on both sides; this also is among our recent acquisitions:

Obv.—C+CL++ΛCL+CLC+CLN Crowned bust r. between two corn-ears; inner dotted circle.

Rev.—C+CL++ΛCL+CLC+CLN Diademed bust r. with round head-dress, between two corn-ears; inner dotted circle.

N. ↑ 17.5 mm. Wt. 23.8 grains (1.54 grammes).
[Pl. III. 12.] Found at Hazki near Aden.
From Col. W. F. Prideaux's Collection, *Journ. As. Soc. Beng.*, vol. 1, pt. i (1881), Pl. x. 8;
Num. Chron., 1884, p. 215, No. 7, Pl. x. 9;
Littmann, p. 56.

Anaeb?

Obv.—OΛΛΛ EB Crowned bust r. Engrailed border.

Rev.—OBC ΛC W CY Cross crosslet, with large voided lozenge-shaped centre, the interior of the lozenge gilt.

Al. base ↑ 14 mm. Wt. 10.4 grains (0.67 gramme).
[Pl. III. 13.] Presented by Signor A. Anzani.

Another specimen in Signor Anzani's collection weighs 16 grains (1.04 grammes), has no gilding, and reads M instead of W on the reverse.

Joel.

Obv.—Crowned bust r.; on r. and l., Ethiopic inscr.
Negush. Plain border.

Rev.—Cross, in angles of which, Ethiopic inscr. 'Iyo'el.
Æ. 14 mm. Wt. 17.4 grains (1.13 grammes).
[Pl. III. 14.] Presented by Sig. A. Anzani.
Cp. Drouin, *Rev. Arch.*, N.S. xlv, Pl. xx. 22;
for the reading, Littmann, p. 55.

G. F. HILL.

II.

THE ALEXANDRIAN COINAGE OF THE EARLY YEARS OF HADRIAN.

[SEE PLATE IV.]

THERE are some interesting peculiarities in the earliest issues of the Alexandrian mint under Hadrian which seem to deserve investigation. In the following paper I have attempted to classify these issues on a chronological basis, using for this purpose the material obtained by examination of the collections at the British Museum, Athens, and Oxford, with my own, and adding references to Signor Dattari's catalogue. Specimens of the more important types are illustrated on the Plate.

No Alexandrian coins of Hadrian's first year exist; but this is not remarkable, as his first year, on the Egyptian reckoning, consisted only of the period between the date of his accession and the end of the Egyptian year, i.e. August 17 to 29, 117. Possibly the news that Trajan was dead and Hadrian had been proclaimed emperor did not reach Alexandria before the new year began; certainly there would have been no time to cut dies and issue coins.

Even in the second year the mint officials at Alexandria do not appear to have obtained prompt information as to the titles or portrait of Hadrian, so far as can be judged from a few specimens which,

in view of their peculiarities in these respects, may be regarded as the first issue. The obverse types are :

A₁ AVTKAITPAIAΔPIANOC APICEBΓEPΔAKΠAP }
 A₂ AVTKAITPAIAΔPIANO CAPICEBΓEPΔAKΠAP }
 A₃ AVTKAITPAIAΔPIANOCAP ICEBΓEPΔAKΠAP }

Head r., laureate ; paludamentum shown at side of neck ;
 ends of tie of wreath curled.

The legend on these coins is clearly borrowed from those of Trajan, passing on to Hadrian titles of his predecessor to which he had no claim. The same transfer of titles occurs on some few Roman "imperial" coins of Hadrian, which also may be presumed to have been struck in the earliest days of the reign, before official particulars as to the style of the emperor were furnished to the mint. Moreover, the head on the Alexandrian coins suggests that the die-engravers had no authentic portrait of Hadrian to copy, and were reduced, as in the case of the legend, to reproducing Trajan with variations ; a minor point of some significance is the treatment of the ends of the tie of the wreath, which are curled, in accordance with the fashion followed during the last five years of Trajan, but previously unknown on Alexandrian coins ; and the rather lumpy strip of paludamentum shown by the neck looks as if it had been adapted from the aegis associated with the head of Trajan on his later issues.

Comparatively few coins appear to have been struck with this obverse type ; I have only seen three tetradrachms, all, however, from different dies, and know of no bronze. The reverse types found with the three varieties of the obverse are :

A₁—9 (a).

A₂—9 (a).

A₃—8.

B ₁	AVTKAICTPAIANOC AΔPIANOC	}
B ₂	AVTKAICTPAIANO CAΔPIANOC	
B ₃	AVTKAICTPAIAN OCAΔPIANOC	
B ₄	AVTKAICTPAI ANOCAΔPIANOC	

Head similar to A, but better portrait.

This type is shown to be a close successor of A by a coin in my collection which has the legend of B cut over that of A (this specimen is illustrated in the Plate as B 4). The general treatment of the head in B is similar to that in A, the curled ends of the wreath and lumpy paludamentum persisting; but the portrait of the emperor, although it cannot be called a successful likeness, shows some improvement, and the unauthorized titles are omitted from the legend; it is noteworthy that the title **CEBACTOC** is also omitted. The type is used only for billon coins of the following varieties:

B ₁ —1; 13 (b); 14 (a); 17; 19 (a).	B ₂ —1; 11 (a); 15.
B ₃ —9 (a); 11 (b); 19 (c).	B ₄ —10.

C ₁	AVTKAICTPAINOC AΔPIANOC	}
C ₂	AVTKAICTPAINO CAΔPIANOC	
C ₃	AVTKAICTPAIN OCAΔPIANOC	
C ₄	AVTKAICTPAI NOCAΔPIANOC	

Head as B.

Type C is closely related to type B, differing from it only in the spelling of the name **TPAIANOC**; the treatment of the head and accessories is the same, and the two may well be contemporary. The spelling **TPAINOC** is not a casual blunder, as it occurs on a number of different dies both for billon and for bronze; it may be that these dies were all executed by the same artist, who had peculiar ideas about

spelling, or the omission of a letter may be a kind of mint-mark to denote the particular shop of issue. The varieties of this type are:

- Billon.* C₁—7 (a); 9 (a); 10; 13 (b); 19 (a); 20 (b); 20 (e).
 C₂—11 (b); 15; 20 (d). C₃—20 (c).
 C₄—7 (b); 9 (a); 10; 16; 19 (a).
Bronze. C₁—vi; vii; ix (b); xi (a); xxi; xxii (a); xxii (b).
 C₂—i; vi; ix (a); ix (b); xi (a); xxi; xxii (a); xxii (b).
 C₃—xi (b).

- | | | |
|----------------|-------------------------|--------------|
| D ₁ | AVTKAICTPIANO CΑΔPIANOC | } Head as B. |
| D ₂ | AVTKAICTPIANO CΑΔPIAN | |
| D ₃ | AVTKAICTPIAN OCAΔPIANOC | |
| D ₄ | AVTKAICTPIA NOCAΔPIANOC | |

This type is found in bronze only, and probably bears the same relation to C in respect of bronze issues as B does in respect of billon. Coins struck from it are rare, and for the most part of smaller module than the bulk of the bronze of year 2, which are of the largest size issued by the mint of Alexandria. The varieties which occur are:

- | | |
|----------------------------------|---------------------------|
| D ₁ —v; xxi. | D ₂ —iii (a). |
| D ₃ —xvii (a); xviii. | D ₄ —xvii (a). |

- | | | |
|----------------|----------------------------|---|
| E ₁ | AVTKAICTPIANOC AΔPIANOCCEB | } |
| E ₂ | AVTKAICTPIAN OCAΔPIANOCCEB | |
| E ₃ | AVTKAICTPIA NOCAΔPIANOCCEB | |

Head similar to B, but ends of wreath-tie straight.

There is a very marked change in the portraiture of the emperor on type E as compared with the earlier ones. The head approaches much more closely to that of Roman coins of the same year; although it is still rather rough in style, it is not so heavy as on B, C,

and D. In regard to the accessories, the ends of the wreath-tie are straight, in accordance with the usual practice of the Alexandrian mint, instead of curled; and the line of the paludamentum shown in front of the neck is a plain strip instead of the inflated lump previously given. The title **CEB(ACTOC)** is added to the legend, although the spelling of the name **TPAIANOC** is not yet correct. The fuller legend and improved portraiture seem sufficient reasons for placing this type after B, C, and D.

The issue was apparently a large one, as coins with this obverse are common both in billon and in bronze of the following varieties:

- Billon.* E₁—1; 7 (b); 9 (a); 9 (b); 10; 14 (a); 14 (b); 16; 19 (a); 20 (b); 20 (f).
 E₂—16; 20 (b); 20 (c). E₃—1.
Bronze. E₁—iii (b); vi; ix (b); xi (b); xii; xiv; xxi; xxii (a).

F₁ AVTKAICTPIANOC AΔPIANOCCEB }
 F₂ AVTKAICTPIA NOCAΔPIANOCCEB }

Bust r., laureate, wearing paludamentum and cuirass, showing chest.

This type is closely related to E in style and treatment, the only material difference being that the portrait shows a bust instead of a head. Coins struck from it are rare, and found in billon only, as follows:

- F₁—14 (a); 19 (b); 20 (b). F₂—10; 14 (b).

G₁ AVTKAICTPIANOC AΔPIANOCCEB }
 G₂ AVTKAICTPIANO C AΔPIANOCCEB }

Head as E: to r., star.

This type also is closely related to E, differing from it in the presence of a star in the field. This symbol may have been introduced to mark a fresh issue, or it may have been intended to distinguish the coins struck in a special shop. There are instances in the series of Alexandrian tetradrachms where a star or other symbol was used almost certainly as the differentiating mark of a shop; and, if such a principle obtained here, E, F, and G might perhaps all be contemporary, though from different shops. The output of the shop using F would in this case have been very small in comparison with the other two.

G was used only for billon, with the following reverse types:

G₁-1; 7 (b); 10; 14 (a); 16; 19 (a); 20 (b).
G₂-16; 19 (a).

H ₁	AVTKAICTPAIANOC AΔPIANOCCEB	}
H ₂	AVTKAICTPAIANO C AΔPIANOCCEB	
H ₃	AVTKAICTPAIANO C AΔPIANOCCEB	

Head generally similar to E, but of better style: to r., star.

The most obvious difference between this type and the three preceding ones is in the spelling of the legend; the execution of the portrait is, however, distinctly improved, and this gives a ground for placing H later than E, F, and G, which dating is supported by the fact that H is used in year 3 as well as in year 2; also in year 2 a number of fresh reverse types occur with it, whereas in the series with types A to G much the same set of reverses had been employed throughout.

Both in year 2 and in year 3 type H is found only on billon, the types being:

Year 2. H_1 —1; 2; 3 (a); 3 (b); 4; 5 (b); 6; 7 (a); 7 (b);
10; 12 (a); 12 (b); 13 (a); 14 (a); 16; 18;
19 (a); 20 (a); 21 (a); 21 (b).

Year 3. H_1 —22 (a); 22 (b); 23 (b); 24; 27; 28 (a);
28 (b); 29; 30; 31; 32 (a); 32 (c); 32 (d).
 H_2 —28 (a). H_3 —31.

J_1 AVTKAICTPAIANOC AΔPIANOCCEB }

J_2 AVTKAICTPAIANO CΑΔPIANOCCEB }

Bust r., laureate, wearing paludamentum and cuirass,
showing chest: to r., star.

This type is related to H as F to E, differing only
in having a bust instead of a head; like H, it is used
for billon only. It does not occur in year 3.

J_1 —14 (b); 16; 18. J_2 —5 (a); 14 (a); 19 (a).

K AVTKAICTPAIANOC AΔPIANOCCEB

Head as H.

The relationship of K to H is that of E to G, and
the remarks made under G as to the possible reasons
for differentiation apply here also. It may, however,
be remarked that K occurs in year 2 on bronze only;
further, H was used for billon in years 2 and 3, K in
years 3 and 4; these facts rather suggest that the two
types were not contemporary issues of different shops.
Bronze coins struck with type K are found in years 2,
3, and 4. The types are:

Billon. Year 3—22 (a); 23 (a); 23 (b); 24; 25; 26;
28 (a); 28 (b); 29; 31; 32 (a); 32 (b); 32 (c).
Year 4—33; 34 (a); 34 (b); 48.

Bronze. Year 2—ii; vi; viii; x; xi (b); xxi.
Year 3—xxiii; xxiv (a); xxiv (b); xxv (a); xxv (b);
xxvi; xxvii; xxx; xxxii; xxxiii; xxxiv.
Year 4—xxxv; xxxvii; xxxviii; xl; xlii; xliii;
xlvi; l.

L AVTKAICTPAIANOC AΔPIANOCCEB

Bust as J.

This type gives another example of possibly concurrent striking with head and with bust, as E with F and H with J; it is very rarely found, and only on billon of years 3 and 4.

Year 3—22 (a); 24; 28 (b).

Year 4—48.

After year 3 the Alexandrian coinage of Hadrian no longer shows the same frequent changes of obverse type as in year 2. The list for year 4 may, however, be completed; the new types of this year are:

M AVTKAITPAI AΔPIACEB

Head r., laureate, paludamentum at side of neck.

N As M, with crescent upwards in field to r.

M is used both for billon and bronze, N for billon only. In subsequent years on the billon the crescent is always present, till year 8, when as an alternative symbol a serpent (probably a suggestion of an aegis) is found. An entirely new type came in with year 9,

AVTKAI TPAIAΔPIACEB Bust r., laureate, wearing paludamentum and cuirass, showing back,

which continued in use for eight years without material variation, except that the coins of later years are in much higher relief than those of earlier, and of better execution; the art of the Alexandrian mint reached its highest point about year 15 of Hadrian. In year 17 two changes occur: the first was only a slight alteration in the legend by the use of -KAIC in place of -KAI, but the second involved a more extensive recasting of the legend to **AVTKAICTPAIAN AΔPI**

ANOCCEB; and at the same time the arrangement of the portrait was modified, the scale being comparatively rather smaller and the lower part of the bust being lengthened and carried out to an angle instead of being finished off squarely. In year 19 the bust portrait was disused and the type became

AVTKAICTPAIAN AΔPIANOCCEB Head l., laureate, paludamentum at side of neck.

During this and the next three years there is considerable variation in the obverse types in minor details: in year 20 the legend sometimes becomes **AVTKAICTPA AΔPIANOCCEB**, occasionally being run on without break; the head of the emperor may be to left or to right, and the paludamentum by the neck is often not shown, and rarely more than a mere line; in year 21 **AVTKAICTPAIA AΔPIANOCCEB** is found as another form of the legend. The bronze coins generally follow the same types as the billon, except in respect of symbols in the field, which hardly ever occur on Alexandrian bronze; in year 12, however, two distinct obverse types were used for bronze, the bust as on the billon of that year and a laureate head. The smallest sizes of bronze do not adhere to the types of the larger coins, their variations being largely dictated by the smaller field, which, for instance, caused the abbreviation or total omission of the legend.

The comparatively few changes which took place in the obverse type of the coinage of the later years of Hadrian make the practice of year 2 more remarkable. If the explanation of the blundered legends and erratic portraiture is that the officials of the Alexandrian mint were waiting for models from Rome, they seem to have been singularly slow in

getting them; it is perhaps more reasonable to suppose that the mint was in rather incompetent hands, and that a new *régime* was responsible for the improved work and more settled types which appeared later.

The respective sizes of the issues with different types may be judged, so far as regards tetradrachms, from a table giving the number of coins of each type in six hoards which have come into my hands.

Year 2:	type A	0	specimens.
	" B	6	"
	" C	14	"
	" E	11	"
	" F	5	"
	" G	17	"
	" H	11	"
	" J	1	"
Year 3:	" H	13	"
	" K	40	"
	" L	2	"
Year 4:	" K	2	"
	" M	46	"
	" N	24	"

The following is a list of the reverse types, with the obverse types with which they are associated, and the specimens I have seen or know from Dattari's catalogue. BM. = British Museum, D. = Dattari, in both cases the catalogue number being added: JGM. = my own collection.

Year 2. Billon.

1. Bust of Zeus r., laureate: i. f. **L B**

B₁: JGM. B₂: Athens 1879 D. 1127^a. E₁: Oxford.
E₂: JGM. G₁: JGM. H₁: D. 1498 bis, 1499 bis;
Athens 1896/7 I. 135/269.

2. Bust of Zeus Ammon r., crowned with disk: i. f. **L B**

H₁: BM. 572; D. 1516; Athens 1877 D. 1126;
JGM.

- 3 (a). Bust of Helios r., radiate : i. f. **L B**
 H₁: D. 1379.
- 3 (b). As 3 (a), but to r. **B**
 H₁: Athens 1896/7 I. 138/274.
4. Bust of Athene r., helmeted, wearing aegis : to r. **B**
 H₁: Athens 1896/7 I. 140/276.
- 5 (a). Bust of Ares r., helmeted, wearing cuirass: i. f. **L B**
 J₂: D. 1284.
- 5 (b). As 5 (a), but to r. **B**
 H₁: D. 1283.
6. Bust of Hermes r., lotus-petal on head : i. f. **L B**
 H₁: D. 1388 (?).
- 7 (a). Dikaioisynē standing l., holding scales and cornucopiae: i. f. **L B**
 C₁: Oxford. H₁: Oxford.
- 7 (b). As 7 (a), but to l. **B**
 C₄: D. 1345; JGM. E₁: D. 1346(?); Athens 1881 D. 1129. G₁: BM. (not catalogued); Oxford; JGM. H₁: D. 1348; Athens 1880 D. 1128; JGM.
8. Nike advancing l.; to l. **B**
 A₃: D. 1409.
- 9 (a). Tyche standing l., holding rudder and cornucopiae: i. f. **L B**
 A₁: Athens 1896/7 I. 187/273. A₂: JGM. B₃: D. 1488; JGM. C₁: BM. (not catalogued); Oxford; JGM. C₄: JGM. E₁: Athens 93/270; JGM.
- 9 (b). As 9 (a), but to l. **B**
 E₁: JGM.
10. Bust of Sarapis r., wearing modius : i. f. **L B**
 B₁: JGM. C₁: Athens 1875 D. 1125; Oxford; JGM. C₄: BM. 606. E₁: D. 1452(?); Athens 1876 D. 1125^a; JGM. F₂: D. 1454(?). G₁: JGM. H₁: JGM.
- 11 (a). Sarapis seated l., r. hand over Kerberos, l. on sceptre: on throne, two figures of Nike: i. f. **L B**
 B₂: D. 1473(?).

- 11 (b). As 11 (a), but to l. **LB**
 B₃: Oxford. C₂: Athens 1896/7 I. 142/278;
 Oxford.
- 12 (a). Bust of Isis r., crowned with disk and horns:
 i. f. **LB**
 H₁: Athens 1896/7 I. 139/275.
- 12 (b). As 12 (a), but to r. **LB**
 H₁: D. 1394.
- 13 (a). Harpokrates standing l., nude, crowned with skhent,
 r. hand to mouth, cornucopiae and himation on
 l. arm, which rests on column: i. f. **LB**
 H₁: D. 1378.
- 13 (b). As 13 (a), but no column, and to l. **LB**
 B₁: D. 1375. C₁: Athens 1882 D. 1130.
- 14 (a). Bust of Nilus r., crowned with lotus: cornucopiae
 to l.: i. f. **LB**
 B₁: BM. 639. E₁: D. 1416 (?); JGM. F₁: JGM.
 G₁: JGM. H₁: D. 1417; Athens 1878 D. 1127;
 JGM. J₂: D. 1418; Athens 1896/7 I. 136/271.
- 14 (b). As 14 (a), but to r. **LB**
 E₁: JGM. F₂: Oxford. J₁: Kom Ushim hoard.
15. Nilus reclining l., holding reed and cornucopiae,
 resting on hippopotamus r.: in exergue **LB**
 B₂: D. 1441. C₂: Athens 1896/7 I. 143/279.
16. Canopus r., crowned with horns, disk, and plumes:
 figures on body: i. f. **LB**
 C₄: Athens 1883 D. 1131; JGM. E₁: JGM. E₂:
 D. 1314 (?); Athens 94/280. G₁: JGM. G₂:
 JGM. H₁: BM. 626; D. 1313. J₁: JGM.
17. Herakles standing to front, head r., r. hand on club,
 lion's skin on l. arm: to r., **LB**
 B₁: D. 1386.
18. Bust of Alexandria r., wearing elephant-skin cap:
 i. f. **LB**
 H₁: D. 1273; Athens 1896/7 I. 141/277. J₁:
 BM. 653.

- 19 (a). Eagle standing r.: i. f. **LB**
 B₁: JGM. C₁: JGM. C₄: Athens 1887 D. 1135;
 JGM. E₁: D. 1553 (?); Oxford; JGM. G₁:
 Oxford; JGM. G₂: Oxford. H₁: D. 1554;
 JGM. J₂: Athens 1886 D. 1134.
- 19 (b). As 19 (a), but to l. **LB**
 F₁: JGM.
- 19 (c). As 19 (a), but eagle l.
 B₂: D. 1569.
- 20 (a). Agathodaemon erect r., enfolding to l. caduceus:
 i. f. **LB**
 H₁: D. 1536.
- 20 (b). As 20 (a), but enfolding to r. ear of corn, to l.
 caduceus.
 C₁: Athens 1885 D. 1133; Oxford. E₁: BM. 664;
 JGM. E₂: D. 1539 (?). F₁: JGM. G₁: Athens
 1884 D. 1132; JGM.
- 20 (c). As 20 (b), but to r. **LB**
 C₂: JGM. E₂: D. 1538 (?).
- 20 (d). As 20 (a), but enfolding to r. caduceus, to l. ear
 of corn.
 C₂: JGM.
- 20 (e). As 20 (d), but to l. **LB**
 C₁: JGM.
- 20 (f). As 20 (d), but in exergue **LB**
 E₁: D. 1534 (?).
- 21 (a). ΘΕΟΤΡΑΙΑΝΟΣ ΣΕΒΑΣΤΟΣΠΑΤΚΥ Head
 of Trajan r., laureate: to r. **LB**
 H₁: D. 1246.
- 21 (b). As 21 (a), but legend not broken, and aegis
 before neck.
 H₁: D. 1247.

Bronze.

[All the bronze are of the largest Alexandrian size, 33-35 mm. in diameter, except where the diameter is specially noted.]

- i. Zeus seated l., r. hand resting on sceptre, thunder-bolt in l.: at his feet, eagle: on throne, Nike:
i. f. **L B**
C₂: D. 1873 (?).
- ii. Athene standing l., holding ears of corn in r. hand, resting l. on spear: beside spear, on ground, shield: i. f. **L B**
K: D. 1640.
- iii (a). Dikaio-syne standing l., holding scales and cornucopiae: i. f. **L B** [29 mm.]
D₂: D. 1674.
- iii (b). As iii (a), but to l. **LB** [30 mm.]
E₁: Athens 1896 D. 1142.
- iv. **EIPHNH** Eirene standing l., holding corn and caduceus: i. f. **L B**
?: D. 1692.
- v. Nike advancing l.: to l. **LB** [30 mm.]
D₁: D. 1770.
- vi. Tyche reclining l. on garlanded couch, holding rudder in r. hand: above, **L B**
C₁: JGM. C₂: D. 1858 (?); JGM. E₁: BM. 727; Athens 1888 D. 1136. K: D. 1857; JGM.
- vii. Sarapis seated l., r. hand extended over Kerberos: to l. **LB**
C₁: BM. 736.
- viii. Harpokrates seated l. on rocks, resting r. hand on sceptre, club in l.: at his feet, ram l. and another r. looking back: to l. **LB**
K: D. 1735.
- ix (a). Nilus reclining l., holding reed in r. hand, cornucopiae in l.: l. elbow on hippopotamus r.: to l. **LB**
C₂: D. 1798 (?).
- ix (b). As ix (a), but in ex. **LB**
C₁: JGM. C₂: JGM. E₁: JGM.
- x. Nilus reclining l., holding reed in r. hand, cornucopiae in l., on back of crocodile r.: to l. **LB**
K: JGM.

- xi (a). Euthenia seated l., holding ears of corn in r. hand, cornucopiae in l.: l. elbow on androsphinx r.: above, **LB**
 C₁: BM. 797; JGM. C₂: D. 1715; Athens 1892 D. 1139^a.
- xi (b). As xi (a), but in exergue **LB**
 C₃: D. 1699. E₁: JGM. K: BM. 798; D. 1714; JGM.
- xii. Distyle portico with Corinthian columns: two figures supporting globe in pediment: within, statue of Sarapis standing l., with r. hand on shrine, l. on sceptre: i. f. **LB**
 E₁: Athens 1889 D. 1137.
- xiii. Portico as xii: within, statue of Athene standing l., r. hand on shield, l. on sceptre: i. f. **LB**
 ?: D. 1948.
- xiv. Square tower, shown at angle; on top, round base of two stages, on which figure standing l. holding out r. hand and resting l. on sceptre: on either side, Triton blowing trumpet: at base of tower, staircase: i. f. **LB** [27-28 mm.]
 E₁: Athens 95/282, 1909 D. 1153.
- xv. Eagle standing r.: i. f. **LB** [23 mm.]
 ?: D. 2015.
- xvi. Hawk standing r.: i. f. **LB** [19 mm.]
 ?: D. 2041.
- xvii (a). Agathodaemon erect r., enfolding ear of corn r., caduceus l.: i. f. **LB** [24-25 mm.]
 D₃: Athens 1896/7 I. 144/283. D₄: Athens 1896/7 I. 151/293.
- xvii (b). As xvii (a), but to l. **LB** [24 mm.]
 ?: D. 1980.
- xviii. Uraeus erect r., enfolding ear of corn r., caduceus l.: to r. **LB** [24 mm.]
 D₃: Athens 1896/7 I. 145/284.
- xix. Cornucopiae: i. f. **LB** [10 and 14 mm.]
 ?: D. 1908, 1909.

- xx. Emperor in biga of centaurs r.: to r. **℞**
 ? : D. 1584.
- xxi. Emperor in quadriga r.: above, **℞**
 C₁: JGM. C₂: Athens 6682/43 O.C.; JGM. D₁:
 BM. 864. E₁: Athens 1895 D. 1141; JGM.
 K: D. 1585 (?); JGM.
- xxii (a). Emperor in quadriga of elephants r.: above, **LB**
 C₁: JGM. C₂: BM. 859; D. 1597 (?). E₁: Athens
 1893 D. 1140; JGM.
- xxii (b). As xxii (a), but in exergue **LB**
 C₁: D. 1598. C₂: JGM.

[Types iv, xiii, xv, xvi, xvii (b), and xx are only known to me from Dattari's catalogue; and, as the legends on his specimens are obscure, it is not possible to assign them to their obverse types. The small bronze coins with reverse type xix have no legend on the obverse, and so cannot be placed in the series.]

Year 3. Billon.

- 22 (a). Bust of Zeus r., laureate: i. f. **L Γ**
 H₁: D. 1500. K: BM. (not catalogued); Athens
 1898 D. 1144; Oxford; JGM. L: Oxford.
- 22 (b). As 22 (a), but to r. **ℚ**
 H₁: D. 1501.
- 23 (a). Head of Zeus Ammon r., crowned with disk:
 i. f. **L Γ**
 K: JGM.
- 23 (b). As 23 (a), but bust.
 H₁: D. 1517. K: D. 1518; JGM.
24. Dikaiosyne standing l., holding scales and cornu-
 copiae: to l. **ℚ**
 H₁: D. 1349; JGM. K: D. 1350; Athens 96/286;
 Oxford; JGM. L: D. 1351; Oxford.
25. Bust of Nike r.: i. f. **L Γ**
 K: D. 1406.

26. Bust of Sarapis r., wearing modius: i. f. $\text{L } \Gamma$
 K: D. 1455, 1456 [$\text{L } \Gamma$ for $\text{L } \Gamma$]; Athens 1896/7 I. 146/285; JGM.
27. Bust of Isis r., crowned with disk and horns: i. f. $\text{L } \Gamma$
 H₁: D. 1395.
- 28 (a). Bust of Nilus r., crowned with lotus: to l., cornucopiae: i. f. $\text{L } \Gamma$
 H₁: Oxford; JGM. H₂: D. 1419. K: BM. (not catalogued); D. 1420; Athens 1899 D. 1144^a; Oxford; JGM.
- 28 (b). As 28 (a), but to r. L
 H₁: JGM. K: BM. (not catalogued); Oxford. L: D. 1421.
29. Canopus r., crowned with horns, disk, and plumes: figures on body: i. f. $\text{L } \Gamma$
 H₁: BM. (not catalogued). K: Athens 1903 D. 1146; JGM.
30. Bust of Alexandria r., wearing elephant-skin cap: i. f. $\text{L } \Gamma$
 H₁: D. 1274; Oxford; JGM.
31. Eagle standing r.: i. f. $\text{L } \Gamma$
 H₁: BM. 656; D. 1555; Athens 1896/7 I. 148/289; JGM. H₂: JGM. K: BM. (not catalogued); D. 1556 [$\text{L } \Gamma$ for $\text{L } \Gamma$], 1557; Athens 1905 D. 1148; Oxford; JGM.
- 32 (a). Agathodaemon erect r.: i. f. $\text{L } \Gamma$
 H₁: D. 1531. K: BM. 666; D. 1530; Athens 1904 D. 1147, 1896/7 I. 147/287; Oxford; JGM.
- 32 (b). As 32 (a), but enfolding to r. ear of corn, to l. caduceus.
 K: BM. 665; D. 1541; JGM.
- 32 (c). As 32 (b), but to r. L
 H₁: JGM.
- 32 (d). As 32 (b), but to l. L
 H₁: D. 1542; JGM.
- 32 (e). As 32 (a), but enfolding to r. caduceus, to l. ear of corn.
 K: D. 1535; Oxford.

Bronze.

- xxiii. Tyche reclining l. as vi: above, $\text{L}\Gamma$
K: D. 1859.
- xxiv (a). Nilus reclining l. as ix: to l. $\text{L}\Gamma$
K: D. 1799.
- xxiv (b). As xxiv (a), but in exergue $\text{L}\Gamma$
K: Athens 1896/7 I. 149/290; JGM.
- xxv (a). Nilus reclining l. as x: to l. $\text{L}\Gamma$
K: D. 1778; Athens 1900 D. 1145^a.
- xxv (b). As xxv (a), but in exergue $\text{L}\Gamma$
K: D. 1783.
- xxvi. Euthenia seated l. as xi: in exergue $\text{L}\Gamma$
K: D. 1700; Athens 1906 D. 1150; JGM.
- xxvii. Temple of Sarapis as xii: i. f. $\text{L}\Gamma$
K: Athens ΔK 77; JGM.
- xxviii. Eagle's head r.: below, $\text{L}\Gamma$ [15 mm.]
?: Athens 97/292.
- xxix. Ibis standing r.: to r. $\text{L}\Gamma$ [16 mm.]
?: D. 2035.
- xxx. Modius on ear drawn by two winged serpents r.:
above, $\text{L}\Gamma$
K: Athens 1896/7 I. 150/291.
- xxxi. Cornucopiae: i. f. $\text{L}\Gamma$ [13 mm.]
?: D. 1910.
- xxxii. Emperor seated l. on curule chair: before him,
Nike advancing r. offering him a wreath: in
exergue $\text{L}\Gamma$
K: Athens 1908 D. 1152.
- xxxiii. Emperor in quadriga r. as xxi: above, $\text{L}\Gamma$
K: D. 1586; Athens 1902 D. 1151^a; JGM.
- xxxiv. Emperor in quadriga of elephants r. as xxii:
above, $\text{L}\Gamma$
K: BM. 860; D. 1599 (?); Athens 1907 D. 1151^a;
JGM.

Year 4. Billon.

33. Bust of Zeus r., wearing taenia: i. f. $\text{L } \Delta$
 K: D. 1503. M: D. 1502 (-TAI-); Athens 1911
 D. 1155; JGM. N: Athens 1896/7 I. 152/294;
 JGM.
- 34 (a). Head of Zeus Ammon r., crowned with disk:
 i. f. $\text{L } \Delta$
 K: D. 1519. M. Athens 1896/7 I. 153/296. N:
 Athens 1896/7 I. 154/297.
- 34 (b). As 34 (a), but to L^Δ
 K: JGM.
35. Bust of Ares r., helmeted: i. f. $\text{L } \Delta$
 N: D. 1285(?).
- 36 (a). Hermes standing l., lotus-petal on head, holding
 purse and caduceus: i. f. $\text{L } \Delta$
 N: D. 1389.
- 36 (b). As 36 (a), but to l. L^Δ
 M: Athens 1914 D. 1145^a.
- 37 (a). Dikaiosyne standing l., holding scales and cornu-
 copiae: i. f. $\text{L } \Delta$
 N: D. 1354.
- 37 (b). As 37 (a), but to l. L^Δ
 M: D. 1352; Athens] 1915 D. 1156; Oxford;
 JGM. N: D. 1353; Athens 1916, D. 1157;
 Oxford; JGM.
38. Elpis advancing l., holding flower and raising skirt:
 i. f. $\text{L } \Delta$
 N: D. 1368.
39. Bust of Sarapis r., wearing modius: to r. $\text{L } \Delta$
 N: D. 1457.
40. Bust of Isis r., wearing crown of disk and horns:
 i. f. $\text{L } \Delta$
 M: D. 1396; Athens 1896/7 I. 155/298; JGM.
41. Harpokrates standing l., nude, crowned with skhent,
 r. hand to mouth, cornucopiae on l. arm:
 i. f. $\text{L } \Delta$
 M: Athens 1918 D. 1159. N: D. 1376.

- 42 (a). Bust of Nilus r., crowned with lotus, cornucopiae to l.: i. f. $\text{L } \Delta$
M: D. 1422; JGM. N: D. 1423; Athens 1910 D. 1154; Oxford.
- 42 (b). As 42 (a), but to r. L^Δ
M: JGM.
43. Nilus reclining l., holding reed and cornucopiae, resting on hippopotamus r.: to l. L^Δ
N: D. 1442.
44. Canopus r., crowned with disk and plumes, figures on body: i. f. $\text{L } \Delta$
M: BM. 627; D. 1316; Athens 1919 D. 1160; Oxford; JGM. N: D. 1317; Oxford; JGM.
45. Head of Herakles r., wearing taenia, lion's skin round neck: to r. L^Δ
N: Athens 1912 D. 1155^a.
46. Bust of Alexandria r., wearing elephant-skin cap: i. f. $\text{L } \Delta$
M: JGM. N: D. 1275; Athens 98/295.
47. Hippopotamus standing r.: in ex. $\text{L } \Delta$
M: D. 1574; Athens 1920 D. 1161; Oxford.
48. Eagle standing r.: i. f. $\text{L } \Delta$
K: Oxford. L: D. 1560. M: BM. 657; D. 1558; Athens 1921 D. 1162; Oxford; JGM. N: D. 1559; Athens 1896/7 I. 157/300; Oxford; JGM.
- 49 (a). Agathodaemon erect r., enfolding to r. ear of corn, to l. caduceus: i. f. $\text{L } \Delta$
M: JGM. N: D. 1544; Athens 1896/7 I. 158/301; Oxford; JGM.
- 49 (b). As 49 (a), but to l. L^Δ
M: BM. 667; Athens 1922 D. 1163.
- 49 (c). As 49 (a), but in ex. $\text{L } \Delta$
M: D. 1543; Oxford; JGM. N: Oxford; JGM.
50. Galley sailing r.: i. f. $\text{L } \Delta$
M: JGM.
51. Emperor in quadriga r.: above, $\text{L } \Delta$
M: Athens 1917 D. 1158. N: D. 1264; Athens 1896/7 I. 156/299; JGM.

Bronze.

xxxv. Head of Zeus Ammon r., crowned with disk:
to r. $\text{L} \Delta$

K: BM. 676; Athens 1896/7 I. 159/302.

xxxvi (a). Dionysos driving l. in biga of panthers: in
ex. $\text{L} \Delta$

M: Athens 1932 D. 1169^a.

xxxvi (b). As xxxvi (a), but above $\text{L} \Delta$

M: Athens 1896/7 I. 160/305.

xxxvii. Tyche reclining l. as vi: above, $\text{L} \Delta$

K: Athens 100/304.

xxxviii. Bust of Sarapis r., wearing modius: i. f. $\text{L} \Delta$

K: Athens 1925 D. 1163^b.

xxxix. Busts jugate r. of Sarapis wearing modius and Isis
wearing crown of disk and horns: i. f. $\text{L} \Delta$

M: Athens 1923 D. 1199^{an}.

xl. Bust of Isis r., wearing crown of disk and horns:
i. f. $\text{L} \Delta$

K: Athens 1924 D. 1163^a.

xli. Harpokrates standing l. on base: body below waist
in form of crocodile: i. f. $\text{L} \Delta$

M: Athens 1926 D. 1164.

xl. Nilus reclining l. as x: to l. $\text{L} \Delta$

K: JGM.

xl. Euthenia seated l. as xi: in ex. $\text{L} \Delta$

K: D. 1701. M: Athens 1928 D. 1166; JGM.

xliv. Two Canopi to front, on base, crowned respectively
with disk, horns, and plumes and horns and
plumes: i. f. $\text{L} \Delta$

M: D. 1660 (?); Athens 1896/7 I. 161/306; JGM.

xl. Temple of Sarapis as xii: i. f. $\text{L} \Delta$

M: D. 1957, 1958; Athens 99/303.

xlvi. Triumphal arch with three gates: in pediment,
figures supporting disk: on summit, emperor to
front in six-horse chariot: i. f. $\text{L} \Delta$

M: D. 1895; Athens 1896/7 I. 162/307.

- xlvi. Eagle standing r.: i. f. $\text{L } \Delta$ [20 mm.]
M(?): Athens 1933 D. 1170.
- xlvi. Hawk standing l.: i. f. $\text{L } \Delta$ [19 mm.]
K: BM. 827.
- xlix. Androsphinx seated l., crowned with modius, fore-paw on wheel: i. f. $\text{L } \Delta$
M: D. 1993.
- l. Emperor in quadriga r. as xxi: above, $\text{L } \Delta$
K: Athens 1929 D. 1167. M: BM. 865(?); D. 1587; JGM.
- li (a). Emperor in quadriga of elephants r. as xxii: above, $\text{L } \Delta$
M: D. 1600; Athens 1930 D. 1168.
- li (b). As li (a), but in ex. $\text{L } \Delta$
M: D. 1601.
- li (c). As li (b), with Nike flying l. over heads of elephants.
M: D. 1608.

J. G. MILNE.

NOTE.—The Berlin billon coin described by von Sallet (*Zeitsch. f. Numis.*, v. 252) with the reverse type **AVT-TRAIANAPICEBΓEPMΔAKIKTPAP** Head of Trajan r. laureate, with aegis: in field $\text{L } \text{B}$, appears to belong to obverse type G: but it is impossible at present to verify the description. If this is correct, the coin was doubtless struck before the news of Trajan's deification reached Alexandria, as von Sallet points out: and this confirms the priority of G to H, as the latter obverse type is used with reverse type 21, which shows Trajan deified.

III.

THE MINT OF LUGDUNUM.

(SEE PLATES V, VI.)

SINCE de Salis undertook the important work of classifying the Roman coins according to their place of mintage, considerable light has been thrown on the question of the coinage of Lugdunum by various writers, amongst whom may be mentioned Mr. Grueber¹ and Sig. Laffranchi.² While acknowledging my indebtedness to these writers and fully appreciating the value of their contributions to the science of numismatics, I venture to think that the limits which they have imposed upon the subject tend somewhat to obscure its connectedness as a whole. Thus Mr. Grueber deals very fully with the Gallic coins, but only carries his consideration as far as the year 5 B.C., and Sig. Laffranchi, who is not in agreement with Mr. Grueber on the question of the mintage of the coins of Augustus struck prior to 15 B.C., only begins his study of Lugdunum at this date and continues it to the time of Tiberius. My aim, therefore, in this paper is to set forth a somewhat fuller conspectus of the coinage of Lugdunum from the time of its inauguration, and by tracing its development down to the reign of Galba, to bring the subject to its logical conclusion.

¹ A. H. Grueber, *Coins of the Roman Republic*, vol. ii.

² L. Laffranchi, "La monetazione di Augusto, Zecca di Lugdunum", *Riv. it.*, 1913.

Thus our present study covers a period of rather more than a century, during which time the constitution of the mint of Lugdunum underwent several important changes. It will be necessary to consider these changes in relation to the development of the Roman coinage as a whole, and in order to gain a general view of the subject, the following summary may prove useful:

- 42 B.C. A mint established at Lugdunum, under the control of the governors of Gallia Lugdunensis, for the issue of gold and silver when required.
- c. 40 B.C. A provincial or "autonomous" mint for bronze came into existence at Lugdunum, contemporaneously with a similar mint at Vienna (Vienne).
- 38 B.C. Bronze issued at Lugdunum by the official mint under control of governors.
- 36-27 B.C. Gold and silver issued at Lugdunum under Octavius.
- 27-15 B.C. The imperial mint transferred to different centres. Thus gold and silver coins of Augustus were struck in Gaul, Spain, Asia Minor, &c.
- 15 B.C. The imperial mint for gold and silver established permanently at Lugdunum. Its operation continued practically without intermission down to A.D. 37.
[To the senatorial mint (Rome) was entrusted the work of issuing brass and copper under the "moneyers".]
- 10 B.C. Inauguration of a copper coinage at Lugdunum. Probably provincial (*autonomous*) in character. (*Altar* type, Cl. I.)
- 2 B.C.—A.D. 21. Brass and copper (*Altar* type, Cl. ii, iii, iv, v) issued by the imperial mint of Lugdunum.
[From 5 B.C. to A.D. 10 the senatorial mint (Rome) appears to have been inactive, and from A.D. 10 to A.D. 21 it issued only copper *asses*.]

- A. D. 22. The imperial brass and copper of Lugdunum ceased, but gold and silver were issued as previously. The senatorial mint (Rome) became unusually active.
- C. A. D. 33. The senatorial mint probably established at Lugdunum as auxiliary to that of Rome.
- A. D. 37-41. Under Caligula gold and silver issued in Rome.
- C. A. D. 48. An extraordinary issue of *semisses* by the imperial mint of Lugdunum.
- A. D. 54-63. The senatorial mint (Rome) issued only gold and silver. Copper issued by the senatorial mint (Lugdunum) (A. D. 60-63).
- A. D. 63-68. Brass and copper issued by both senatorial mints, while gold and silver were issued by the imperial.
- A. D. 68 [April-June]. Various revolutionary mints ("autonomous") came into existence in Gaul and Spain.
- " [June-July]. Lugdunum issued "autonomous" *denarii* with types reminiscent of Nero.
- " [after July]. Normal working of the senatorial and imperial mints resumed.

The earliest coins that can be assigned to Lugdunum with certainty are silver *quinarii* struck by M. Antony [B.C. 42-41] shortly after his appointment as governor of Gaul.

1. *Obv.*—Female bust r., with small wings on either side of the neck.
Rev.—Lion walking r.; below and above, **L V G V - D V N I**;
in field, **A—XL**.
[*R. Quin.* B. M. C. ii, p. 394, No. 40. See Pl. V. 1.]
2. *Obv.*—[Similar, but with **III·VIR·R·P·C**.]
Rev.—Lion walking r.; above, **ANTONI**; below, **IMP**;
in field, **A—XLI**.
[*R. Quin.* B. M. C., ii, p. 396, No. 48.]

This group presents several features of interest. The female bust on the obverse is, in all probability, one of

the few contemporary portraits of Antony's wife, Fulvia, found on the coinage. The lion on the reverse has been regarded as the badge, or symbol, of Lugdunum; although, it may be mentioned, the lion only appears very rarely on coins of Lugdunum issued subsequently. Fortunately, these coins record not only the place, but also the date of their issue. The numerals XL and XLI, on the reverse, probably refer to Antony's age. His fortieth birthday fell in the year 42 B.C.; and these *quinarii* seem to have been issued for the purpose of largess to the troops on this occasion and also in the following year.³

Although these *quinarii* form a clear starting-point from which to study the coinage of Lugdunum, they offer practically no analogy to other coins of this period and the period immediately following.

During the period of the Triumvirate there is good reason for believing that mints were established almost simultaneously in various Roman provinces. The rapidly growing importance of Lugdunum under the governorship of M. Antony [43-42 B.C.] and of Octavius [42-40 B.C.], and the active measures for the Romanizing of Gaul which emanated from Lugdunum, certainly warrant the assumption that a mint existed in that city.

The following examples, Nos. 3-15, are assigned by de Salis and Mr. Grueber to Gaul, and it is probable, though not absolutely certain, that they were struck at Lugdunum:

41 B.C.

3. *Obv.*—C·CAESAR·III·VIR·R·P·C. Bare head of Octavius (as Triumvir) r. [Pl. V. 2.]

³ Hill, *Historical Roman Coins*, p. 124.

Rev.—Equestrian statue r. S.C.

[*Denarius. B. M. C.*, ii, p. 399, No. 63.]

4. *Obv.*—M·ANTONIVS·IMP·III·VIR·R·P·C. Head of Antony r.; behind, lituus.

Rev.—PIETAS COS. Piety standing l.

[*Aureus and Denarius. B. M. C.*, ii, p. 400, No. 65.]

5. *Obv.*—M·A·III·V·R·P·C. Bearded head of Antony r.

Rev.—P·VENTIDI·PONT·IMP. Standing figure of Jupiter.

[*Denarius. B. M. C.*, ii, p. 403, No. 73.]

40 B. C. Octavius and Julius Caesar.

6. *Obv.*—C·CAESAR·COS·PONT·AVG. Bearded head of Octavius r.

Rev.—C·CAESAR·DICT·PERP·PONT·MAX. Laur. head of Caesar r.

[*Aureus. B. M. C.*, ii, p. 404, No. 74.]

7. *Obv.*—C·CAESAR·III·VIR·R·P·C. Head of Octavius r.

Rev.—CÆSAR·DIC·PER. Curule chair surmounted by wreath.

[*Denarius. B. M. C.*, ii, p. 405, No. 76.]

8. *Obv.*—(Similar.) [Pl. V. 3.]

Rev.—BALBVS
PRO·PR above and below a club. [Struck by the moneyer, L. Cornelius Balbus.]

[*Aureus and Denarius. Coh.* 416, 417.]

9. *Obv.*—(Similar.)

Rev.—Q·SALVIVS·IMP·COS·DESIG [or DESC]
Winged thunderbolt. [Struck by the moneyer, Q. Salvius Rufus.]

[*Denarius. B. M. C.*, ii, p. 407, No. 86.]

Circa 39 B. C.

10. *Obv.*—CAESAR·IMP. Bearded head of Octavius r.

Rev.—ANTONIVS·IMP. Head of Antony r.

[*Aureus. B. M. C.*, ii, p. 408, No. 90.]

11. *Obv.*—(Similar.)
Rev.—**ANTONIVS·IMP.** Winged caduceus.
 [Denarius. *B. M. C.*, ii, p. 409, No. 92.]
12. *Obv.*—**CAESAR·III·VIR·R·P·C.** Helmeted bust of Mars r.
Rev.—**S·C.** Eagle on trophy between two military standards.
 [Denarius. *B. M. C.*, ii, p. 410, No. 96.]
- Circa* 38 B.C.
13. *Obv.*—**DIVOS·IVLIVS·DIVI·F.** Laur. head of Caesar facing bare head of Octavius.
Rev.—**M·AGRIPPA·COS**
DESIG across field.
 [Denarius. *B. M. C.*, ii, p. 410, No. 100.]
14. *Obv.*—**IMP·DIVI·IVLI·F·TER·III·VIR·R·P·C.** Laur. head of Caesar r.
Rev.—(Similar to preceding.)
 [Aureus. *B. M. C.*, ii, p. 411, No. 102.]
15. *Obv.*—**IMP·CAESAR·DIVI·IVLI·F.** Bearded head of Octavius r. [Pl. V. 4.]
Rev.—(Similar to preceding.)
 [Denarius. *Coh.* 545.]

The following bronze coins probably belong to the years c. 40–38 B.C.:

- A. 16. *Obv.*—**DIVI·IVLI·IMP·CAESAR·DIVI·F.** Heads of Caesar, laur., and Octavius, bare-headed, back to back; between them, a palm-branch.
Rev.—Prow of ship r., with seven oars; above, the sun; below, **COPIA.** [Pl. V. 5, 6 (from two different specimens).]
 [Coh., *J. Caes. and Oct.*, 8.]
17. *Obv.*—**CAESAR.** Bare head of Octavius r.
Rev.—Prow of ship with superstructure; no legend.
 [Coh., *Aug.* 737.]
18. *Obv.* and *Rev.*—Similar, but without obverse legend.
 [Mr. F. A. Walters's Coll.]

B. [B.C. 38—*circa* 29.]

19. *Obv.*—**CAESAR·DIVI·F.** Bare head of Octavius r.

Rev.—**DIVOS·IVLIVS.** Laur. head of Caesar r.

[Coh., *J. Caes. and Oct.*, 3. *B. M. C.*, p. 412,
No. 105 f.]

20. *Obv.*—**DIVI·F.** Head of Octavius r.; in front, star.
[Pl. V. 7.]

Rev.—**DIVOS
IVLIVS** within wreath.

[Coh. 95.]

21. *Obv.*—**CAESAR·DIVI·F.** Bare head of Octavius r.

Rev.—Similar to preceding.

[Coh. 96. Pl. V. 8 *var.*]

These two groups constitute the earliest bronze coinage of Gaul under the Triumvirs. They are, moreover, in all probability the only bronze issued at Lugdunum prior to the imperial bronze and copper currency of 10 B.C.—A.D. 21.

It is evident at first sight that these groups differ considerably from each other both in fabric and general style.

The coins of group A are generally struck in good relief, but their execution is clumsy, and the flans are frequently irregular in shape. The style of the portraits bears but a remote resemblance to that found on the *denarii* of the period 41–38 B.C. But the bold relief suggests an early date for the coins, most probably about the year 40 B.C.

The occurrence of the word **COPIA** on the reverse of No. 16 leaves no doubt that the coin was minted at Lugdunum, since *Copia felix Munatia* was the name originally given to the colony by its founder, L. Munatius Plancus. An interesting point, however, arises from the existence of coins almost exactly similar in type

and style to No. 16, merely omitting the palm-branch between the heads on the obverse and with the reverse legend **C·I·V** instead of **COPIA** (Coh., *J. Caes. and Oct.*, 7). Cohen is undoubtedly right in assigning these coins to Vienna (Vienne). Thus we have two parallel series of bronze coins issued apparently simultaneously from the cities of Lugdunum and Vienna, and their general similarity in style and fabric suggests some sort of collaboration between the two mints at this particular period, although the rivalry which developed into a bitter feud between the two cities would have rendered such a condition of things impossible a few years later.

Taking into consideration the distinctive character of these coins and also their unlikeness to the *denarii* of the period, it seems reasonable to suggest that they are productions of a provincial or "autonomous" mint, distinct, that is to say, from the official mint at which the gold and silver were issued.

The two coins, Nos. 17 and 18, without reverse legends, are related equally to No. 16 and to the Vienna coin just mentioned. It is therefore impossible to say to which mint they belong.

The reason for the choice of a ship's prow as the reverse type on this group of coins is somewhat difficult to discover, since Lugdunum and Vienna were situated well inland. Probably, however, it is nothing more than an adaptation of the traditional type found on the bronze coinage of the Republic.

On the coins of group B the heads are generally carefully executed, but always in low relief; that of Octavius closely resembles the portrait shown on the *denarius* No. 15 [Pl. V. 4], from which it may be

inferred that the bronze coins of group B belong to the same period, namely 38 B.C., and, moreover, were issued from the same mint as the gold and silver. That is to say, group B may be regarded as the official bronze coinage of Lugdunum which superseded the provincial bronze of group A.

The coins appear to have been issued over a period of several years, probably from 38 to 27 B.C. A marked deterioration in the style is, however, noticeable in the series; the heads gradually lose the likeness of Octavius, and the reverse types become confused and badly centred. The better struck coins are almost certainly the earlier of the series, and correspond most nearly with the official gold and silver. Many specimens of the later coins are semi-barbarous in style; and as a somewhat extreme example see **Pl. V. 8**, where the reverse legend is retrograde and the obverse shows that it is superstruck on a coin of Pompeius Magnus. Obviously coins of this class do not belong to the Lugdunum mint, but are imitations struck in neighbouring parts of Gaul. Nevertheless they are important as showing the popularity and wide circulation of the Lugdunum types.

The form **DIVOS** instead of **DIVVS** is peculiar to coins of provincial mintage and never occurs on coins of Rome.

A minor feature, noticeable on the coins of this group, is the somewhat unusual edge, which is in the form of a double bevel. This seems to be the result of casting the blanks for the coins in moulds of this shape, and, after the coins were struck, the edges were probably trimmed up with a file. Although not confined to Lugdunum, this feature reappears on many of

the *brass* coins of this mint struck after 2 B.C. The device does not appear, however, to have been used in the case of copper coins.

The coins of group B are, as Mr. Grueber mentions, composed of orichalcum or yellow bronze; and he gives their denominations and approximate weights as follows:

<i>Sestertius</i>	= 4 asses,	about 400 grains.
<i>Tripondius</i>	= 3 asses,	" 330 "
<i>Dupondius</i>	= 2 asses,	" 250 "
<i>As,</i>		" 130 "

This generalization, however, presents some difficulty which calls for comment in passing. Even allowing that the figures given above bear some correspondence with the average weight of the coins, it is evident that such a monetary system is based on a highly artificial standard of relative values; and it is not easy to understand how so elaborate a system of "token money" could have been introduced at Lugdunum with apparently no preparation other than that of the provincial bronze coins of group A.

But from an investigation of the coins it seems certain that no clearly defined metric system was aimed at, since actual specimens show an extraordinary variation of weight, ranging from about 200 to 400 grains.⁴ Further, we not infrequently find two specimens practically identical in size and general appearance, although of very different weights. This is the case with two examples, noted below and marked *; the only difference being in the thickness of the flan,

⁴ Actual weights in grains of well-preserved specimens are: *Type 19* (Coh. 3), 408, 360.4, 282, 265, 250, 128.5; *Type 20* (Coh. 95), 384, 373.5, 359, 352, 333, 316.5, 301, 300, 292*, 253.5, 211, 209, 207*; *Type 21* (Coh. 96), 256.5, 211.

which is almost indistinguishable at sight. It may be mentioned too that Mr. Grueber does not include a denomination which certainly seems to have existed weighing 210 grains, or half an ounce.

In view of these considerations it seems impossible, therefore, to accept Mr. Grueber's suggestion that these coins can be classified under the four denominations of *Sestertius*, *Tripondius*, *Dupondius*, and *As*.

It seems probable that the original bronze issue of 38 B.C. consisted of two denominations, not very exactly defined as to weight, but more or less corresponding with the two weights of the provincial coins [group A]. During the period subsequent to 38 B.C., these types were imitated on coins struck in other districts of Gaul of barbarous or semi-barbarous style and of greatly reduced weight.⁵

Resuming our enumeration of the silver coins, we note the following:

Circa B.C. 37-29.

22. *Obv.*—IMP·CAESAR·DIVI·F·III·VIR·ITER·R·P·C.

Bearded head of Octavius r. [Pl. V. 9.]

Rev.—COS·ITER·ET·TER·DESIG. Pontifical emblems.

[*Denarius*. Coh. 91.]

B.C. 29-27.

23. *Obv.*—Bare head of Octavius r.

Rev.—IMP·CAESAR·DIVI·F. Circular shield.

[*Denarius*. *B. M. C.*, ii, p. 416, No. 119.]

24. *Obv.*—Bare head of Octavius l.

Rev.—LEG·XVI. Lion running r.

[*Denarius* (Berlin). Cf. *B. M. C.*, ii, p. 417.]

⁵ The smallest of the denominations enumerated by Mr. Grueber (*As*, 130 grains) appears only to exist in barbarous style.

It has been suggested that the lion is here the symbol of Lugdunum, as in the case of M. Antony's *quinarii* [Nos. 1 and 2].

On the question of assigning coins to Lugdunum between the years 27 B.C. and 15 B.C., somewhat conflicting views have been advanced by modern writers. Mr. Grueber, following the classification of de Salis, attributes a number of gold and silver to Gaul; and as Lugdunum was the administrative centre of the province, it is natural to assume that these coins, or at any rate a large proportion of them, would have been struck there.⁶ Sig. Laffranchi, on the other hand, does not enumerate any coins struck at Lugdunum prior to the year 15 B.C., and assigns to various Spanish mints all the earlier coins of Augustus, which Mr. Grueber regards as Gallic.⁷

One is naturally diffident in formulating fresh theories which, it must be admitted, too often merely add confusion to an already involved subject. But it is obvious that some readjustment of this question is necessary; and this can only be arrived at by giving due consideration to the two principles which underlie all similar numismatic problems, namely, the historical and the critical.

(1) *The historical principle.* Although Lugdunum was but a newly founded colony when M. Antony entered upon his governorship of Gaul,⁸ its growth, both in

⁶ Grueber, *op. cit.*, vol. ii, p. 386.

⁷ *Riv. it.*, 1913.

⁸ Lugdunum was originally a settlement of people from the neighbouring town of Vienna (Vienne), whence they had been expelled by the Allobroges. It was founded as a Roman colony by L. Munatius Plancus, about June, 43 B.C. Cf. Cassius Dio. xlii. 50.

population and importance, was extremely rapid, so that within a few years it became not only the chief city of the Tres Galliae, but was constituted the Roman head-quarters for the administration of the Gallic provinces. Military roads, constructed at the instigation of M. Vipsanius Agrippa, radiated from Lugdunum to the Rhine, the Somme, the Channel, across the Cevennes, also to Massilia and Narbo.⁹ Lugdunum was the residence of the governors of Gallia Lugdunensis, and here Augustus made a prolonged stay from 16 to 14 B.C.

Since there is no lack of historical evidence to show the political importance of Lugdunum, it certainly appears unnatural to imagine that no gold or silver coins were struck there between the date of the issue of M. Antony's *quinarii*, 41 B.C., and the establishment of the imperial mint, 15 B.C. We have, then, the strongest historical probability in favour of the existence of a mint at Lugdunum during this period of over a quarter of a century. We may assume, moreover, that the mint was intermittent in its operation, and that its output was controlled by the governor of the province or depended upon the mandate of Augustus himself.

(2) *The critical principle.* The method of assigning coins to their place of mintage purely on considerations of style often involves difficulty, and is not always conclusive. Particularly is this the case with the earlier coinage of Augustus, where two factors have to be reckoned with. In the first place, it is practically certain that Augustus, as he moved about the Empire,

⁹ Strabo, iv, c. 6, § 11.

included in his retinue a number of professional die-engravers for the purpose of striking coins when required. Secondly, artificers and engravers may have been, as they probably were, transferred from one town to another. Thus there are certain coins, struck between 27 B.C. and 15 B.C., that can only be assigned to their places of mintage conjecturally. On the other hand, many coins of this period exhibit peculiarities of style which may be regarded as local mannerisms; and whenever the same mannerism is observed throughout a group or series of coins, there is good reason for considering it as evidence of identity of mintage.

Now the mannerism which is characteristic of all the coins that unquestionably belong to Lugdunum is a tendency to flatness in the execution of the portrait and a decidedly linear technique. These traits are first seen on the *denarii* of Octavius as Triumvir, then on the bronze issue of 38 B.C., again on the *Altar of Lugdunum* series, and later on the bronze of Caligula, Claudius, and Nero. Therefore, so far as considerations of style are to be taken into account in assigning coins to Lugdunum, it appears safer to admit no coins which present characteristics entirely different from those mentioned. Sig. Lafranchi, however, assigns to Spain several *aurei* and *denarii* which unmistakably exhibit the flat linear style of Lugdunum [*e.g.* see Pl. V. 10]. On the other hand, in Mr. Grueber's very complete list of the coins of Gaul, some are included which I venture to think are thoroughly un-Gallic in style, and therefore cannot certainly be assigned to Lugdunum; *e.g.* the *denarius* with the head of Augustus in high relief, and reverse **AVGVSTVS**,

capricorn with globe and rudder [*B. M. C.*, ii, p. 419, Nos. 124-7; *Coh.* 21]. Laffranchi assigns the coin to Colonia Patricia.

Circa 18-17 B. C.

25. *Obv.*—**CAESAR AVGVSTVS**. Head of Augustus I., wearing oak-wreath. [*Pl. V.* 10.]

Rev.—**DIVVS IVLIVS**. Comet.¹⁰

[*Denarius.* *Coh.* 97.]

16-14 B. C. During this period Augustus resided at Lugdunum, and there appears to have been a considerable increase in the output from this mint.

26. *Obv.*—**CAESAR AVGVSTVS**. Head of Augustus I., wearing oak-wreath.

Rev.—Victory flying r., holding wreath; below, shield inscribed **CL.V.**, above, **S.P.Q.R.**¹¹

27. *Obv.*—Head of Augustus I., wearing oak-wreath.

Rev.—**CAESAR AVGVSTVS** Two laurel-trees.¹¹

[*Denarius.* *Coh.* 48.]

28. *Obv.*—**CAESAR AVGVSTVS**. Bare head of Augustus r. or l.

Rev.—**S.P.Q.R.**
CL.V on circular shield.¹⁰

[*Denarius.* *Coh.* 293.]

29. *Obv.*—(Similar to preceding.)

Rev.—**OB.CIVIS**
SERVATOS. Above and below an oak-wreath.¹¹

[*Denarius.* *Coh.* 211.]

The first important change in the constitution of the

¹⁰ Ascribed by Laffranchi to Caesaraugusta (Saragossa).

¹¹ Ascribed by Laffranchi to Colonia Patricia (Cordova).

mint of Lugdunum occurred about the year 15 B.C. Henceforth, instead of issuing gold and silver coins intermittently, its operation becomes regular and continuous. That is to say, the imperial mint, instead of being shifted from place to place, now became fixed permanently at Lugdunum. At the same time the issue of brass and copper in Rome was entrusted to the senate. The significance of this readjustment is that, from this date until the end of the reign of Tiberius, the imperial gold and silver were struck solely at Lugdunum, and it was not until the time of Caligula that the emperor so far encroached upon the privilege of the senate as to strike gold and silver in Rome itself.

Strabo, writing in the reign of Tiberius, c. A.D. 19, gives confirmation to the statement by saying that there was a mint at Lugdunum for coining gold and silver [Strabo, *Geogr.* iv, c. 3, § 2]. We have evidence, too, that a "Cohors urbana" was stationed at Lugdunum throughout the first century, and the most reasonable explanation of its continued presence in the city is that it was there to guard the mint.

Both Mr. Grueber and Sig. Laffranchi agree in assigning to Lugdunum the *aurei* and *denarii* which exhibit a very distinctive portrait of Augustus. The profile is less regular than on the coins already described; the hair is treated as a mass of conventionally formed curls, rather wig-like in appearance, and frequently coarse in execution [Pl. V. 11]. About the year 11 B.C., a change of style is noticeable; the hair is more freely treated, and the emperor's head is crowned with the laurel wreath.

The series bears the obverse legend **AVGVSTVS**.

DIVI·F, in conjunction with the following reverse types dated **IMP·X**, **XI**, and **XII** (= 14-9 B.C.):¹²

30. Augustus seated l. on camp-stool; in front, soldier presenting an olive-branch $\overline{\text{IMP·X}}$.

Coh. 130, 131.

31. Similar type, but with two soldiers, $\overline{\text{IMP·X}}$.

Coh. 132, 135.

32. Bull charging either r. or l. $\overline{\text{IMP·X}}$; $\overline{\text{IMP·XII}}$.

Coh. 136, 158, &c.

33. Apollo with lyre and plectrum, $\frac{\text{IMP·X}}{\text{ACT}}$ (Coh. 143, 144);

$\frac{\text{IMP·XII}}{\text{ACT}}$.

34. Diana with stag, $\frac{\text{IMP·X}}{\text{SICIL}}$ (Coh. 145, 146);

$\frac{\text{IMP·XII}}{\text{SICIL}}$ (or **SICILI**).

35. Capricorn holding globe, $\overline{\text{IMP·XI}}$.

Coh. 147.

36. Augustus seated on camp-stool receiving a child presented by a barbarian, $\overline{\text{IMP·XIII}}$.

Coh. 174, 176.

37. Victory seated l., **TR·POT·XVII**.

N. Quinarius. Coh. 314.

¹² Dates of Augustus:

IMP·X = 14-12 B.C.

" **XI** = 12-11 "

" **XII** = -9 "

" **XIII** = 9-8 "

" **XIII** = 8-5 "

TR·POT·XIII = Nov. 11-10 B.C.

" **XIII** = " 10-9 "

" **XV** = " 9-8 "

" **XVI** = " 8-7 "

38. Caius galloping r.; behind, legionary aquila and two
 signa, **C·CAES**
AVGVS·F (circa 5 B.C.).

Aureus and Denarius. Coh. 40.

The year 10 B.C. marks the inauguration of a regular copper coinage at Lugdunum, which was supplemented in 2 B.C. by three denominations of brass (orichalcum). This series continues, apparently without a break, until about the year A.D. 21, and has for its reverse type a representation of the famous Altar of Lugdunum, with the legend **ROMETAVG** (*Romae et Augusto*). We have here a type peculiar to Lugdunum;¹³ and it is from this well-known series that we derive some of the most important evidence, not only for assigning other coins to the same mint, but for determining the exact status of the mint itself.

The series may be classified as follows:

Class I. *Augustus* [10-3 B.C.].

39. *Obv.*—**CAESAR·PONT·MAX.** Laur. head of Augustus r. [Pl. V. 13.] (In all cases, with the exception of No. 41, the obverse legend reads from r. to l.)

Rev.—[Common to the entire series] **ROMETAVG.**
 The Altar of Lugdunum. [Pl. V. 14.]

Æ² As (Coh. 240); Æ¹ (?) B.M.C., ii, p. 439,
 No. 203.

Class II. *Augustus* [2 B.C.—A.D. 8].

40. *Obv.*—**CAESAR·AVGVSTVS·DIVI·F·PATER·PATRIAE.** Laur. head r. [Pl. V. 15, 16.]

Æ¹ (Coh. 236). Æ² D (Coh. 237). Æ¹ As (Coh. 237);
Semis (Coh. 238).

41. *Obv.*—Similar, but with laur. head l., and legend reading from l. to r.

¹³ Mr. Grueber (*op. cit.*) has shown conclusively that this series belongs exclusively to Lugdunum, thereby dispelling any doubts raised by earlier writers on the subject.

Æ¹, or possibly a "medallion". Wt. 444 grs.
(published by Mr. F. A. Walters in *Num. Chron.*,
1915, p. 328, and Pl. xvi. 2).

Class III. *Tiberius* [A. D. 8-11].

42. *Obv.*—TI·CAESAR·AVGVSTI·F·IMPERATOR·V.
Bare head of Tiberius l. [Pl. V. 17.]

Æ¹ (Coh. 28); or with laur. head r. (Coh. 29); or
with laur. head l. (Coh. 30).

43. *Obv.*—TI·CAESAR·AVGVST·F·IMPERAT·V. Laur.
head l.

Æ² D (Coh. 31). Æ² As (Coh. 31); Semis (Coh. 32).

44. *Obv.*—Similar, but with laur. head r.

Æ² As (Coh. 33).

45. *Obv.*—TI·CAESAR·AVGVST·F·IMPERAT·VI. Laur.
head r.

Æ² As (Coh. 34).

Class IV. *Tiberius* [A. D. 11-14].

46. *Obv.*—TI·CAESAR·AVGVSTI·F·IMPERATOR·VII.
Laur. head r.

Æ¹ (Coh. 35); or with laur. head l. Æ¹ (Coh. 36).

47. *Obv.*—TI·CAESAR·AVGVST·F·IMPERAT·VII.
Laur. head r. [Pl. V. 18.]

Æ² D (Coh. 37); Æ² As (Coh. 37); Semis (Coh. 38).

Class V [A. D. 14-21].

48. *Obv.*—TI·CAESAR·DIVI·AVG·F·AVGVSTVS. Laur.
head r.

Æ² As (Coh. 40); Semis (Coh. 39); or with bare
head r.; Semis (Coh. 41).

49. *Obv.*—TI·CAESAR·DIVI·AVG·F·PATER·PATRIAE.
Laur. head r.

Æ² As (Coh. 42).

After the year A. D. 21 the *Altar of Lugdunum* ceases
as a regular coin-type. It is unknown with the legend
IMPERATOR VIII of Tiberius,¹⁴ nor does it occur on

¹⁴ Tiberius is said to have abstained from applying the title
imperator as a praenomen, a statement which is borne out by the

coins of Caligula. It reappears, however, for a short period on *semisses* of Claudius, and is rather curiously revived on a very rare copper *as* of Nero (*vid. infra*).

It may be stated in passing that there is no doubt that the reverse type represents the famous *Ara Romae et Augusto*, erected near the confluence of the rivers Rhone and Arar, and dedicated by Augustus on Aug. 1, 10 B.C. [Suet. Claud. 2].¹⁵ The structure is shown to be rectangular, decorated in front with a wreath between two laurel-trees in bas-relief.¹⁶ At the ends, detached from the altar itself, are columns surmounted with winged Victories, each holding a palm-branch and garland. Various suggestions have been made to explain the decorations on the extreme right and left of the front, and of the eight small objects on the top of the altar. That the latter, in some way, symbolize the Gallic tribes seems, however, the more probable. According to Strabo, there was an inscription on the altar containing the names of the sixty-four Gallic states, which were also symbolized by a corresponding number of statues. It is generally supposed that these statues were placed around the altar; however, it seems quite plausible to imagine that they formed the

coins. The title is used, therefore, merely as a military distinction. Dio and Velleius state that Tiberius received the salutation seven times, while according to other authorities he was saluted imperator for the eighth time in A.D. 16. The coins, however, make it clear that **IMP.VII** occurs for the last time with **TR.P.XXIII** (A.D. 21), and **IMP.VIII** begins with **TR.P.XXIII**.

¹⁵ For a refutation of the theory advanced by Dr. Willers (*Numism. Zeit.*, xxxiv, 1902), that the type represents the *ovarium* of the circus, see article by M. Poncet and M. Morel (*Revue Num.*, 1904, pp. 46 ff.), and by Max L. Strack (*Bonner Jahrbücher*, 111, 112, p. 442 f.), also Grueber, *Coins of the Roman Republic*, vol. ii, p. 439.

¹⁶ Hill, *Historical Roman Coins*, p. 159.

principal decoration of the cornice of the altar, those in the centre being placed under sculptured canopies.

The earlier coins of the series [Class I] are mainly copper *asses*. There is, however, in the British Museum a specimen of larger size, which Mr. Grueber considers a copper *dupondius*. That *dupondii* of copper are occasionally met with amongst the coins of the Empire is practically certain, but it seems open to question whether the term is rightly applied to this particular example. The coin, though somewhat worn, weighs 403.5 grains, thereby indicating that its normal weight is uncial [421 grains]. The *asses* of this series conform to the standard that appears to have been maintained consistently throughout the first two centuries of the Empire, i.e. $\frac{1}{16}$ of a Roman pound, or 168.4 grains. The copper *dupondius*, or double *as*, should therefore weigh normally 336.8 grains, and this is approximately the weight of certain coins which may reasonably be designated *dupondii* of copper. Thus it will be seen that the large copper coin of this series, weighing normally 421 grains, possessed the intrinsic value of $2\frac{1}{2}$ and not 2 *asses*. This being so, the term *sestertius*, which originally signified the equivalent of $2\frac{1}{2}$ *asses*, would seem more appropriate than *dupondius*, despite the fact that for upwards of two and a half centuries the Roman *sestertius* had had the current value of four *asses*. It will be remembered too that during the first two centuries of the Empire the weight of the brass *sestertius* was always equal to $2\frac{1}{2}$ *asses* of copper.

If the coin is not actually a *sestertius*, it would seem more reasonable to regard it as a *medallion* struck about the time the altar was dedicated.¹⁷

¹⁷ Some examples of the *asses* of Class I show traces of having

After the year 2 B.C. the copper *asses* [Class I] were supplemented by coins of brass [Classes II, III, IV] of the following denominations: (1) *sestertius* (421 grains), (2) *dupondius* (210.5 grains), and (3) *semis* (about 70 grains). There can be little question that the last mentioned is rightly designated a *semis*. It is therefore the earliest example of this denomination under the Empire; and the fact of its having been introduced at Lugdunum rather than at Rome is not without interest.

The fact that S.C. does not occur on any of the *Altar of Lugdunum* series clearly indicates that the coins are not senatorial; and we are thus led naturally to make some inquiry as to the exact status of the mint from which they were issued.

The *asses* of Class I are quite distinct in style from the brass and copper of Classes II, III, IV, and V, and at the same time exhibit no very close resemblance to the gold and silver (10-7 B.C.) with which they are actually contemporaneous. Sig. Laffranchi assigns these *asses*, as well as the *aurei* and *denarii* of the period, to the imperial mint, and by way of illustration places side by side examples of both.¹⁸ Although there is admittedly some similarity, it is nevertheless impossible, after a critical examination of these coins, to allow that there is identity of style. The workmanship of the *asses* is generally poor, the style flat, the outline of the profile harsh, and the face is almost devoid of modelling. The lettering is very irregular and the obverse legends frequently are not circular.

been silvered, apparently in ancient times. We may conjecture that these were possibly treated as souvenirs of the occasion of the dedication.

¹⁸ *Ris. it.*, 1913, Tav. II, 19, 20, 21, and 23, 24, 25.

One feels that at best they are but imitations of the *aurei* and *denarii*, executed by inferior engravers. Thus it appears improbable that the earlier examples of the *Altar* series [Class I] were products of the imperial mint.

Some light seems to be thrown on the question incidentally by a suggestion made by M. Mowat, to the effect that the type of the *Altar of Lugdunum* possessed an autonomous significance.¹⁹ There is no doubt that in itself the altar was quite as much a tribal monument of the *Tres Galliae* as it was a tribute to Roma and Augustus. The adoption and perpetuation of this type to the exclusion of all others may, therefore, be regarded as evidence that the mint at which these coins were struck was to some extent of an autonomous character. It may in fact have been a revival of the ancient provincial mint, such as that which issued bronze coins about a quarter of a century previously.

A distinct change of style takes place after the year 2 B.C. [Class II]. The obverse legends are circular, the lettering is more regular, and the style of portrait corresponds closely with that of the imperial gold and silver. This change is clearly not merely artistic but constitutional; that is to say, the brass and copper after 2 B.C. were undoubtedly struck by the imperial mint, with which the provincial mint had by this time become incorporated.

The institution of an imperial brass and copper coinage at Lugdunum may be regarded as one of the most remarkable and important experiments in the monetary system of the Empire undertaken by Augustus. In fact, it is probably true to say that the ultimate

¹⁹ *Revue Num.*, 1895, pp. 160 ff.

form assumed by the senatorial coinage of Rome was the outcome of this experiment. In its more distinctive features, namely, the imperial portrait as the obverse or principal type combined with some symbolical or commemorative device as the reverse, the senatorial bronze, as we know it from the time of Caligula onwards, bears practically no relationship to the senatorial coinage of Augustus. But it is precisely these features that we find so strikingly anticipated in the imperial brass and copper of Lugdunum.

At this point we may mention the following small brass coin:

50. *Obv.*—IMP·CAESAR. Laur. head of Augustus r.
[Pl. V. 12.]

Rev.—AVGVSTVS. Eagle with spread wings.
Coh. 29.

This coin is in all probability a *quadrans*, since it weighs, on the average, about 40 grains, or slightly more than half that of the *semis*. Cohen observes that it was struck outside Rome, and there is little doubt that it belongs to Lugdunum. There is, however, some difficulty in assigning it to its exact place among the coins of the period we have just been considering. The style of portraiture and execution corresponds with that of the copper *asses* of 10 B.C. [Class I] [cf. Pl. V. 13], but the fact that it is of brass and not copper would lead us to associate it with the coins of Class II, issued after 2 B.C. I am inclined to think that, considering the general style of the coin, the earlier date is to be preferred.

Taking the *Altar of Lugdunum* series as the basis of style, we are able with practical certainty to assign

a number of gold and silver coins, struck between 2 B.C. and A.D. 24, to the same mint.²⁰

2 B.C. seq.

51. *Obv.*—CAESAR AVGVSTVS DIVI F PATER PATRIAE. Laur. head of Augustus r.
[Pl. VI. 19, 20.]

Rev.—AVGVSTI F COS DESIG PRINC IVVENT.

In ex., C L CAESARES. Caius and Lucius standing, facing, with shields, spears, &c.

Aureus (Coh. 42); *Denarius* (Coh. 43).

Sig. Laffranchi maintains that the mint of Lugdunum was entirely inoperative from 6 B.C. to A.D. 3. He bases his reasoning on the fact that the dated series of gold *quinarii* of the *Victory* type temporarily ceases with TR.P.XVII (7 B.C.) and does not recommence until TR.P.XXVII (A.D. 4); from which he argues that no coins should be assigned to Lugdunum during the interval. It may be urged as a *prima facie* argument that such a deduction is in itself illogical. But in the *Caius and Lucius* type, just described, we have direct evidence that not only were coins struck at Lugdunum during this period, but that the mint was extremely active.

Sig. Laffranchi advances the theory that the type is commemorative and should be placed after the death of Caius and Lucius, in A.D. 4. Mr. Hill,²¹ however, has pointed out that Augustus received the title of *Pater Patriae* on Feb. 5, 2 B.C., and that Caius had been designated consul in 5 B.C. to enter on his consulship

²⁰ Sig. Laffranchi has pointed out the irregular and cramped formation of the letters on the coins of Lugdunum, particularly the letter S, which invariably appears as Ş. In contrast the letters on the coins of Roman mintage are large, square, and more carefully formed.

²¹ Hill, *Historical Roman Coins*, p. 169.

on Jan. 1, A.D. 1. Since, therefore, on these coins Augustus is called *Pater Patriae* and Caius *Consul designatus*, we have practically no alternative but to assign these coins to the period between Feb. 5, 2 B.C., and Dec. 31, 1 B.C.

There are perhaps no coins of Augustus which were struck in so great numbers and obtained so wide a circulation as these *aurei* and *denarii*; also they were imitated in distant parts of the Empire. So that, even if they were the only gold and silver coins struck at Lugdunum during this period, the mint must have been kept well employed.

The examples illustrated [Pl. VI. 19, 20] show two variations in the style of portraiture. No. 19 closely corresponds with the style of the *sestertius* [Pl. V. 15], while No. 20 resembles the *dupondius* [Pl. V. 16] and many of the *semissēs*. There is no doubt, therefore, that both these styles belong to the Lugdunum mint.

A.D. 4-7.

52. *Rev.*—Victory type. **TR·POT·XXVII** (= A.D. 4);
XXVIII (= A.D. 6); **XXX** (= A.D. 7).

N. Quinarii (Coh. 315-317).

Circa A.D. 11.

53. *Rev.*—**PONTIF MAXIM.** Livia seated l., with attributes of Peace.

Aureus (Coh. 222); *Denarius* (Coh. 223).

A.D. 13.

54. *Rev.*—**TI·CAESAR·AVG·F·TR·POT·XV.** Tiberius in quadriga r., holding laurel-branch.

Aureus (Coh. 299); *Denarius* (Coh. 301).

The same type is continued under Tiberius.

55. *Obv.*—**TI·CAESAR·DIVI·AVG·F·AVGVSTVS.** Laur. head of Tiberius r., or l.

Rev.—**TR·POT·XVI** (or **XVII**). In ex., **IMP·VII**.
Tiberius in quadriga r.

Aureus (Coh. 45, 47); *Denarius* (Coh. 46, 48).

56. *Rev.*—**PONTIF·MAXIM**. Livia seated r.

Aureus (Coh. 15); *Denarius* (Coh. 16).

57. *Rev.*—**DIVOS·AVGVST·DIVI·F**. Head of Augustus
r.; above, star.

Aureus (Coh. 3, 4); *Denarius*.²²

Note the provincial form **DIVOS** instead of **DIVVS**.

A. D. 15–32.

58. *Obv.*—**TI·DIVI·F·AVGVSTVS**. Laur. head of Tiberius r.

Rev.—Victory seated r., **TR·POT·XVII** (or **XX**, **XXII**,
XXIII, **XXV**, **XXVI**, **XXVIII**, **XXVIII**,
XXX, **XXXI**, **XXXII**, **XXXIII**).

N. Quinarii (Coh. 49–60).

A. D. 33–6.

59. *Obv.*—**TI·CAESAR·DIVI·AVG·F·AVGVSTVS**. Laur.
head of Tiberius r.

Rev.—Same type but with **TR·POT·XXXV**, **XXXVI**,
or **XXXVIII**.

N. Quinarii (Coh. 61, 62, and 63(?)).

The final phase in the constitution of the mint of Lugdunum, with which we are concerned, is the establishment of the senatorial mint as auxiliary to that of Rome. As to the date at which this change occurred somewhat divergent views have been expressed. Sig. Laffranchi maintains that it was established in the latter part of the reign of Tiberius, about the year A. D. 33 or 34.²³

It is rather tempting to suggest that Claudius inaugurated the senatorial mint at Lugdunum at the

²² Cohen does not mention a *denarius* of this type; the example here mentioned is in my collection.

²³ Laffranchi, *op. cit.*

same time that he conferred the senatorial dignity on the citizens and admitted the Gallic nobles to a share in the imperial government, about the year A.D. 47 or 48.²⁴ Claudius was, moreover, a native of Lugdunum, and regarded the city as the political centre from which he designed to extend the *limites* of the Empire in accordance with the plan mapped out by Augustus.

M. Mowat, however, connects the change with Nero's munificence to the city after the great fire, which he places in the year A.D. 58.²⁵ Apart from the fact that the fire did not occur until eight years afterwards, this date seems too late for the establishment of the senatorial mint, for reasons which will be stated presently.

Historical evidence on the question of the mint is unfortunately scanty; we are forced, therefore, to rely mainly on such evidence as can be derived from the coins. While fully realizing the conflicting elements with which the whole question is surrounded, I am inclined to favour the earlier date—A.D. 34—for the following reasons:

(1) The senatorial bronze coinage (Rome) of Tiberius exhibits several very significant features. During the first period of the reign (A.D. 14–21) it is practically confined to the issue of copper *asses* and a few *dupondii*; the coins, moreover, show but little variety of type. Throughout this period, however, as we have already seen, there was an abundant issue of brass and copper (*Altar* type, Classes III, IV, V) from the imperial mint of Lugdunum. The middle period of the reign (A.D.

²⁴ Tac. *Ann.* xi. 24. On two bronze tablets discovered at Lyons in 1524 are engraved extracts from the speech delivered by Claudius on the occasion that the measure was introduced.

²⁵ *Revue Num.*, 1895, p. 160 ff.

22-33) is characterized by great activity on the part of the senatorial mint of Rome in consequence of the discontinuance of the imperial bronze of Lugdunum. *Sestertii* as well as *dupondii* and *asses* were issued, and their style shows a marked improvement on that of the earlier coins. The heads are in high relief and well modelled, and great care is expended on the formation of the lettering.²⁶ In the last period of the reign (A.D. 34-7) we find a significant change. While the higher denominations, *i.e.* *sestertii* and *dupondii*, continue the finer style, and in some cases reproduce the types of the coinage of A.D. 22 seq., a number of *asses* exhibit a flat style and somewhat irregular form of lettering. It is very difficult to account for this difference of style in senatorial coins of the same date unless we assume that two mints were employed in their production. The *sestertii* of A.D. 34-7 unquestionably belong to Rome, and we may reasonably conclude that the *asses* should be assigned to Lugdunum. That is to say, they may be regarded as the earliest examples of senatorial coins struck at the mint of Lugdunum working as auxiliary to that of Rome.

(2) The gold and silver coins of Tiberius are practically uniform as regards style and fabric, and belong, as we have already shown, entirely to the imperial mint of Lugdunum. Of these the most regular and continuous are the gold *quinarii* with reverse type of Victory seated, bearing dates ranging from A.D. 15 to

²⁶ Note, for example, *Civitatibus Asiae restitutis* Æ¹ (Coh. 3); *Pontif. Maxim.*, &c., Æ² *As* (Coh. 19, 24, 25); *Clementiae* Æ² *D* (Coh. 4); *Moderationi* Æ² *D* (Coh. 5); *Divus Augustus* Æ¹ (Coh., Aug. 309); Æ¹ *D* (Coh. 252); Æ¹ *As* (Coh. 228); *Pietas, Iustitia, Salus* (*Livia*?) Æ¹ *D* (Coh., Liv. 1, 4, 5); *Drusus Iunr.* Æ¹ (Coh., Drusus 1) Æ² *As* (Coh. 2), &c.

36 (TR.POT.XVII to XXXVIII; cf. *supra*, Nos. 58 and 59). A slight change of style occurs in these coins after A.D. 33, but it should be noted that it takes place gradually, through a period of transition. Sig. Laffranchi²⁷ notices this, and also points out that the style of the *quinarii* of A.D. 34-6 corresponds closely with that of the senatorial *asses* of the same date. He concludes, however, that during these years both *asses* and *quinarii* were struck in Rome. But, in the case of the *quinarii*, the inherent improbability of Tiberius encroaching on the traditions of the Roman mint to the extent of transferring the machinery for the issue of the imperial coinage to the capital,²⁸ and also the fact that the change of style occurs not suddenly but gradually, strongly support the view, originally stated, that the entire series belongs to Lugdunum. That being so, it will be seen that we have further evidence for assigning the group of *asses*, similar in style to the later *quinarii*, to the same mint.

(3) The characteristic features, to which we have alluded, in the *asses* dated A.D. 34-6, *i.e.* the flatness of portraiture and irregularity of lettering, can be traced distinctly on senatorial coins of Caligula, Germanicus, Claudius, Drusus, and Nero. Under the last mentioned there is no question that Lugdunum was the place of mintage (*vide infra*), and although arguments based purely on considerations of style are not always conclusive, these peculiarities are nevertheless sufficiently marked to suggest that the coins are non-Roman, and their continuance through the reigns

²⁷ Laffranchi, *op. cit.*, vid. pl. ii.

²⁸ Caligula appears to have been the first emperor to make the innovation of striking gold and silver in Rome.

mentioned points almost unmistakably to the existence of two senatorial mints from about the year A.D. 34.

(4) Mr. Mattingly, who inclines to the Neronian date for the establishment of the senatorial mint at Lugdunum, in the course of some interesting notes on the subject, points out that a technical difficulty is caused by the supposition that a senatorial mint was set up in Lugdunum, which was, and continued to be, an imperial province entirely outside the control of the senate. "Under Tiberius the senatorial treasury, the *aerarium Saturni*, was still nominally entirely independent of the emperor. It is unlikely, then, that Tiberius should have allowed a senatorial mint in one of his provinces, especially towards the close of his reign, when he was notoriously opposed to changes of any kind, and also was quite out of touch and sympathy with the senate. The mint is, however, a practical certainty under Nero; and the explanation probably is that after A.D. 57 the *aerarium Saturni*, under its new praefecti, nominated by the emperor, was practically under imperial control, and that the objection to its activity in an imperial province was therefore removed."

There is undoubtedly force in Mr. Mattingly's contention; on the other hand, there are two further points worth considering. (a) The assumption that no bronze was struck at Lugdunum between the date at which the *Altar of Lugdunum* series ceases (A.D. 21) and the time of Nero's fiscal reform—a period of at least thirty-six years—is in itself very difficult to explain. (b) It will be remembered that in the year A.D. 33 a serious financial crisis occurred, owing to a widespread abuse of the regulations respecting usury, which involved

nearly all the members of the senate.²⁹ The money-lenders called in their loans, and a large number of debtors, in order to meet their obligations, were obliged to sell their estates. As a consequence there arose a scarcity of specie, and we are told that amongst other things Tiberius himself advanced the sum of 100,000,000 sesterces as a loan fund. It seems, therefore, by no means improbable that, under these exceptional circumstances, the copper currency was restarted at Lugdunum with the emperor's sanction, but apparently under senatorial control.

Perhaps the real solution lies in the peculiar character of the Lugdunum mint itself. It stood apart from other mints, not merely as the exclusive mint of the west for gold and silver from 15 B.C. to 37 A.D., but as a very important mint for brass and copper coins, which in their more general features closely resemble senatorial coins. Obviously, then, the mint of Lugdunum could boast of die-engravers and coin-strikers of considerable skill and experience, and must have been equipped with a very complete plant. In view of this, it seems only natural to suppose that so useful a mint would have been taken over as auxiliary to the senatorial mint of Rome, fairly soon after it ceased to issue brass and copper as an imperial mint, without necessarily involving any change in the constitution of the province.

Since the discontinuance of the Lugdunum brass and copper threw the whole burden of production on the senatorial mint of Rome (A.D. 22-33), it is reasonable to assume that at the end of the period the strain was relieved by relegating the issue of senatorial copper of Lugdunum.

²⁹ Tac. *Ann.* vi. 16, 17; Suet. *Tib.* 48.

Of the senatorial *asses* struck after A.D. 34, the following may be noticed:

60. *Obv.*—**TI·CAESAR·DIVI·AVG·F·AVGVST·IMP**
VIII. Laur. head of Tiberius I. [Pl. VI. 21.]
Rev.—**PONTIF·MAXIM·TRIBVN·POTEST**
XXXVI (XXXVII or XXXIIX). Winged
 caduceus between **S·C.**
Æ² Asses (Coh. 21, 22, 23).

Sig. Laffranchi has illustrated an example of this type, which he assigns to Rome, but since the coins show a poorness of style, contrasting in a marked degree with the fine style of the period A.D. 22–33, I suggest that in them we see the earliest productions of the senatorial mint of Lugdunum, working in conjunction with that of Rome.

There is, moreover, a distinct appropriateness in the adoption of the type of the *winged caduceus*, which was by no means foreign to the traditions of Lugdunum (cf. No. 11). Mr. Hill, in describing a *semis* of the *Altar* type with a caduceus behind the head of Augustus on the obverse, says: "It has been recently maintained that the festival of the three Gauls was celebrated at Lugdunum on 1st Aug., because that was the date of the festival of the Gaulish Mercurius, and Augustus had been received into the Gaulish Pantheon in the character of that god."³⁰

Thus, although the representation of the *Altar of Lugdunum* was discontinued as a regular coin-type,

³⁰ Hill, *Historical Roman Coins*, p. 160 and note. For the latest light on the cult of Octavian-Mercurius, see an interesting article by J. Six in *Revue Archéologique* (1916). The Gaulish national god Lug (from which presumably *Lugdunum*) was identified with Mercurius by the Romans. Cf. Otto Hirschfeld, *Kleine Schriften*, vii, p. 130 f.

some allusion to the annual festival held in connexion with it was still preserved in the type of the caduceus.

In the reign of Claudius there is a somewhat curious reappearance of the *Altar* type on a series of brass *semisses* without **SC**.

61. *Obv.*—**TI·CLAVDIVS·CAESAR·AVG·PM·TR·P·IMP.** Bare head of Claudius r.

Rev.—**ROMETAVG.** Altar of Lugdunum.

Coh. 81. [Variety with laur. head r., see Pl. VI. 26; illustrated from a coin in Mr. F. A. Walters's collection.]

Cohen also mentions this type on coins of larger size, presumably copper *asses* (Coh. 82); obverse legend uncertain.

Since these coins are clearly not senatorial, they must have been struck by the imperial mint; and it is possible that a *denarius* die was used for the obverse.

Are we to infer that at this time there was no senatorial mint at Lugdunum for the issue of brass coins? Otherwise how is this rather unexpected revival of the old Lugdunum type to be explained?

The fact that these *semisses* are decidedly rare coins suggests that their issue was very limited, and their close correspondence in style with the *aurei* and *denarii* of Claudius indicates that they formed an extraordinary issue from the imperial mint quite irrespective of the regular senatorial coinage. Three possible explanations as to their *raison d'être* suggest themselves. They may have been struck on one of the anniversaries of the foundation or dedication of the Altar, possibly the fiftieth or sixtieth; or, since Claudius was born on Aug. 1, 10 B.C., the day on which the *ara Romae et Augusto* was dedicated, he may have

signalized his own birthday by reviving a type so obviously associated with his nativity;³¹ or again, the occasion of their issue may be that already referred to, when the senatorial dignity was conferred on the citizens of Lugdunum.

The distinctive features of coins issued by the senatorial mint of Lugdunum under Claudius will best be seen by comparison with examples of the Roman mint. For example, on *asses* of unquestionably Roman work [Pl. VI. 27] the letters are large, square, and evenly placed, similar to those found on the Roman coins of Tiberius and Germanicus. The style of portraiture is thoroughly characteristic of the Claudian period of Roman art. On the Lugdunum *asses* [Pl. VI. 28] there is the same unevenness and irregularity in the form of the letters and flatness in the execution of the portrait that were noticed on the Lugdunum *asses* of Tiberius [Pl. VI. 21] and the *sestertius* of Caligula [Pl. VI. 22].

The output from the senatorial mint apparently consisted mainly of copper coins, although a somewhat limited number of *sestertii* and possibly *dupondii* seem to have been struck at Lugdunum under Claudius.

The establishment of a senatorial mint at Lugdunum, working in union with that of Rome, tended gradually to produce a similarity of style in the products of the two mints. Down to the time of Vespasian certain local mannerisms are still observed, but after the first few years of his reign the differences between the two mints become less apparent, and finally disappear.

During the first six years of Nero's reign (A.D. 54-60)

³¹ Suet. *Claud.* 2; and cf. Seneca, *De morte Claudii*, c. 6.

it appears practically certain that no brass or copper coins were struck at either Rome or Lugdunum. To this period, however, belongs a fairly extensive issue of dated *aurei* and *denarii* with the reverse type of the *civic crown* and legend **PONTIF·MAX·TR·P** (—**TR·P·VII·COS·III·PP**), continued between A.D. 60 and 63 by the *Ceres*, *Mars*, and *Roma* types. Both mints seem to have been employed in the production of these coins, and as they show two different renderings of Nero's portrait, we are probably right in assigning those of the cruder style [**Pl. VI. 30**] to Lugdunum, and the more artistic to Rome [**Pl. VI. 29**].

During the last eight years of the reign (A.D. 60–8) the activity of the Lugdunum mint increased enormously, particularly with regard to the issue of brass and copper. Fortunately in the question of attribution we have one or two fairly defined landmarks to guide us.

At the beginning of the period (A.D. 60–3) we find a group of copper *asses* with stylistic features similar to those noticed in the Lugdunum coins of Tiberius and Claudius [**Pl. VI. 31**]. That is to say, the formation of the letters is irregular, and the portrait has a flat appearance, although the profile is less harsh than on the coins of Claudius. The somewhat untidy arrangement of the hair is characteristic, and there is a tendency to make the head rather large and outspread, in marked contrast to the more compact Roman style.

Thus there seems good reason for believing that they belong to Lugdunum and form a continuation of the senatorial copper series of Claudius. At the end of the reign we find the following *denarius*:

62. *Obv.*—IMP·NERO·CAESAR·AVG·PP. Laur. head of Nero r.

Rev.—Legionary eagle between two standards.

Coh. 356.

This reverse type leaves practically no doubt as regards either the date or place of mintage of these coins. The allusion is clearly to military operations of some sort; and since the date of the Parthian campaign is too early for the issue of this coin, which is of the reduced weight of Nero's later silver, the only other occasion to which it could reasonably refer is the defence of Lugdunum and mobilization of forces against Vindex, in the spring of A.D. 68. This date entirely accords with the style of these *denarii*, and it seems not improbable that they were struck at Lugdunum at the very time that the rebel army was besieging the city.³²

The style of portraiture differs from that of Nero's Roman *aurei* and *denarii*, and corresponds with the flat outspread portrait, with untidy hair, which is, as we have already noted, characteristic of Lugdunum. The chin and neck are heavily developed, and, in most cases, Nero is shown with a closely cropped beard.

A further point about the *eagle and standards denarius* calls for notice, namely the distinctive form of *obverse* legend, IMP·NERO·CAESAR·AVG·PP, which occurs also in conjunction with the *reverse* types, ROMA, IVPPITER CVSTOS, SALVS and IVPPITER LIBERATOR. In each instance, however, it will be seen that the style of portrait is non-Roman. Whereas when the types IVPPITER CVSTOS and SALVS

³² Cf. an interesting and suggestive article by Mr. H. Mattingly in *Num. Chron.*, 1914, pp. 110 ff.

occur with the *obverse* legends, **NERO·CAESAR·AV·CVSTVS** or **IMP·NERO·CAESAR·AV·CVSTVS**, the head is of the more compact Roman style; from which it may be inferred that the legend **IMP·NERO·CAESAR·AVG·PP** was not used by the Roman mint, but belongs solely to that of Lugdunum [Pl. VI. 33].

Mr. Mattingly has described certain of Nero's *asses*, countermarked with the letters **PR**, which he very reasonably considers were so stamped by the followers of Vindex in lieu of issuing a special copper currency corresponding with the revolutionary ("autonomous") *denarii*.³³ The existence of these countermarked *asses* strengthens our argument for assigning coins of Lugdunum, since they exhibit the characteristics of style mentioned above, and it is certainly natural that Vindex should have appropriated the money issued locally.

Thus by arguing forwards from the group of *asses* of A.D. 60-3, and backwards from the *denarii* and counter-marked *asses* of A.D. 68, we are able to connect together a tolerably complete series of coins struck at Lugdunum during the second half of Nero's reign.

Accordingly copper *semissae* of the **CERTamen QVINQuennale** type may probably be assigned to this mint; also many with the type of *Roma* seated. The brass equivalents with these types, on the other hand, belong entirely to Rome. A number of *sestertii*, *dupondii*, and *asses* may be assigned to Lugdunum on considerations of style, but as their reverse types are similar to those of Rome, it is unnecessary to enumerate them.

³³ *Num. Chron.*, 1913, "The Coinage of the Civil Wars, A.D. 68-70".

The brass and copper coins struck at Lugdunum between A.D. 60 and 68 exhibit almost invariably certain distinctive features in conjunction with the style of lettering and portraiture already mentioned, which may be summarized as follows:

(1) Nero is never portrayed with the radiate crown. On the *dupondii* his head is laureated [PL. VI. 32], and on *asses* and *semisses* he is bare-headed [PL. VI. 31].

(2) The flan is invariably flat, and not, as in the case of most of the coins of Roman mintage, with the reverse slightly concave.

(3) The marks of value, $\overline{\text{II}}$, $\overline{\text{I}}$, and S , do not occur on the brass coins.

I have already commented on the theory, advanced by M. Mowat, that the *globe* at the point of the bust is the mint-mark of Lugdunum. It is, therefore, unnecessary to repeat the arguments which conclusively disprove the theory.³⁴

Towards the end of the reign of Nero a decided improvement is noticeable on the Lugdunum coins in the formation of the letters, which are evenly placed and usually slightly larger than on the coins of Rome.

There remains a very rare and somewhat puzzling type to be noticed:

63. *Obv.*—NERO CLAVD CAESAR AVG GERM.
Radiate head L, with globe.

Rev.—ROMETAVG. Altar of Lugdunum.
Coh. 256.

How are we to account for a revival of this type under Nero?³⁵ If this is really a Lugdunum coin,

³⁴ *Num. Chron.*, 1915, "The Coinage of Nero."

³⁵ M. Mowat has built up in connexion with this presumably unique coin a somewhat fanciful theory, which, as I have elsewhere shown, is disproved by historical and numismatic evidence.

and not, as seems quite possible, a Gallic imitation, I venture to suggest that it is an "emergency" coin, and that some clue as to its *raison d'être* may be found in a reference to contemporary history.

In the year A.D. 65, which was in several ways a disastrous year, the city of Lugdunum was almost totally destroyed by fire. So overwhelming a disaster must, amongst other things, have seriously dislocated the working of the mint. In the confusion, coins would have been struck from any dies that came to hand; and, since there must have been vast quantities of dies used for the striking of the *Altar of Lugdunum* coins of Tiberius, it appears by no means improbable that a few had survived down to the time of Nero. The solitary example of this coin in the French National Collection is evidently struck from a much-worn die, which goes to support this theory with regard to it; and owing to the pooriness of its condition it is scarcely possible to give an illustration of it.

In the general confusion that marks the last three months of Nero's reign and the beginning of that of Galba, a number of mints cropped up in Spain and Gaul, which issued revolutionary gold and silver coins—commonly known as "autonomous"—required for the payment of Galba's troops in Spain and the rebel army of Vindex in Gaul.

A few historical details are necessary in order to place the coins of the period in their right relation to one another.

The revolutionary movement, under the leadership of Julius Vindex, spread over the greater part of southern and central Gaul, and even to the Rhine district. But, though Vindex himself held the post of governor of

Gallia Lugdunensis, with Lugdunum as his administrative centre, the city refused him support, expelled him from his residence, and remained loyal to the imperial government and to Nero as emperor. On the other hand, Vienna, the inveterate rival of Lugdunum,³⁶ welcomed the rebel leader and, for the time, became the head-quarters of the anti-Neronian rebels.

The numismatic importance of this is that, although revolutionary coins were issued between the beginning of April and the middle of June, A.D. 68, in various Gallic cities, such as Narbo, Augustodunum, &c., none were struck at Lugdunum. Here the regular issue of Nero's coins continued, and we may well believe that the *denarii* of the *eagle and standards* type (*vide supra*) are the distinctive coins of this period.

Disaster and defeat befell Vindex and his army during May, A.D. 68; and the cause of Galba would have doubtless shared the same fate had it not been for the opportune death of Nero which placed the Empire in his hands. The news reached Galba in his retirement at Clunia about the middle of June, but his formal investiture, at the hands of the emissaries of the senate, did not take place until the end of July.

We have then a short period of about six weeks to which may be assigned the gold and silver coins with the *obverse* legends, **IMP GALBA, GALBA IMPERATOR, SER GALBA IMP**, &c. (*i.e.* legends omitting the titles *Augustus* and *Pontifex Maximus*, or any mention of the *Tribunicia potestas*). There is little doubt that these coins belong to the Spanish and Gallic mints which had issued revolutionary coins during the two previous months.

³⁶ Tac. *Hist.* i. 65.

Turning to Lugdunum we find that the citizens were no more favourably disposed to Galba than they had been to Vindex. Galba was naturally regarded as the patron of the Gaulish rebel, and we can scarcely imagine that the mint-masters of Lugdunum would strike coins bearing the portrait or titles of an emperor whom they refused to acknowledge. What coins, then, may be assigned to Lugdunum during this period? It is unlikely that Nero's coins were continued after his death, but there is a very distinctive series of *denarii* which forcibly recalls the Neronian types without making any allusion to his successor.

64. *Obv.*----- **AVGVSTI**. Female bust, diademed, r.

Rev.—**IVPPITER CONSERVATOR**. Jupiter standing l., holding fulmen and sceptre.

Denarius. Coh. 371.

65. *Obv.*—**ROMA RESTITVTA**. Helmeted bust of Roma r.

Rev.—**IVPPITER CONSERVATOR**. Jupiter seated l., holding fulmen and sceptre.

Denarius. Coh. 370.

66. *Obv.*—**ROMA**. Bust of Roma, wearing turreted helmet, r.

Rev.—**IVPPITER CVSTOS**. (Similar type to preceding.)

Denarius. Coh. 372.

67. *Obv.*—**VIRT**. Helmeted bust of Valour r.

Rev.—**IVPPITER CVSTOS**. (Similar type.)

Denarius. Coh. 373.

68. *Obv.*—**ROMA RESTITVTA**. Helmeted head of Roma r.

Rev.—**IVPPITER LIBERATOR**. (Similar type.)

Denarius. Coh. 374.

Although **IVPPITER CONSERVATOR** does not actually occur on coins of Nero, the type corresponds so closely with the others of this group as to make it practically inseparable from them. There is good reason to believe that coins of Nero with the types **IVPPITER CVSTOS** and **IVPPITER LIBERATOR** were struck at Lugdunum, since they occur in conjunction with the *obverse* legend, **IMP NERO CAESAR AVG PP** (*cf. supra*). The style of these "autonomous" coins, particularly the formation of the letters, is quite in keeping with that of Lugdunum, so that it seems reasonable to assume that in this group we have a series of coins which fills up the gap between the death of Nero, June 9, and Galba's investiture, about the end of July, A.D. 68.

The five and a half months following this latter date are remarkable for the prolific issue of brass and copper from the senatorial mints.

Galba's gold and silver appear to have been issued from one, if not two, Gallic towns besides Lugdunum; but it seems probable that his brass and copper belong exclusively to Lugdunum and Rome.⁵⁷

The work of distinguishing between the products of the two senatorial mints is involved in some difficulty and is to a large extent a matter of conjecture. The variation in Galba's portrait is one of the striking features of his coinage. To the Roman mint may be assigned some eight or nine different representations of Galba, notably those that show him with more elderly and rugged features—probably the most accurate in point of likeness. To Lugdunum should,

⁵⁷ For the gold and silver coins of Galba and Vitellius struck at Lugdunum see Mr. Mattingly's article referred to above.

in all probability, be attributed the portraits of Galba with rather high forehead and less harsh features * [PL. VI. 34]. By this time, however, the coins of the two senatorial mints show practically no difference in the formation of the letters, and local mannerisms almost entirely disappear.²⁸

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²⁸ I wish to express my best thanks to Mr. H. Mattingly for allowing me to make use of some of his interesting notes bearing on the subject of this paper; also to Mr. G. F. Hill and Mr. F. A. Walters for their kindness in supplying specimens for the purpose of study and illustration.

IV.

THE ELIZABETHAN COINAGES FOR IRELAND.

(SEE PLATE VII.)

ALTHOUGH all the Irish coins issued during Queen Elizabeth's reign were in fact struck in London, there was in 1561 a strong body of opinion in favour of the reopening of the Dublin mint, as to which I shall have more to say presently.

Three months after the Queen's accession the mint at the Tower was partially employed in converting debased English money into an Irish currency of a still lower standard of fineness, in accordance with the plan approved by Queen Mary between 1555 and 1558 (*Brit. Num. Journal*, vol. viii, pp. 197-9). Indeed, Elizabeth's three commissions, to be next mentioned, obviously follow the general lines of the Irish regulations issued by her predecessor on the throne.

THE FIRST COINAGE, 1558-9.

At this time there was only one mint at the Tower, consequently the Irish moneys were struck in the original, or "nether", mint, as the new establishment known as the "upper houses" was not completed until December, 1560, when its work was restricted to the conversion of the remaining base coins into English money of fine silver (*Num. Chron.*, 4th ser., vol. xvi, p. 68). To the officials of the nether mint, then, the following commissions were directed:

(1) To Sir Edmund Peckham, high treasurer, Thomas Stanley, comptroller, John Bull, assay master, and John Monnes, provost of the moneyers. The Queen being minded to convert certain base moneys then current within this realm (England) into harpshillings and groats to be defrayed about her affairs within the realm of Ireland, authorizes the comptroller to receive so much of the base moneys then current as should amount to twelve thousand pounds in number and quantity; and to convert and recoin so much of the said sum as should make in ready money for Ireland the sum of twenty-four thousand pounds in harp shillings and harp groats of the standard of 3 oz. fine silver out of the fire and 9 oz. alloy in the pound Troy. Forty harp shillings or one hundred and twenty harp groats shall weigh one pound Troy. And the coins shall be struck with the arms of Ireland, which is the harp crowned, with our scriptures about the same on the one side, and our picture with our scriptures about the same on the other side. The harp moneys shall be current in Ireland and not elsewhere, and each pound weight Troy shall contain forty shillings by tale. The remedy shall be 3 dwt. at the assay and at the shear in the pound Troy. Before delivery out of the mint, three pieces at the least of every several coin from each journey of thirty pounds weight shall be placed in the pyx, to be assayed before the high treasurer or others who may be appointed. The residue of the £12,000 current base moneys, after making the £24,000 harp moneys, shall be retained for the cost of workmanship and the fees of the officers. Dated 17 February, 1 Elizabeth, 1558-9 (Patent roll, 1 Eliz., part 3).

(2) The like to the same persons, who are authorized to receive £4,000 base moneys for conversion into £8,000 harp shillings and groats. Dated 1 May, 1 Eliz., 1559 (Pat. roll, 1 Eliz., part 3).

(3) The like to the same persons. £4,000 to be converted into £8,000 as before. Dated 16 June, 1 Eliz., 1559 (Pat. roll, 1 Eliz., part 4).

These two coins can be identified, although undated, by the description in the foregoing commissions and by their weights, which were 144 and 48 grains respectively, being the same as the harp-moneys of Philip and Mary [Pl. VII. 1, 2]. Two privy-marks, the Rose and the Harp,¹ are mentioned by Simon in his *Irish Coins*, but there was no obligation to hold the usual trial before the Lords of the Council and a jury at Westminster. There was merely a stipulation for an assay at the Tower in the presence of a mint officer.

A question arises as to the interpretation which should be given to the respective amounts of English base moneys convertible under the terms of the three commissions. I think that the £12,000 in the earliest order, for example, really represented £24,000 in coins as originally valued at the time when they were struck. We must remember that silver pieces, from the shilling to the halfpenny, were cried down to the extent of fifty per cent. by Edward VI on 17 August, 1551, and that the reduction was confirmed by Mary in a proclamation of 26 December, 1554. No alteration having been made by Elizabeth in her first year, the rating at one-half of the face value of such coins still held good. The bulk of the English base silver

¹ I have not yet seen the Harp mark on either denomination; it appears to be quite unknown, save in the books.

then current was probably of the standard of 4 oz. fine, with a certain number of pieces of 8 oz., 6 oz., and 3 oz. fine, respectively. But even assuming that 12,000 meant 24,000, a large quantity of alloy must have been added to the bullion when melted, as the weights of the new Irish coins much exceeded those of the corresponding English denominations, of which the heaviest shilling weighed 80 grains only.

There are no detailed working accounts relative to this issue, but Thomas Stanley, the comptroller, records that he made, by virtue of the three commissions, 19,828 pounds Troy in "pitched moneys" of 3 oz. fine, which being valued at the prescribed rate of 40*s.* in each pound weight would yield £39,656 in Irish currency of the first coinage (*S. P. Ireland*, Folios, vol. vi). Simon on p. 43 gives a table, reproduced by Ruding, of the respective quantities struck for Ireland throughout Elizabeth's reign, but some of his *data* are incorrect and the aggregate figures are consequently affected. It is, however, clear that the amount of the first issue was small, being less than one-fourth of the base coinage of 1601-3, which explains the comparative rarity of the shilling and groat of 1558-9.

Perhaps I should add that the ratio between the two currency systems in 1560 was 13*s.* 4*d.* English to 20*s.* Irish, or, as one of the documents expresses it, "to turn Irish money into sterling subtract one fourth part, and to turn sterling into Irish add one third part".

THE SECOND COINAGE, 1561.

The striking of this coinage was preceded by a considerable correspondence between London and Dublin, extending over several months. These letters prove

that divergent counsels swayed Elizabeth and her advisers until almost the last hour before a decision was reached. The Irish authorities naturally wished for a mint in their island, while the officials at the Tower were equally desirous of adhering to the precedent in favour of London, as set up by the Queen's first issue. The discussion of the subject deserves a little notice here, chiefly because it provides us with some interesting particulars as to the erection and equipment of the intended mint.

On 21 December, 1560, a letter to the Lieutenant of Ireland from the Queen orders that the teston then rated in England at $4\frac{1}{2}d.$ (*i.e.* the shilling stamped with the portcullis) should be current in Ireland for $7d.$, and that the teston rated at $2\frac{1}{2}d.$ (*i.e.* stamped with the greyhound) should be current in Ireland for $3\frac{1}{2}d.$; that the teston formerly coined for Ireland with the arms, being a harp, on one side, and then of late rated at $7\frac{1}{2}d.$, should be current there for $7d.$ A proclamation was to be issued to that effect (*S. P. Ireland, Eliz.*, vol. 2, No. 57). The identity of the last-named teston is a little uncertain, but the description might apply to the shilling of Elizabeth's first Irish coinage in 1558-9. If so, the original face value of that coin, namely twelvecence, had been very soon cried down. On the other hand the shilling of Philip and Mary may be the coin indicated.

Apparently the earliest reference to an Irish mint is on 23 February, 1560-1, when an English memorandum inquires what Mr. St. Leger did with the implements belonging to the mint in Dublin (*S. P. Ireland, Eliz.*, vol. 3, No. 23). Doubtless the appliances in question were those used at Dublin Castle by Edward VI, of

which a full inventory is preserved in the Irish State Papers of Mary's first year, under the date 8 February, 1553-4, but it seems probable that some, at all events, of the objects scheduled in Mary's reign were no longer at the Castle in 1561, because an estimate was prepared by Elizabeth's experts for the necessary plant, both fixed and movable. The latter document is in the following terms:—

Estimated cost of the apparatus for fining 60^m pounds weight of base moneys of Ireland into fine moneys according to the standard lately made for the same;

First, for 2 fining chimneys for the tests, 60^{li}.

For a blowing chimney which may be made for the most part with wood and loam (? puddled clay or peat) 20^{li}.

For a melting chimney 12^{li}.

For 2 segeryng² furnaces 4^{li}.

The irons that should serve for the same segering furnaces are already prepared of the Queen's Majesty's store, and all other irons meet for the same, saving for the value of 40^s to be employed for other iron work, 2^{li}.

For lead, wood and coal, that must the finers allow for; saving I suppose it will cost the Queen's Majesty over and above the price of wood and coal made to the said finers, 20^{li}.

The said finers must have about 24 men and labourers which must be of their finding.

Sum, 118^{li}.

The coinage of the same into fine moneys with all manner of charges thereto belonging—

Imprimis, a melting furnace, 30^s.

An assay furnace, 30^s.

A blanching furnace, 20^s.

Seats for 24 hammer men, 12^{li}.

Seats for 8 sleymen,³ 4^{li}.

For 3 shearing stocks, 15^s.

For balance for the shear, 6^s.

For balances and weights, 10^{li}.

For boards for the treasury, for telling boards and for the boards for the assay house, with green cloths, 10^{li}.

² Sagger or segger = a casing or vessel of fire-proof clay.

³ Perhaps derived from sley, an instrument for striking used by weavers.

For a lantern and balance for the assay, 3^{li}.

For 6 melting pots, 18^{li}.

For 2 annealing pans, 20^s.

For 3 blanching pans, 20^s.

For 20 dozen of trays, 6^{li}.

For a pipe of argall, 10^{li}.

For coining irons, 40^{li}.

For salt and sponges, 40^s.

For 200 loads of coals, 130^{li}.

For other necessities that shall be needful which may be overshot for lack of remembrance, 12^{li}.

Total, 382^{li} 12^s (*sic*).

The provost (of the moneyers) must have 24 hammer men, 3 shearers, 8 sley men and one annealer, which 36 men must be at the finding and charge of the provost.

Undated, but calendared under 23 Feb. 1560-1, which is no doubt approximately correct (*S. P. Ireland, Eliz.*, vol. 3, Nos. 25-6).

The next letter still leads the Irish authorities to believe that they are about to have a mint of their own. The Queen writes to the Lords Justices and the Chancellor of Ireland, on 8 March, 1560-1, informing them that she intends to erect a mint in Dublin where fine moneys should be coined and base moneys converted ⁴ (*S. P. Ireland, Eliz.*, vol. 3, No. 34). This is followed by a note dated 13 March in the same year—"Memorandum for Ireland. The money to be put to coining and to be ready by the 10 of April at the furthest." On the other hand, Sir William Cecil in a letter of 14 April, 1561, speaks of sending new silver coin to Ireland for Ireland (*op. cit.*, Nos. 36 and 54), which suggests that the Queen's wishes were being opposed in London. Nevertheless it seems clear that

⁴ In this connexion it should be remembered that a second mint in the upper houses at the Tower was started in December, 1560, under the control of Thomas Fleetwood, for converting the English base silver coins (*Num. Chron.*, 4th ser., vol. xvi, p. 68). Evidently the Queen now contemplated an extension of the scheme to Ireland.

the Irishmen continued to hope for the fulfilment of Elizabeth's promise, as there is a letter from Dublin to Cecil, dated 3 May, 1561, saying that William Williams⁵ and Thomas Smythe had been sent over for matters of the mint and had conferred with the Lords Justices, when it had been resolved that Dublin was the "most aptest place" for refining and recoinage. On the next day there is another letter to Cecil to the same effect. Then the Irish Privy Council express their views in a letter to the Queen on 5 May, wherein they say that the Castle of Dublin, with the help of the chapel next without the gate, then out by lease, would be the most convenient place in that realm; and that £100 would make the old buildings again fit for the purpose of a mint (*op. cit.*, Nos. 63-5). The above-mentioned Thomas Smythe also writes to Cecil from Dublin on 5 May, reporting that he had begun to repair the furnaces, &c., and asking for a flat-bottomed hoy of 40 or 50 tons, drawing about 5 or 6 feet, in which to bring wood to the Castle. He adds a request for the patents for the officers there, but does not mention their names (*op. cit.*, No. 66).

On 22 May, 1561, the Queen sends to the Lieutenant of Ireland a signed list of instructions, some of which doubtless surprised the advocates of a mint at Dublin and cut short the work connected with its inauguration. The relevant passages in this document inform the Lieutenant that "we have sent over a certain mass of treasure of new fine and sterling silver, now newly coined with the stamp of our arms of Ireland, being agreeable to the goodness of our moneys of England,

⁵ An assay-master under Edward VI at Dublin.

for the observation of the good accompt and reckoning betwixt both our realms". Each of the greater pieces was to be rated and be current for 12*d.* Irish in Ireland, and for 9*d.* sterling in England and not above. The smaller moneys coined for groats were to be current for 4*d.* Irish and 3*d.* English. A proclamation was to be published (*op. cit.*, No. 78, and Carew Papers, *sub anno*). If the words "agreeable to" are to be read as meaning "equal to", the statement is not quite accurate, because the English standard of silver was, at the date of this letter, 11 oz. 2 dwt. fine (*Num. Chron.*, 4th ser., vol. xvi, pp. 6 and 8), whereas I shall presently show that the Irish coins of the second issue were only 11 oz. fine—a great improvement in quality, but not uniform with the English currency of 1560. Elizabeth, having thus confronted the Dublin executive with an accomplished fact, writes another letter on 17 June containing further directions explanatory of her rather curt intimation of 22 May. The Lieutenant is told that—

It had been found that the moneys could not be refined and new coined in that realm (Ireland) without an over great charge, therefore it had been resolved to recoin the same in the Tower of London. A reasonable gain was to be offered, after the decrying, to merchants trading in both realms for bringing the coins to the Tower. The harp shilling of Queen Mary marked with two letters **M** and **R** shall be valued at 8*d.* Irish or exchanged for 8½*d.* in Irish fine moneys. The harp shilling of Philip and Mary with the stamp of both their faces, and likewise the harp shilling "coined in our time and stamped with our face", shall be current each for 5½*d.* Irish or exchanged for 5½*d.* Irish in fine moneys. The harp groats of the same stamp and standard shall be current for 1½*d.* or three for 5½*d.* Harp groats with the arms of England on one side and the harp on the other (presumably the Bristol-coined groats of Henry VIII) shall be 1½*d.* Irish. The rose penny shall be current for "a farthing half-farthing Irish" or four for 1½*d.* (*S. P. Ireland, Eliz.*, vol. 4, No. 7).

The proclamation giving effect to this order was sent over and published in Dublin on 14 (?) July, 1561.

A little later there is a complaint from the Irish Privy Council that the calculations of the rating of some of the coins were wrong, which is not surprising when the variety of pieces in circulation and the fractional values assigned to them are considered.

I have now briefly reviewed the historical evidence as to the discussion which preceded the second coinage. It is evident that while the foregoing letters, &c. were passing between London and Dublin the mint officers at the Tower had received an order to strike the fine silver coins for Ireland. The original indenture or commission has not survived, nor has it been enrolled, but there is sufficient proof from other sources that the order was dated not later than 1 April, 1561, and that the shilling and groat therein mentioned were struck by Thomas Stanley in the "nether mint" [PL VII. 3, 4.]. The State Papers and the Exchequer Accounts contain the following particulars:—

(1) In April, 3 Elizabeth (1561), Irish moneys in harp shillings and groats of 11 oz. fine silver were struck to the extent of 2,997 pounds Troy and were valued at the shear at 4^{li} in each pound Troy (*S. P. Ireland*, Folios, vol. vi).

(2) The figures in paragraph (1) can be checked and confirmed by another contemporary reckoning which states that from 1 Apr., 1561, to the 30th of the same month 11,988^{li} by number and tale of moneys for Ireland of 11 oz. fine were coined, at the rate of 80s. in each pound Troy ^o (*Exch. acc't.* 303/21).

* *Simon*, on p. 43, assumes that these coins were sheared at the rate of 60s. in the pound weight; this vitiates his calculation.

(3) The new coins were tested at a pyx trial in the Star Chamber on 24 October, 1561, when £9 0s. 12*d.* (*sic*) in harp shillings and groats were found in the chest and proved to be in accordance with the standard (*Exch. acc't.* 303/53, and *Harley MSS.* 698, fo. 62).

I notice that Sir Martin Bowes, then a private goldsmith, was one of the jury sworn at this trial; the times had changed since he was present at such ceremonies as the head of the Tower mint.

The accounts of later date show that none of the 1561 coins were struck after the end of April. They bear only one privy-mark, the harp, and as both denominations are dated they are readily identified. The novel type of the reverse, three harps upon an indented shield crowned, is more pleasing than that of the first coinage, and may, I think, be regarded as one of Derick Anthony's most successful productions [PL. VII. 3, 4]. Although the English mill coins were struck at the same time and proved at the same trial as the Irish pieces, the latter were made by the hammer process only.

It will be seen that the shilling of this issue, being sheared at the rate of 80 in each pound Troy, weighed 72 grains, or one-fourth less than the corresponding English coin, which weighed 96 grains at that time. This proportion conformed to the Queen's instructions of 22 May, 1561 (*supra*), which fixed the face value of the Irish shilling when in England at one-fourth less than the English shilling. The groat, of course, bore the same ratio, both in weight and face value.

Although the ostensible object of the second coinage was to effect a reformation of the existing currency, the small quantity produced must have been insufficient

even to leaven the mass of the debased moneys. The attempt was abandoned after one month's working at the Tower, and no Irish coins, fine or base, were struck during a period of forty years.

THE THIRD COINAGE, 1600-1.

Before I discuss the coinage of the 43rd year it will be necessary to free the subject from an entanglement due to the belief that there was an intermediate issue in 1598, during the Queen's 40th regnal year. This alleged coinage is mentioned by Stephen Martin-Leake in 1745, Simon in 1749, Ruding in second and third editions, and by Mr. Grueber in the *British Museum Handbook*. It is said that Elizabeth sealed an indenture with Sir Richard Martin and Richard his son in 1598, for making five denominations of Irish money. I had felt sceptical as to these statements, first because there was no record of such an order or any reference to it in the mint accounts; secondly, because Richard Martin the younger was not appointed to be a joint master-worker at the Tower until September, 1599, and therefore could not have been a party to a mint indenture in 1598; and, finally, because the Irish coins said to have been struck in 1598 bear privy-marks identical in some cases with those on the copper pieces dated 1601. I think that the cumulative effect of these considerations would have justified a disbelief in the existence of the supposed coinage, without any additional evidence. Quite recently, however, I have confirmed my doubts by proving beyond question that the statements in the text-books were founded upon a misreading of a recital in a contemporary document to which I am about to refer. It appears that Martin-Leake, the earliest of

the authors named above, was relying on an abstract in Rymer's *Foedera* from an agreement of April, 1601, between the Queen and Sir George Carye, appointing the latter to be master of the Exchange between England and Ireland. It is not inconceivable that the subsequent writers followed Martin-Leake's lead without further inquiry. Now, the enrolled agreement with Carye recites, among other things, that Elizabeth had ordered certain coins for Ireland by an indenture with the two Martins in the *three and fortith* year of her reign. Rymer had transcribed the words which I have italicized as "fortith" (Pat. roll, 43 Eliz., part 6, m. 21). Consequently the whole case falls to the ground and the issue of 1598 is shown to be apocryphal in fact as well as by inference.

The path being now cleared of obstructions I can turn to the third coinage, which was struck in accordance with the indenture recited in the agreement with Carye, as mentioned in the last paragraph. There is no evidence that the Dublin Privy Council renewed on this occasion their proposal as to a mint in that city, for the reason, perhaps, that the result of their efforts in 1560-1 was not of an encouraging character. In December, 1600, a suggestion was put forward to cry down all Irish moneys, whether sterling or base, and that the new debased coins, the issue of which was then in contemplation, should alone be current there; also that exchanges should be set up in the two islands (*S. P. Ireland, Eliz.*, vol. 207, part 6). There is much discussion of the project in the State Papers, but no decision is recorded and apparently none was reached until after the new mint indenture had been in operation for some three months.

The Queen's benevolent intention to restore the Irish moneys to the fineness of the English standard of silver had waned during the forty years of inaction, and gave place to a blunt declaration in the spring of 1601 that she had decided to revert to the "course" adopted by Henry VIII, Edward VI, and Mary. Indeed, the terms of the indenture will indicate that Elizabeth was even better than her word and that she authorized a debasement exceeding the lowest degree of fineness sanctioned by her immediate predecessors. The order of February, 1600-1, is not noticed by Ruding or quoted by other writers, as far as I have observed, therefore it seems desirable to append a few extracts from its provisions and from a schedule which was attached to the principal document.

Indenture with Sir Richard Martin and Richard his son, master-workers at the Tower, who covenant to make five manner of moneys—

The shilling Irish, current for 12^d, of which there shall be 62 in each lb. Troy.

The half-shilling Irish, current for 6^d, of which there shall be 124 in each lb. Troy.

The quarter-shilling Irish, current for 3^d, of which there shall be 248 in each lb. Troy.

"At the casting of the silver into ingots it is to be of the standard of 2^{oz} 18^{lwt} out of the fire, which is according to the standards of England 3^{oz} of fine silver in the body," in accordance with an indented trial piece to be ordained by three of the Privy Council, and each trial piece shall be stamped with the print of the said moneys. Each pound Troy shall contain 62 shillings Irish by tale.

Also, two manner of "small Irish moneys without silver".

One piece being current for one penny Irish, of which 192 in each lb. Troy.

The other being current for one halfpenny Irish, of which 384 in each lb. Troy.

The warden shall retain 2^s 6^d by tale for the coining of every pound weight of the first three recited moneys, of which the master shall take 20^d; and 2^s 6^d in respect of the

last two recited moneys, of which the master shall take 22^d. The balance shall pay the fees of the officers according to a schedule annexed.

The remedy to be 3^{dwt} both at the 'say and the shear of the pound weight of silver coins, and 4^{dwt} at the shear of the coins without silver. (Then follow long instructions as to the receipt and custody of bullion; as these are unusual they suggest some previous trouble in that department of the mint.)

In each 12^{lbs} of silver moneys there shall be 1^{lb} of quarter shillings, 4^{lbs} of half shillings, and 7^{lbs} of shillings.

A privy mark on all coins, which shall bear the stamp of her Majesty's arms crowned, with the inscription of her style on one side, and a harp crowned with the inscription *Posui Deum Adjutorem Meum* on the other side.

There shall be placed in the pyx; of every 30^{lbs} one piece of each of the three silver moneys, and the like of the copper moneys which shall be tried for weight only.

Three members of the Privy Council are authorized, if satisfied that the costs and charges exceed the 20^d and 22^d respectively for each pound weight, to allow such further sum as they may think fit from the part remaining to her Majesty's use; and likewise the 20^d and 22^d if proved to be excessive may be abated. Dated 2 February, 43 Eliz., 1600-01.

The schedule, being the new establishment.

Fees and diet of the officers and ministers, to be borne by the Queen and paid by the warden.

Thomas Knyvett, warden, £100 per annum, and Edward Runham his clerk, £20.

Richard Rogers, comptroller, £66 13^s 4^d, and his clerk £13 6^s 8^d.

Walter Williams, assayer, £66 13^s 4^d, and after his decease to Andrew Palmer; his clerk £10.

Alexander Kinge, auditor, no fee; his clerk £10; for parchment, ink, paper, etc., £10.

Edmonde Dowbledaye, teller, £33 6^s 8^d.

Paul Swallowe, clerk of the irons, 20 marks, and as surveyor of the melting-house, 40 marks; his clerk £10.

Charles Anthony, graver, £30.

Francis Williams, under assayer, £40, now to be allowed as necessary.

Thomas Knyvett, purveyor, £20, now to be allowed; to provide the alloy and other necessities.

John Rutlinger, undergraver, £40, now to be allowed as necessary.

George Tyson, sinker of the irons, £20. and after his decease to William his son if adjudged to be of good behaviour and sufficient.

Henry Gesborne *als* Mattice, smith, £10.

John Joye, porter, £10.

The parson of the chapel within the Tower (St Peter ad Vincula) for his tithes, 13^s 4^d. The sexton of the same chapel, 4^s.

For the diet of the officers during the time of their employment in the service, £138 13^s 4^d.

(Pat. roll, 43 Eliz., part 16.)

The master-worker is not included in the foregoing schedule as his remuneration was based on the amount of the output from the mint. This record of the persons who were concerned in the preparation of the Irish coins adds nine holders of offices to Ruding's list of those employed at the Tower during Elizabeth's reign.

A few general comments may be made on the fruits of the indenture. The coins of both metals are without the Queen's portrait, and it is perhaps significant that the East India testons of sterling silver, which were ordered in the preceding month, also exhibit the same peculiarity. Were it not for the fact that the new English coinage of the following July reproduced the royal effigy as usual, I should be inclined to think that the Queen in her old age preferred to omit a portrait. There must, therefore, be another explanation of this departure from the type of the first and second Irish coinages. If the indenture weights of the silver coins struck by Martin and his son are compared with those of the debased pieces ordered in 1558-9, it will be seen that the shilling of the third issue [Pl. VII. 5] was very much lighter than the same denomination at the beginning of the reign, namely 92 $\frac{3}{4}$ grains as against 144 grains. Thus not only was the fine silver

standard now abandoned, but the weight of the inferior substitute was reduced by one-third. The *Handbook* tells us that the third-issue shilling should weigh "about 88 grains"; the precise weight, however, is $92\frac{2}{11}$, as stated above.

The half shilling and quarter⁷ shilling [Pl. VII. 6, 7] are now added to the Irish currency and the groat is omitted, but the most novel feature in the indenture is the introduction of copper pence and halfpence [Pl. VII. 8, 9, 10]. For the first time the Tower mint was to strike an official coinage in a base metal, but it will be recalled that the Dublin mint had previously issued the "Salvator" copper farthings of Edward IV. The number of pence in each pound weight was 192 (*i.e.* thirty grains), not $190\frac{1}{2}$ as mentioned on p. 232 of the *Handbook*, and the farthing was not ordered, although some text-books state the contrary. As the copper coins bear the year of their issue (1601 and 1602) they serve to date the undated silver pieces with the same privy-marks. For example, the pence and halfpence of 1601 marked with the mullet or star and the slipped trefoil [Pl. VII. 8, 10] are thereby linked to the 1s., 6d., and 3d. with similar marks, while the pence and halfpence of 1602 with the martlet [Pl. VII. 9] show that the three silver coins so marked were struck in that year.

In addition to the three privy-marks to which I have just alluded, the books tell us with singular unanimity that the cipher, crescent, lys, and cross also occur on the third coinage. At the time of writing I have been

⁷ The quarter shilling is quite the rarest coin in the series of Elizabeth's Irish moneys.

unable to trace a coin of either metal bearing any one of the four last-named marks, and I doubt if they exist. The cipher was of course the English mark in 1600, and in accordance with contemporary practice it would not have been used for the Irish series. The crescent also seems to be improbable, and for a similar reason. The reputed lys and cross may have their origin in a worn or ill-struck trefoil. If the privy-marks at present known to me are added to those which I am inclined to reject as visionary, we have a total of seven marks on this Irish coinage within two years, whereas three sufficed for the English series during the same period. It is also to be observed that the known Irish marks correspond in number with those on the English coins and with the pyx trials of 1601-3. There is no evidence that more than one Irish mark was tried on each of the three occasions.

Ruding has illustrated in Plate xv, Nos. 10 and 11, a "Pledge of a penny", dated 1601, and a similar but undated halfpenny. As copper coins were not ordered in the English indenture of 1601, it seems possible that these two pieces may have been intended as patterns for Ireland, notwithstanding the survival of a copy or draft of an undated English proclamation concerning pledges of pure copper for a halfpenny and farthing which has been provisionally assigned to that year (*Crawford* 932, and *Harley MS.* 698/54).

Within a few days of the sealing of the Irish indenture the Privy Council gave instructions that unserviceable brass guns, "pieces of great ordnance", should be sent to the Tower mint, and that Spanish guns, if there were any, could best be spared (*Acts of Privy Council*, 15 Feb., 1600-1). Doubtless this metal

was to supply in part the needs of the master-workers of the new moneys, and it will be convenient now to cite some relevant extracts from the original account declared by the warden of the mint and from a copy of the master-workers' figures dealing with the same period.

Account by Sir Thomas Knyvett, from 1 Oct: 41 Elizabeth to 31 May 3 James I.

In Michaelmas term 43-4 Elizabeth, Spanish moneys taken in ships upon the narrow seas by her Highness's navy were valued at £5200 and coined into Irish moneys of the new standard.

The total of Irish silver moneys then struck was 89,677 pounds Troy 5^{oz} 17^{grs} of 2^{oz} 18^{dwt} fine, which represented, at the prescribed rate of 62^s the pound weight, £278,000 by tale in pieces of 1^s, 6^d, and 3^d. The intrinsic value of this bullion was stated to be 16^s 1½^d the pound weight.

Mere copper pence and halfpence amounted to 36,250 pounds Troy, which represented, at 16^s Irish the pound weight, £29,000 by tale. The intrinsic value of the metal was 6½^d the pound weight.

Coining irons for Irish moneys, to the number of 421 dozen and one, cost 7^s 6^d the dozen.

A standard trial piece for the same coinage, £8 10^s 8^d.

Paid to the master-workers for making 89,444^{lbs} 10^{oz} 15^{dwt} of "white Irish" at 20^d the pound weight, £7453 14^s 10^d.

And for making 36,177^{lbs} of copper moneys at 22^d, £3316 4^s 6^d.

(It will be noticed that the quantities for which payment was actually made are less respectively than those set out in the earlier part of this account; probably the differences represent waste in coining.) (Declared Accounts, Pipe Office, 2030.)

The reckoning prepared by Sir Richard Martin and his son repeats the figures last mentioned in the warden's account, and makes a claim for certain allowances in addition to the fixed scale of payments for the Irish work:

For garbling (selecting) 67,814^{lbs} of copper, according to agreement with the Chancellor of the Exchequer, at 1^d the pound, £268.

For cutting thick Hungary plates and melting gun metal and charges incidental thereto, £100.

For 1^d extra for each pound weight of "white Irish", and 2^d for the copper money, "above the amount allowed in the indenture, which they were constrained to pay to the moneyers against all conscience", £674. (*Additional MSS.* 24190.)

The coins referred to in the foregoing accounts underwent, together with the English series, three trials of the pyx at the Star Chamber. The original record of the two earlier trials appears to be missing, but I have taken such details as are available from a contemporary copy of a working account by Sir Richard Martin; the official figures as to the third trial have survived.

(1) In the period between the date of the indenture, 2 Feb. 1600-1 and 20 May 1601, 26,307 pounds weight of white Irish moneys were struck, and were found by the pyx jury to be of the standard of 2 oz. 17 dwt. fine silver in the pound Troy. Martin does not state the privy-mark, but it was presumably a slipped trefoil. The copper pence and halfpence are not mentioned in connexion with this trial.

(2) Between 20 May 1601 and 14 May 1602, 32,963 pounds weight of white Irish moneys were struck, and at the trial were found to be of the standard of 2 oz. 17 dwt. fine, the privy-mark being a mullet. The copper coins are again passed over in silence. (*Additional MSS.* 18758, p. 88.)

(3) On 7 June, 1603 (1 James I), Irish silver moneys, in pieces of 1s., 6d., and 3d., amounting to £42 16s. 6d., were taken from the pyx, the privy-mark being a

martlet.^s They were found to be agreeable to the standard.

Irish copper moneys in pieces of 1*d.* and $\frac{1}{2}$ *d.*, amounting to 2*lb.* 3*oz.* 7*dwt.* 18*grs.*, were found to contain 15*s.* 10*d.* in each pound weight and to be within the remedy. (*Exch. Accounts, Proceedings on trials of the pyx*, b*dl.* 3, vol. 1.)

I believe that the trial of 1603 is the one known occasion on which a copper or brass currency was accorded the honour of being tested at the Star Chamber in the presence of the Privy Council.

The form in which the warden, Sir Thomas Knyvett, presented the figures relating to the transactions of the mint (*supra*) brings into sharp contrast the difference between the face value and the intrinsic value of Elizabeth's third issue for Ireland, which was in truth a token coinage. The so-called silver moneys were to be current at the rate of 62*s.* for the pound weight, the actual cost of the metal being 16*s.* 1 $\frac{1}{2}$ *d.* The pound weight of copper coins was rated at 16*s.* and valued at 6 $\frac{3}{4}$ *d.* It may, I think, be regarded as a sign of grace that some of these documents use the phrase "white Irish" instead of "silver Irish" when reference is made to the coins which contained only 2*oz.* 17*dwt.* of silver in the pound Troy. At all events, I do not recall an instance of such becoming candour in any of the mint accounts of the earlier Tudors who permitted similar debasements in their English or Irish currencies.

A letter from Richard Martin, undated but pre-

^s In *Num. Chron.*, 4th ser., vol. xvi, p. 105, line 1, I inadvertently wrote "mullet" instead of "martlet" when speaking of this pyx trial.

sumably subsequent to the indenture of 1600-1, shows that the senior master-worker was in trouble with respect to the working expenses. He says that at the first making of the Irish coins the charges were very great, but they could then be made more fairly owing to his searching for the means, and he hopes that his enemies would not reap the benefit of his work. As to the red money, he would be content to make it at the rate of £100 for "every thousand weight" on condition that fine copper was delivered to him. For the white money he desired the same price as then was given (*S. P. Ireland, Eliz.*, vol. 208, part 1, No. 28). Conceivably the "enemies" were the persons who will be next mentioned.

In the closing years of the reign two other men came into the foreground, not in an official position at the mint but as advisers, more or less expert, of the Privy Council in coinage matters. These individuals were Captains Edward and Thomas Hayes, who were either brothers or kinsmen, the former being commissary of musters for the province of Leinster. They suggested improvements in the striking of and in the mixture of alloys for the Irish coins, and also put forward a scheme for the general amendment of the currency difficulties in Ireland. Whatever their merits as practical reformers may have been, they manifestly gained the ear of the Queen or her councillors, and were afforded an opportunity of proving the utility of their proposals. That being so, it may be interesting to gather together the historical evidence as to their proceedings, which appear to have escaped notice in our numismatic books. Possibly, but not certainly, the earliest of their writings is an undated

memorandum by Edward Hayes on the need for small copper money. He remarks that they must not be too thick; the copper plates being drawn thin by "ingens" will prevent counterfeiting by casting, as copper will not run thin between moulds when cast. "The fabrication should not be gross as are our silver monies, but neat and exquisite to grace the baseness of their substance" (*Cotton MSS.*, Otho E. x, No. 50). In this instance Hayes's quaintly phrased advice was neglected, as it will be seen that the pence and half-pence are decidedly thick when compared with the Harrington farthings of James I. Nevertheless they are by no means "gross". Next we have a joint letter from the two brothers, if such they were, addressed to Sir Robert Cecil on 24 March, 1600-1. They suggest to him that base moneys only should be current in Ireland, as it would do good service to England and ease the Queen's charge; it would least offend the State in Ireland, and especially the army there, "by which only her Majesty doth and must look to hold that kingdom". The writers then set out the benefits in detail and offer their services "about the settling of the money course" in Ireland (*S. P. Ireland, Eliz.*, vol. 208, part 1, No. 102). I shall have occasion to comment later on this question of the circulation of the new coinage, as ordered by proclamation. Then we have a letter from the Privy Council, which gives to "the two Hayes" the *entrée* to the Tower mint for the purpose of experimenting. On 17 April, 1601, the warden is instructed to permit them to use a convenient place in the mint where they can work privately and make trial of their invention for the new Irish moneys, and to provide them with silver to

the value of £50. On the same day the graver is informed that "a trial (will) be made of a commixture of metal that the two Hayes do offer to make into coin of better show and more expedition", and he is told to grave on eleven pairs of puncheons, which they had already made, the stamp of the new Irish shilling to be used for the trial (*Acts of the Privy Council*). That the inventors carried out some experimental work is proved by an account in the Domestic State Papers which mentions a loss of about £29 in silver bullion. It is, however, obvious that their improvements, if any, were too late for the first portion of the new coinage, because the warden is ordered on the 28th of the same month of April to deliver £49,000 in 1s., 6d., and 3d., and £1,000 in pence and halfpence of the coins of the new standard for Ireland (*Acts P. C.*). At present I have not been able to detect any difference as regards a "better show" between the silver pieces marked with a mullet or a trefoil in 1601 and those with a martlet in 1602, but, on the other hand, as the Hayes's association with the Tower mint extended for several years after Elizabeth's death, it must be assumed that their inventions or schemes were sufficiently useful to justify their continued attendance (*Brit. Num. Journal*, vol. ix, p. 222 f.). There is also a letter from Thomas Hayes, undated, but placed under 1602 in the calendar, in which he claims that he devised the plan for the alteration of the Irish standard of fineness, and says that he and his kinsman had "employed their endeavours in a inginarrie worke for coynedge w^h is nowe finished and effected"; unfortunately he does not describe the apparatus. In the next document, also undated, they assert that "the

probation of our ingines in this coinage wilbe so throughly manifested y^t hereafter it may induce ye whole moneys of England to bee wrought therby". The latter extract is in connexion with a proposal by the Hayes's to set up a mint in Dublin and to erect the engines invented by them, for which they asked to be allowed £3,000 sterling. They also put forward an alternative suggestion, possibly because the new coinage was a failure, that a standard of 9 oz. fine should be adopted for Irish silver moneys, inclusive of the three-pence, copper being used for the lower denominations down to the farthing (*S. P. Ireland, Eliz.*, vol. 212, Nos. 99-101). Neither of these projects was favourably received, and Dublin still remained without its mint, but the scheme for improving the standard to 9 oz. seems to have been revived by Hayes in the autumn of 1603, when James I was trying to solve by those means the currency difficulties which had beset Elizabeth. I do not find that any payment was made to Thomas or Edward Hayes out of mint funds or that the Queen granted a special reward to either of them. In a letter of 21 December, 1601, they ask that a privy seal warrant might be signed, but do not give any clue as to its nature. They also make a cryptic reference to "those who shoot with other men's arrows", which may be a thrust at the mint officials (*S. P. Ireland, Eliz.*, vol. 209, p. 248). It was not until September, 1603, that they respectively received by patent from James I an annuity of £100, which was stated to be in consideration of "good service done in the wars", there being no direct allusion to Irish coinage affairs.

It remains briefly to comment upon the series of very long proclamations which were published at

Dublin Castle during the two years which elapsed between the sealing of the mint indenture and the death of Elizabeth on 24 March, 1602-3. The first of the proclamations, which is dated 20 May, 1601, gives effect to the agreement as to Exchanges made with Sir George Carye in the previous month, to which I have already alluded. The Queen announced her decision, for the reasons there stated, to reduce the moneys to "the ancient course of her progenitors", namely, to a difference in fineness between the moneys of England and Ireland, and to that end had caused great quantities to be coined according to the ancient standard used by her Majesty's father, brother, and sister. The same were to be established as the lawful current moneys of Ireland, and after 10 July then next all other moneys, whether Irish, English, or foreign, were to be annulled and no longer current, and were to be esteemed as bullion only. And the Queen, in order to give reasonable satisfaction, which was not offered in the days of her progenitors, had established an exchange to be maintained at Dublin, Cork, Galway, and Carrickfergus, and in England at London, Bristol, and Chester, where coins of England might be changed for the new standard moneys of Ireland and vice versa. For 20s. of new Irish coins, 19s. of current English moneys were to be delivered by means of a bill directed to a place of exchange in England; and for 20s. English, 21s. new Irish deliverable at an exchange in Ireland. The Irish base moneys then annulled might be exchanged, money for money, for coins of the new standard (*S. P. Ireland, Eliz.*, vol. 208, part 2, No. 82). The object of this exchange system was to prevent the transportation of English sterling coins to Ireland,

where they were used by the rebels for making purchases abroad, and to confine the circulation of the new Irish coins to that island. If Thomas Hayes rightly claimed that he was the promoter of the measures for reducing the standard of fineness and setting up the exchanges, he was responsible for bringing many hardships upon Ireland. Before the end of 1601 trouble arose and the new system practically became unworkable, notwithstanding the greater "moderation" than in former times which the Queen took credit for exercising. I should add, however, that Elizabeth is said to have been personally averse from the whole scheme and to have yielded only to the pressure of her advisers.

On 9 June, 1602, a second proclamation was issued, by which the rate of exchange was increased to 22*s.* of new Irish moneys for 20*s.* of decried sterling coins, and it was expressly mentioned that gold coin and bullion would be received at the various offices. As the subjects had brought in debased moneys only, contrary to the true meaning of the earlier proclamation, it was ordered that when the new moneys were tendered for exchange into sterling moneys receivable in England, at least one-fifth part of the sum so tendered should consist of sterling silver or gold. Those who were in the pay of the Queen were to be allowed to use the exchange to the extent of their pay or entertainment without putting in money of the old sterling (*S. P. Ireland, Eliz.*, vol. 271, No. 50). The provision as to exchanging gold would seem to be almost derisory so far as Ireland was concerned, as I should imagine that coins of that metal were seen in 1602 even less frequently than in England in 1917.

In July, 1602, the Queen gave instructions that all exchange of mere copper moneys was to be refused (*op. cit.*, vol. 211, Nos. 77-8), thus in effect demonetizing these coins outside the realm of Ireland. I notice that James I treated the poor with greater consideration in October 1603, when he reduced by two-thirds the face value of Elizabeth's issue of "base mixed moneys", but exempted the copper pence and halfpence when tendered in small sums.

It is clear that there were still many abuses of the exchange system due to fraudulent practices by merchants, who thereby caused loss and suffering to the community. An amendment of the general confusion was attempted by a third proclamation dated 24 January, 1602-3—"the last and most foolish proclamation", as it is described by Mr. R. P. Mahaffy, who edited this portion of the Irish State Papers. The document recited, among other things, that the mischief which was the main cause of the alteration of the standard, namely, the use by the rebels of sterling money and its exportation to foreign countries, had not been remedied. Therefore Dublin and London were to be the only places where exchange could be obtained by those engaged in trade, but the army and others in the Queen's pay might still use a "bancke" at Cork for that purpose, as formerly; travellers and soldiers leaving Ireland might exchange at Bristol and Chester to the extent of four pounds. Another alteration increased the compulsory proportion of sterling moneys to forty per cent. of each £100 brought in for exchange (Carew Papers, *sub anno*).

After the death of Elizabeth her later policy with regard to Irish currency matters was entirely reversed

by James I, but it should be remembered that Ireland was then no longer torn by rebellion and war.

In conclusion, I have to express my indebtedness to Mr. Thomas Bearman for allowing me to reproduce five coins from his cabinet, namely Nos. 1, 2, 3, 5, and 7 on the accompanying plate. The others are from the series in the British Museum.

HENRY SYMONDS.

V.

CONCERNING SOME ROETTIERS DIES.

THE transcripts here printed of documents among the Stuart papers at Windsor were originally made for Sir Wollaston Franks, when he and Mr. Grueber were preparing the text of *Medallic Illustrations of the History of Great Britain and Ireland*.

As they appear to be of some interest to students of Stuart medals, they are now reproduced with one or two exceptions, which are noted. The documents do not record the ultimate issue of the dispute between the titular king, James III, and the widow of Norbert Roettiers.¹ It is, however, known that James, the son of Norbert, visited England in 1730-3 with a view to striking medals from some of these dies (see B. Nightingale in *Num. Chron.*, vol. iii, p. 57), and some thirty or forty years later Snelling made a list of others still in the possession of James Roettiers (*ibid.*, p. 59 and p. 187 note). Moreover, a number of dies and puncheons were acquired by Matthew Young, who, in 1828, after making some restrikes, presented the defaced dies to the British Museum (see J. H. Burn in *ibid.*, p. 186). They were obtained from the descendants of John Roettiers, and according to most authorities,

¹ Norbert was the son of John Roettiers, and in 1703 succeeded his uncle Joseph as Engraver-General of the French mint. From 1695 he had filled this office to James III at Paris. He died in 1727, leaving a son, James, born in 1707, and later known as Jacques Roettiers de la Tour, who became goldsmith to Louis XV in 1737.

from Norbert's daughters, the intermediary being one Cox.

In the present circumstances it has not been possible to compare the copies with the original MSS. nor to place the responsibility for certain obvious errors. Such mistakes have therefore been tacitly corrected, whilst the peculiarities of spelling have been preserved. Discussion of the various questions arising out of the documents must be left for a future occasion, but I have ventured for purposes of identification to add a few notes, appending to document V references to *Medallic Illustrations* and to the copy made by Bindley in 1776 of Snelling's list, &c. By the kind co-operation of Mr. Hill I have noted such of the dies and puncheons, now in the British Museum, as are mentioned in Norbert Roettiers's list.

HELEN FARQUHAR.

I.

INSTRUCTIONS TO COLONEL O'BRYEN TO INQUIRE INTO THE OWNERSHIP OF THE DIES AND PUNCHEONS.

Memorand for Colonel O'Bryen.

Item—To speak to Rottier and his Mother about the Dyes of Medals &c. in their custody, and to get a signed List of them from them to be sent to the King and to endeavour to secure them so as none of them be disposed of to any body else, But to be kept at H. Ms. disposal, if they shall be found to belong to him, or if not at his purchase whenever he shall think it proper.

Item—To cause Roettier cutt two Seals in Silver one for the Prince and another for the Duke with the proper marks of distinction, & the Garter round the arms, and the reverse of said seals to be their proper Chyphers. & the collar of St. Andrew²

Endorsed

Memoire de ce qui m'est ordonne par le R.

² The marginal note is stated in the copy to be in the handwriting of James III.

II.

COLONEL O'BRYEN'S INTERIM REPORT.

I have been at Mrs. Rottiers it is the guoldsmith³ who has the moulds of the Meddals of the Royal family they are all in great confusion and it will take I am affrayd a month before I can send you a satisfactory answer You may assure yourself I shall do it as soon as possible if Mr. Rottier finds the register which he has promised to seke for You will have it sooner he has none anecenter than King Charles the first and there are several not finished and without Mottos.

III.

LETTER FROM PHILIPS COVERING MEMOIR FROM
MME. ROETTIERS.

Sir,

I send you with this M^{rs}. Roettiers Memoire: her great concern in this affair is that she should be thought to offer to defraud the King of anything that belongs to him; which she abhors: and will part with anything in her hands with pleasure, as soon as ever the right appears to her so as to justify her in her administration of her husbands effects, which she is accountable for to her children when they grow up, according to the Inventory taken of them. And indeed I am fully satisfied it is her only motive, and all that she wants is to be satisfied that the Crown pays for the puncheons of Medals in England and has a right to the property of them; which she is endeavouring to learn from the Officers of the Mint there. I am so pressed by some affairs that I shall not be able to stir out of doors these three days, unless you go to Mrs. Roettiers before, when I will be ready to wait on you, tho if it be indifferent to you I had rather it were Saturday than any other day, but your commands shall regulate my time and I am with all possible respect

Sir,

Your most humble &
Obedient Servant
Philips.⁴

Feb. 25. 1728.

³ See No. VIII, note 12.

⁴ Philips was the alias of Thomas Carte; see note 17 to document XIII.

IV.

MADAME ROETTIERS'S MEMOIR.

Memoire about Mr. Roettiers Puncheons
& Dyes for Medals.

The Catalogue annexed is a Copy of what Mr. Roettier sent to the King in November 1724.

It Were to be wished that the proper Enquiries had been made about them at that time, because he Was more Capable of Answering them than anybody else is at present.

He was then upon a project of striking sets of all his Cabinet, Which he was put upon by several English Gentlemen that he had seen here, Who Were not only curious in things of that nature but zealously Affected to the Kings Cause, and thought that striking off a Series of Medals of the family of Stuarts, Would be useful to continue the Memory of it, and preserve the affection of the people of England to the King, the true Representative of that family. Mr. Roettier readily entered into this notion, and accordingly got Mr. W. Taylor of the Temple (a nephew of Dr. Taylors) to make an Agreement with his sisters for the purchase of his fathers puncheons, Which was done for about the sum of 40,000 Livers.

As soon as he got them into his hands he desired Mr. Carte to assist him in his project and to write a Book to give an account of each medal, With the Occasion of its being struck, as well as of the persons Whose Effigies Were Represented in it.

In this Book There Were to be prints of all the Medals, of Which Mr. Roettiers resolved to have copper plates Engraved by the best Masters in Paris.

With this View he and Mr. Carte took a Catalogue of all his Puncheons & Dyes, and afterwards sent it to Rome to have the Kings Approbation of the Design.

The greatest part of these Puncheons & Dyes Mr. Roettiers Father left by his Will to his Executors to be sold for the benefit of his Children. His son Who had a fourth part in them, Was always averse to the selling them, but was not able to purchase them till about the time above mentioned. His sisters wanted the money in their hands, and the Government of England Would fain have bought them, but the Sisters regard for the King and for their Brothers as well as their fathers Sentiments, kept them from hearkening to any propositions from that quarter: they had likewise proposals from private persons, Which they did not agree

to, as Well for the reasons above, As for what they had heard their father say With Regard to his Brothers Selling his puncheons of Medals &c. to the King of France (Whose Engraver General he Was⁵) Condemning that action as a very foolish one, & Declaring that Nothing but Imminent hazard of Downright Starving Should have made him have parted With any of his Work & let it go out of the family.

The impression that these considerations made upon them kept them from closing with any overtures, till the late Mr. Roettier bought them at his Death, Mrs. Roettier his Widow not having any doubt but that they were Entirely the Property of her husband; Allowed them to be put into the Inventory as part of her husbands personal Estate to be Divided between her Children and herself; at the same time she omitted to insert there the Puncheons & Dies for Coin, Which (as by the Law of England the Crown has the sole right of Coining Money, so that it is high treason for anybody else to pretend to it) She deemed to belong to the King.

She had various presumptions to make her think these Puncheons & Dies for Medals to be her late Husbands personal property: he had always thought them so himself, and tis plain his Father thought them his own, because he disposed of them by his will, and was too loyal to the King to offer to defraud him of the least of his right; The Government of England which seized everything else belonging to K. James (as they did what his late daughter left) Condescended to treat for the purchase of these Puncheons; other people treated for them too; The General opinion of English Gentlemen of good sense and knowledge & the particular ones of Lawyers that had all the zeal imaginable for the Kings Right, as Mr. W. Taylor and Mr. Walter Pryse who would have been the last men on Earth to have Lessened his Prerogative in any Respect With some particular circumstances of the late Mr. Roettiers fathers possession of them, for though he did not take the Oaths to the Government he lived in his house in the Tower⁶ for above Eight Years after the Revolution, where L^d. Lucas the Governour did everything in his power to plague and distress him, and searched the House frequently for Arms

⁵ This refers to Joseph Roettiers.

⁶ John Roettiers remained in his official residence at the Tower until 1697, and did not leave London before his death in 1703, fourteen years after the Revolution.

and sometimes for the Duke of Berwick after what was called the Assassination Plot, and yet all the while these puncheons Were openly in his Closet Where he Worked and Received Company ; & When afterwards to Avoid these persecutions he Retired to an house in Red Lion Street Sometime before his death, he always kept these Puncheons Openly in his Closet Where all the World visited him, and Came to see them every day with as much Curiosity as they did to his Sons in Paris & yet the Government that hated him for his loyalty to his true Prince, Never offered to seize them ; as M^{rs}. Loftus who lived with him all that time is ready to Attest, All these were such presumptions in favour of her late Husbands Property in them (Espetially since nothing was ever suggested at that time to the Contrary) that she thought herself obliged to put them in the Inventory of his personal Estate.

Before we enter upon an Enquiry into the property of these puncheons, it may not be improper to observe two things, first that some of these puncheons are for Medals of the King & Royal Family, others are for those of private persons, of foreign Princes & the twelve Cæsars ; these latter seem to be out of the question.⁷ And as to the former sort it should be Observed, Secondly, That as Puncheons & Dies (if not duly hardened, or the Balancier does not strike them to the utmost nicety) are apt to break, and in such Case the Work must stop until another puncheon or die is made Engravers generally Make More than one at a time So as to have a Supply in case of Accidents ; and as several of Mr. Roettiers are Not finished & want hardening, this probably was the case of those Puncheons & Dies.

In order to determine whether the Property of the Puncheons and Dies of the former sort belongs to the King or to Mr. Roettiers family one ought to know the custom and the Constitution of the Mint of England and the Custom of it in this Article.

The Law of England is Indeed very clear & Express with regard to the Coin, because that regards the nation & its Commerce ; So that the sole right of Coining Gold and Silver Money is vested in the Crown ; private persons Indeed formerly made brass money of their own Which passed within the Sphere of their Commerce and they changed it into Silver Whenever it was brought them ; Various persons

⁷ The puncheons of the Cæsars and "private persons" were those later brought over to England by James Roettiers.

remember to have seen a great many pieces of this Brass Money, but of late years this liberty has been taken away by Act of Parliament, and it is High Treason at present for anybody to coin brass money but such persons as are commissioned by the Crown.

But as to Medals there never has been any Law made about them So that every man seems to be left in his Natural Liberty to make any Medals he sees fit, Unless the prerogative of the Crown restrains him.

What the prerogative of the Crown is in this respect tis Difficult to say; there is no written law and Persons that have read all the Books (that ever they could meet with, that treated of the rights & prerogative of the crown) Never saw any Law Book that offers to explain it in this particular there seems to be no rule of forming a judgement in this case but by the Patents which the Crown had granted to Engravers general, or by the custom of the Mint of England.

As to Patents one may consult Rymer and see whether there are any Patents of Engravers General in his Collection of Records. The Patent of K. Charles 2 to old Mr. Roettiers & his Brothers, gives them authority to *frame medals of his own Effigies or on occasion of any Remarkable success or Worthy action* and appropriates to them *all the profit and benefit of such medals.*

There is no mention made there of Puncheons & Dies from which the medals are struck, So that whether they are included Under the words profit and benefit of Medals is not easy to determine.

Indeed one never heard of any Puncheons of old Medals preserved in the Tower or in the possession of the Crown; if there were they must be in the hands of the proper Officer the Engraver General to keep them from spoiling & to use them on occasion and there is such a fury in England at present for old Medals, they would soon get sets of them struck off; and therefore one may reasonably Conclude them lost, Which Can't well be accounted for but by their being the property of the Engravers that work them.

There is another enquiry to be made in this case Viz. Whether the King besides the Engravers salary gives him any particular fee for making a Puncheon and die and if he does, whether such puncheon & Die becomes the Kings property, or he has only the use of it When he pleases to send a Warrant to Coin Medals of such Gold & silver Bullion as he sends with it; tis not easy to learn here whether the King gives any such fee or what it is, And if he does whether

he is in a better case than private Men who when they give 200 lb sterling for a puncheon, have not the property of such puncheon after it is made (for Engravers will on no account part with any of their work out of their hands) Only the Engraver is obliged to take off as many medals as the private person pleases, & sends Materials for their being wrought. The Kings of England seem indeed in other cases not to think of themselves, for every Officer of the Wardrobe, Household &c is Ready to claim some part or other of their real property for a fee and perquisite of their Office. But how it is in this particular point is what wants to be cleared up.

The most natural and perhaps the only way of Determining it is to know the custom of the Mint of Engd. With regard to the prerogative of the Crown and the Rights and perquisites of the Officers of it for if other Gravers general have the property of the puncheons they make tis reasonable to think that Mr. Roettiers had the same; And the rather because K. Charles 2 who knew him in Flanders had a particular regard for him & persuaded him to come over to England at a time when the Duke of Tuscany Offered him even greater advantages than he ever made of his post in England.

Mrs. Roettiers is ready to submit her own and the Claims of her family to this rule of Judging where the property lies. She Would by no means be thought to dispute any Right of the Kings for she Acts out of no motive but that of Conscience as a Guardian of her Childrens Right and the moment that it appears to her that the King has the Property of these Puncheons, She would part with all she has Rather than oppose it.

To show her Readiness in this point she will as her son is not of age Willingly join with him in signing the Catalogue of the Puncheons tho she has not been required to do so and she only desires to be assured of the Kings right to them that she may be justified in what she does and not be accessory to the defrauding her children of anything that belongs to them.

V.

CATALOGUE OF THE PUNCHEONS AND DIES IN THE POSSESSION OF MADAME ROETTIERS.

Catalogue of the Medals of Mr. J. Roettiers

Mentioned in Mr. Evelyns Discourse of Medals with the other Medals in the late Mr. Norbert Roettiers Cabinet.

1. Medal of King Charles I
 The Bust is in plain Armour
 The Inscription Carol. I D.G.M.B.F. et
 H.R. etc
 Glor. Mem.
 The Reverse is only this inscription
 Rex pacificus
 Victus
 Vincebat Hostes
 Victor
 Triumphat in
 Coelis.
2. A Medallion of Arch. Bp. Laud in his Ruff and Episcopal Vestments.
 The inscription about his head is Guil. Laud Archiepisc
 Cantuar. x Jan. 1644.
 Reverse is—2 Angels supporting a crown & a Mund
 Over the City of London : Another Carrying up a
 Mitre & Crosier to heaven joining with other Angels
 and Cherubs.
 Inscription. Sancti Caroli Præcursor—
3. A Medallion of Mr. Giles Strangeways Grandfather to
 Mr. Strangeways of Dorsetshire
 The Effigies is in Bust a la Romain
 The Inscription is *Ægidius Strangeways de Melbury in
 Com. Dorset Arm.*
 Reverse—Represents that part of the Tower of London
 Called Cæsars Tower ; The Royal Standard Dis-
 played & The Sun Darting light out of a Cloud.
 The Inscription *Decusque Adversa Dederunt
 The Exurge Incarceratus—Sept. 1645.
 Liberatus—Apr. 1648.*
4. A Medal of General Monek not finished
 No Inscription about the Head
 No Reverse but this Inscription
*Georgius Munk Omnium Copiarum in Anglia
 Scotia et Hibernia Dux Supremus et Thalassiarcha
 Ætat. 52.*
5. A Medallion of K. Charles 2.
 His Effigies Cæsar like to the Breast
 The Inscription—*Carolus Secundus D.G. Mag. Brit.
 Fran. et Hib. Rex.*
 The Reverse—*Justitia holding the Fasces with the*

Balance in her left hand, & with her Right Delivering the Olive Branch to Britannia sitting under a Cliff by the Sea Shore with a spear in one hand and the Union Shield in the other; Pallas Hercules & Fame standing by. An Angel over all with a Palm, & Beneath

This Inscription—*Felicitas Britanniae*
29 Maii 1660.

6. A Medal of K. Charles 2.

The Kings Effigies in Short Hair à la Romain Antique.
The Inscription—*Optimo Principi Carolo 2 D.G.M.*
Brit. Fran. et Hib. Regi
Under it—*Philip Roti. F.*

The Reverse Incomparably Represents a Matron half veiled sitting and holding a naked sword & Cornucopia in her right hand; in her left a Book opened in which is written—*Fides*. Under her feet *Libertas*.

The Inscription about the circle is—*Fidei Defensori Religionis Reformatæ Protectori*
about the Rim *Architecturæ Navalis et Monetæ Instauratori*.

7. A Medal of K. Charles 2 and Q. Catharine together—

The Inscription *Carolus et Catharina Rex & Regina*.
The Reverse—A Terrestrial Globe Representing Europe Affrica with part of Asia & America.
The Inscription—*Diffusus in Orbe Britannus 1670*.

8. A Medal of K. Charles 2—

His Effigies with Laurel about it
The Inscription *Carolus 2. D.G. Mag. Brit. Fran et Hib. Rex*.
The Reverse—Queen Catharines Head.
The Inscription—*Cather. D.G.M.B.F. et Hib. Regina*.

9. A Medal of Q. Catharines

The Inscription—*Catharina D.G.M.B.F. et Hib. Regina*.
The Reverse—The figure of St. Catharine at length holding a sword point down in her left hand, a Palm in the right and standing by the broken Wheel.
The Inscription—*Pietate Insignis*.

10. A Medalion of K. Charles II, in Bust, Short Hair and Roman like.

The Inscription—Augustiss. Carolo Secundo P.P.

The Reverse—Prudentia with Pallas supporting upon an Altar a Shield, in which there is represented Britannia; about whom Stand, Pax, Hercules, Mercurius & Abundantia, the last a Cumbent figure.

This Inscription—Nullum Numen Abest.

The Exurge—Britannia.

11. A Medal of K. Charles II

The King's head in a Peruke bound with a Laurel—and—

The Inscription—Carolus Secundus D. G. M. B.

F. et Hib. Rex.

The Reverse—Britannia sitting by the Shore under a Rock holding in her right hand a Spear & the arms of Great Britain in a Shield with her left hand; looking towards a Fleet at Sea, the Sun shining and dissipating the clouds.

The Inscription—Favente Deo

Exurge Britannia

About the Rim Carolus Secundus Pacis et Imperii Restitutor Augustus.

12. A Medal as it may be called of K. Charles II tho. struck for a farthing in the Dutch War during that Dispute for the Dominion of the Sea.

The Kings Effigies crowned with Laurel &c.

The Inscription—Carolus a Carolo—1665

„ Reverse—Britannia as usually represented.

The Inscription about the circle—Quatuor Maria Vindico

Underneath Britannia.

13. A Medalion of K. Charles II.

The Kings Head in a Peruke bound with Laurel.

The Inscription—Carolus Secundus Dei Gratia Mag.

Bri. Fra. et Hib. Rex.

Reverse—The King at length in the Roman Military Habit & Paludamentum standing under a Cliff, with a Batoon in his right hand & pointing towards the Sea, where a Fleet is represented Engaged & one of the Ships sinking.

Exurge—pro Talibus Ausis.

This was designed to be given to such as had signalized themselves in any Action at Sea.

14. A Medalion of K. Charles II

The Kings head Laureat &c.

The Inscription—Carolus Secundus Dei Gratia Mag. Bri. Fran. et Hib. Rex.

Reverse—The King in Roman Military Habit standing on a square Pedestal Ascended by Six Round Steps and holding a naked sword with his left hand point downward in his Right a Batoon; the Sea behind him full of Ships sailing to & fro.

The Inscription—Redeant Commercia Flandris.
Underneath 1666.

15. A Medalion of K. Charles II

The King in Bust short hair Richly Arm'd a L'Empereur.

The Inscription—Carolus Secundus D. G. M. B. F. et Hib. Rex.

Reverse—A Blue Coat Boy with his Bonnet under his arm (by the Sea Side in view of Ships sailing before the wind) is Represented as newly examined by the Arts Mathematical; Arithmetick Laying her hand on the Childs head; Geometry, Astronomy, & Mercury; Angels & Horae above in the clouds Sounding Trumpets and pouring down fruits out of the Amalthean horn.

Epigraph—Institutor Augustus 1673.

This was Struck on Occasion of the Kings founding a Seminary at Christ Church for the Institution of Children & making them fit for the Service of His Navy.

16. A Medalion of King Charles II

The Kings Effigies in Bust.

The Inscription. Carol II. D. G. Angl. Scot. Fran. et Hib. Rex.

Reverse—Displays the Atchievement or Arms of Great Britain, France & Ireland quater'd Within the Garter & Usual Supporters. Helm. Crest & Mantling.

The Motto—Dieu & Mon Droit.

17. A Medalion of K. James II When Duke of York struck on occasion of His first Engagement and Signal Victory over the Dutch Fleet.

His Effigies in Bust clad in the Roman Mantle.

The Inscription—Jacobus Dux Ebor. & Alban. Dom. Magn. Admirallus Angliæ &c.

Reverse—Represents the Admiral and Whole Fleet in Battle.

The Inscription—*Nec Minor in Terris.*

3 Jun. 1665.

18. Another Medalion of the Kings

His Bust short hair & in a Roman Dress

The Inscription—*Jacobus Dux Ebor. et Alban. Frater Augustiss. Caroli II Regis.*

This was the first Inscription Indeed, but the Letters were (at his Accession to the Crown when there was not time enough to make a new Medal) Erased & a New Inscription made—*Jacobus Secundus D. G. M. B. F. et Hib. Rex.*

Reverse—A Trophy & Ships in fight.

Inscription—*Genus Antiquum.*

N.B. Those that follow are not mentioned in Mr. Evelyns Discourse of Medals.

19. A Medal of K. Charles I.

His head a Bust.

The Inscription *Carol. D. G. M. B. F. et Hib. Rex &c. Glo. Mem.*

Reverse—Represents a Landscape of Trees and Sheep grazing, an hand out of the clouds holding a Crown with Rays of Glory about it.

The Inscription *Virtut ex me. Fortunam ex Aliis.*

N.B. This was the first essay of Mr. Nobert Roettiers work ; he set about it when his Father was making another of K. Charles I (No. 1).

20. A Medal of K. Charles II.

of the same sort With No. 11 but of a smaller size.

21. A Medal of K. Charles II

The same as No. 13

The Exurge—*pro talibus Ausis.*

N.B. This Lesser was Designed to be given to persons under the Rank of Captains, who had Signalized themselves in Actions at Sea.

22. A little Medal of K. Charles II

[Inscription *Carolo Secundo* p. 133 Evelyn N. 2

The Stile as usual

The Reverse a Rose

Inscription—*Ante Omnes.*

23. The Coronation Medal of K. James 2. p. 148.
 The Kings head & bust with a Peruke.
 The Kings Stile put about it.
 The Reverse an arm from the Clouds holding the
 Crown of England over a Laurel Branch laid on a
 Cushion.
 The Inscription—A Militari ad Regiam
 The Exurge—Inaugurat 23 Ap. 1685.
24. The Coronation Medal of Q. Mary p. 152.
 Her Majestys Head a Bust. Dressd in her hair.
 With a Laurel a L'Empresse.
 The Inscription—Maria. D.G. Ang. Sco. F. et Hib.
 Regina.
 Reverse a woman sitting leaning on a Rock
 The Inscription O Dea Certe.
25. A Medal of King James 2 & Q. Mary
 On one side the faces of the King & Queen
 The Reverse a Britannia.
26. A Medalion of King James 2.
 The Kings Head a Bust, With the Usual Style
 The Reverse—a Britannia, & a fleet of ships going off
 as if the King had been restored, Peace settled
 & Commerce flourishing: 2 Angels are Crowning
 the Britannia with Laurel.
- 27-32. Six other Medals of K. James II.
 for four of which were designed and struck the
 4 following Reverses.
1. A Britannia presenting a Crown to the King.
 2. The King entering London on horseback, a truncheon
 in his hand, With Hercules Pallas & Truth carrying
 a Pillar, Plenty Represented in the Air & fame
 blowing her trumpet.
 3. The King in a Triumphal Chariot Drawn with four
 horses, Fame sounding her trumpet, & Rebels led
 in chains by the Chariot side.
 4. Hercules, Pallas, & Hope in conference together.
- N.B. None of these Medals or Reverses were ever coined,
 so that the Reverses may serve for His present
 Majesty & any other that his Majesty pleases be
 put to his Fathers Medals to Represent any
 Remarkable action in his Life.

33. A Medal of K. James III—When Prince of Wales.
The Reverse is the head of K. James II.
34. Another Medal of King James III—when Prince of Wales.
The Reverse Represents a Ship tossed in a storm
The Inscription—Non Mergitur Undis.
35. Another of the King when Prince of Wales
The Reverse a Dove with an Olive Branch.
36. Another of the King when Prince of Wales
The Reverse a Mine Springing.
The Inscription Quo compressa Magis.
37. Another Medal of the King
The Reverse—the Princess Louisa.
38. A Lesser of the same.
39. A Medalion of King James III
The Kings Head a Bust
The Inscription—Cujus est
The Reverse The British Isles & a fleet of Ships
The Inscription Reddite.
40. A Lesser Medal of the same
41. A Medal of King James III & His Queen
The King & Queens Effigies on one side
The Reverse—A Woman holding a Child
The Inscription—Spes Britaniæ
The Exurge—Car. Wal. Pr. Natus die ult. A. 1720.
42. A Medal of the King when Prince of Wales
The Princes Head a Bust
The Inscription—Jac. Walliæ Princeps
The Reverse—The Sun Rising, Owls & Batts flying off.
The Inscription—Sola luce fugat.
43. An Head of the Prince of Denmark
P. of Orange
Princess of Orange.
44. A Medal of the first Duke of Beaufort
Great Grandfather to the present Duke.
45. A Medal of Prince Rupert.

46. Another of the Earl of Clarendon Lord Chancellor of England.
N.B. These three last have no Reverses.
47. A Medal of the Duke of Lauderdale's struck 1675.
Reverse—The Arms of his family
Motto—Virtute et Animis.
48. A Medal of the Present Emperors When he carried the Title of the King of Spain
The Reverse a fortification or two
The Inscription—Flandria—Ostendia
The Exurge—NeptVno ID. frenVM CaroLVs ap-
posVIIt.
49. A Medal of the King of Sweden Struck by his order,
When King Charles 2. sent him the Garter p. 142.
On one side the George
The Inscription—Carolus XI Rex Sue. Eq. Nob.—Ord.
Perisc. inaug.
The Exurge—29 Maij 1671.
The Reverse—The Garter & Star, the Garter passing
through 2 Regal Crowns & 2 Double C^s. surrounded
by the Collar.
The Inscription about the Rim
Concordia Regum Salus Populorum.
50. A Medal of the Czar of Muscovy
To which proper reverses want to be put.
- 51, 52, 53. Medals struck for the Elector of Bavaria.
- 54, 55, 56. Medals for the late Elector of Cologne.
N.B. There wants proper reverses for all of these,
Except for one of the Elector of Bavaria & another
of the Elector of Colognes.
The Reverse for the Elector of Bavaria—is—
A River emptying itself into the sea upon which
ships are Represented sailing.
The Inscription—Nil Sibi Servat.
The Exurge—1714.
The Reverse for the Elector of Cologne—is
A Lion holding the Electors Armes—
The Inscription—Subditis Clemens.
There are also 5 other Medals finely struck.
57. The Duchess of Richmonds Head Large

58. The same in Small
59. The Dutchess of Mazarines
60. The Dutchess of Cleveland
61. The Dutchess of Portsmouth.
62. There also the heads of the 12 Cæsars which Mr. Roettiers Graver General to King Charles 2 and King James 2 was 20 years a working and are the finest heads made since Augustus and Adrians time.
63. Medal of the late Elector Palatine.
64. Mr. Roettiers Graver General to his Majesty and to the King of France did at the time of the Scotch Expedition 1708 prepare Puncheons & Dyes for three several sorts of Coin Viz. for half Crowns, Crowns, & Guineas: which he has ready by him. They are indeed Six sorts, there being three several ones for each nation of England & Scotland.
 To Make the History of the House of the Stuarts compleat he proposes to make the Medals of K. James 5 of Scotland Q. Mary and K. James 1 for which Reverses will be wanting as also for the Marqs. of Montross.
 And as King Charles 2 thought proper to give an honourable badge of the Services & sufferings of some of his Loyal Subjects by ordering Medals to be struck of them and appointing the Reverses himself (as particularly in the case of Col. Strangeways) Mr. Roettiers flatters himself that his Majesty will approve his design of striking Medals for the Duke of Ormond & Mar Lord Lansdown The Bishop of Rochester, Mr. Dillon & Sir Harry Goring and Will Honour him with His Commands for any Medals of other persons whom his Majesty shall think fit to have struck.

NOTES ON DOCUMENT V.

Key to the medals in Norbert Roettiers's List. Unless omitted in *Medallic Illustrations of British History*, references to Evelyn's *Numismata* are left out as unnecessary. The above work is understood by *Med. Ill.*,

whilst Sn. stands for Snelling's list of dies, compiled between 1765 and 1770, and transcribed by Bindley in 1776. Snelling divided the medals into two classes, published and unpublished; he is therefore quoted as Sn. pub. and Sn. unpub. Of the former he did not number the last eleven; I have called these 13 to 23. Further contemporary evidence of striking and size being shown by Slingsby's priced list of medals offered to Pepys in 1687, I have referred to those mentioned by him as Sl., numbering them according to the diarist's copy.* By the valuable co-operation of Mr. G. F. Hill, such foreign medals as are not in *Medallic Illustrations* have been referred in full to Van Loon, Beierlein, &c.

M. Y. stands for the collection of dies presented to the British Museum by Matthew Young, whose restrikes are no unmixed blessing, being sometimes wrongly combined and destructive of contemporary evidence. The collection does not contain all the pieces mentioned in Norbert Roettiers's list, but comprises others which apparently he had not intended to illustrate in his purposed book. It seemed probable that all remained in the hands of James Roettiers de la Tour until his death in 1784, and amongst them is a copy apparently from the hand of Alexandre Louis Roettiers de Montaleaux, his son, who worked in partnership with him until 1775; also a puncheon and signed die of a medal of Louis XV, dated 1774, by the same engraver.

No. 1. Charles I. *Med. Ill.*, i. 346, 199, signed by Norbert, but confused in the list with No. 19, which is

* Pepys's Correspondence, Oct. 11, 1687, also published unnumbered in *Num. Chron.*, vol. iii, p. 175.

signed by John. Sn. pub. 17 and 18, rightly ascribed by Snelling to Norbert. M. Y. Obv. puncheon and die; Rev. die. On this as on many other medals the titles are less abbreviated in reality than in the list.

No. 2. Laud. *Med. Ill.*, i. 315, 147; signed by John. Sn. pub. 20. M. Y. Obv. punch slightly varied and cracked; die as published; Rev. die.

No. 3. Strangways. *Med. Ill.*, i. 333, 177. Signed by John. Sn. pub. 21. Sl. 10. M. Y. Obv. puncheon slightly varied, die signed Al.R. (? Alexandre Louis); die as published by John. Rev. die.

No. 4. No medal of Monk by Roettiers is known, but see description, Evelyn, No. XLIII, p. 120.

No. 5. Charles II. *Med. Ill.*, i. 450, 53, usually attributed to John, but Sn. pub. 1 gives the "head by Joseph". Sl. 1 calls it the "Great Britannia". The obverse die exists, but is not in Young's collection.

No. 6. Liberty of Conscience. *Med. Ill.*, i. 553, 214. Sn. pub. 6. Sl. 9. M. Y. Obv. puncheon and die; Rev. puncheon and die.

No. 7. British Colonization. *Med. Ill.*, i. 546, 203. Sn. pub. 7. Sl. 21. M. Y. Obv. puncheon.

No. 8. Charles II and Catherine. *Med. Ill.*, i. 488, 109 and 489, 110. Sn. pub. 8. Sl. 22. M. Y. Rev. puncheon of 109, and die of 110.

No. 9. St. Catherine. *Med. Ill.*, i. 490, 112. Sn. pub. 9. Sl. 19. M. Y. Obv. die; Rev. die, and puncheon of wheel.

No. 10. Charles II. *Med. Ill.*, i. 460, 54. Signed by John. Sn. pub. 2. Sl. 18. M. Y. Obv. puncheon and die; Rev. puncheon and die.

No. 11. Peace of Breda. *Med. Ill.*, i. 535, 185. Sn. pub. 4. M. Y. Obv. die; Rev. puncheon and die.

No. 12. Dominion of the Sea. *Med. Ill.*, i. 507, 147. M. Y. Rev. unfinished puncheon.

No. 13. Naval Reward. *Med. Ill.*, i. 503, 139. Sn. pub. 11.⁹ Sl. 8. M. Y. Obv. die; Rev. two puncheons for King's figure, one broken.

No. 14. Proposed Treaty with Spain. *Med. Ill.*, i. 516, 161. Sn. pub. 10. Sl. 18. M. Y. Obv. die; Rev. die.

No. 15. Christ's Hospital. *Med. Ill.*, i. 556, 217. Sn. pub. 3. Sl. 3. M. Y. Obv. die; Rev. puncheon and die.

No. 16. Charles II. Signed by John. *Med. Ill.*, i. 595, 277. Sn. pub. 12. Sl. 16. M. Y. Obv. puncheon and die; Rev. puncheon and die. Snelling apparently saw the rev. puncheon, only as he says "Arms without inscription".

No. 17. Naval Action; Duke of York. *Med. Ill.*, i. 504, 142; signed by John. Sn. pub. 13. Sl. 2. M. Y. Obv. two varied puncheons, and die as published; Rev. two puncheons, one cracked, and a die, also a small puncheon for a ship in the background.

No. 18. Duke of York. *Med. Ill.*, i. 505, 143; signed by John. Sn. pub. 14. Sl. 2. M. Y. Obv. puncheon; Rev. puncheon and die. Matthew Young's collection also contains the obverse die of *Med. Ill.*, i. 616, 28, with experimentally altered inscription, but reading Ang. Sco., instead of M. B. as noted in Roettiers's list, and also of *Med. Ill.*, i. 617, 29, which was finally issued with a new bust to take the place of the altered die. Recently, an interim impression in lead, in cavo, made from the old puncheon, has been presented to the British Museum. This reads **ÍAC: II: D: G: MAG: BRIT: FR: ET: HIB: R:**

⁹ Snelling gives no size, so may mean No. 21.

The letters appear to have been separately impressed by hand as an experiment, and agree more nearly with the legend of the list, than any of the finished medals with this obverse and reverse.

No. 19. Memorial of Charles I. Signed by John. *Med. Ill.*, i. 346, 200. M.Y. Obv. puncheon and die. See note on No. 1. A smaller example after this design was advertised for sale by Norbert and his brother James in 1695 (*Med. Ill.*, i. 346, 201). Of this latter no dies or puncheons are in Young's collection.

No. 20. The reverse of *Med. Ill.*, i. 536, 187, called by Slingsby (13) the "First Britannia", agrees with the description of No. 20, but is only known with a jugate obverse, and Sn. pub. 5 gives it "with two heads". M.Y. Obv. of Charles and Catherine die; Rev. puncheon and die. Roettiers may have combined this reverse with the obverse of *Med. Ill.*, i. 582, 257, of which the die is in Young's collection.

No. 21. Naval Reward. *Med. Ill.*, i. 504, 141. Sn. pub. 11.¹⁰ Sl. 14. M.Y. Obv. puncheon and die; Rev. die and a puncheon for small ship.

No. 22. Ante Omnes, by Philip. *Med. Ill.*, i. 541, 194. M.Y. Obv. puncheon.

No. 23. Coronation of James II. *Med. Ill.*, i. 605, 5 and 6. Snelling (15 pub.) gives the obv. of 6 combined with the reverse of Mary Beatrice (*Med. Ill.*, i. 606, 8). Sl. 17. M.Y. Obv. puncheon and die of No. 5; puncheon of No. 6; Rev. puncheon and die.

No. 24. Mary Beatrice. *Med. Ill.*, i. 605, 7. Sn. pub. 15. Sl. 17. M.Y. Obv. two dies; Rev. unfinished puncheon.

¹⁰ See note 9 to No. 13.

No. 25. James II and Mary Beatrice. Unidentified, but catalogued by Sn. unpub. 11 as "One, with the heads of James II and his Queen, like that of Bower's *Naufraga Repertâ*". This might apply to an original obv. copied on *Med. Ill.*, ii. 217, 540,¹¹ which agrees in size with the Britannia rev. of *Med. Ill.*, i. 535, 185-6; see No. 11.

No. 26. James II. The rev. of this medal is *Med. Ill.*, i. 538, 188, a trial-piece in lead being in Brit. Mus. The only obv. in the collection of dies which fits in style, size, and bordering, is an unfinished medal of James II, *Med. Ill.*, i. 617, 30, of which a lead impression is also in Brit. Mus. Sn. unpub. 8 describes this obv. as "A head of James II, rather old without inscription". M. Y. Obv. unfinished die; Rev. puncheon and die.

27-32. James II. There are four of the six obv. puncheons, two large, one medium, and one small, in Young's collection, but I have not ventured to appropriate them to the respective rev. puncheons, Nos. 1, 2, 3, and 4, two of which are large, two small. All are therefore labelled 27-32. By "struck" Roettiers evidently means that the dies were made, for he specifies that neither obverses nor reverses were coined. Only the puncheons are in M. Y.

No. 33. James II and Prince James. Signed by Norbert. *Med. Ill.*, ii. 201, 515, or *Med. Ill.*, ii. 202, 516 or 517. M. Y. Obv. puncheon and die of 515 and obv. puncheon of 516-17: for rev. puncheon see No. 42. Matthew Young afterwards combined the larger portrait

¹¹ Bower's jugate bust appeared on *Med. Ill.*, i. 612, 21, and *Med. Ill.*, i. 619, 33. *Med. Ill.*, ii. 217, 540, belongs to a set of medals later copied from originals by Norbert Roettiers.

of James II with the Cujus Est obverse as *Med. Ill.*, ii. 315, 138.

No. 34. Prince James. *Med. Ill.*, ii. 193, 500. Signed by Norbert. M. Y. Obv. puncheon and die.

No. 35. Prince James. *Med. Ill.*, ii. 195, 505. Signed by Norbert.

No. 36. Prince James. *Med. Ill.*, ii. 194, 502. Signed by Norbert.

No. 37. James III and Princess Louisa. *Med. Ill.*, ii. 388, 241. Signed by Norbert. M. Y. Obv. puncheon and die; Rev. two puncheons and one die.

No. 38. James III and Louisa. *Med. Ill.*, ii. 389, 243. Signed by Norbert. M. Y. Obv. puncheon and die; Rev. die.

No. 39. James III, Cujus Est. *Med. Ill.*, ii. 314, 135. Signed by Norbert. M. Y. Obv. puncheon; Rev. puncheon and die, but with legend *Reddite Igitur*.

No. 40. Cujus Est. *Med. Ill.*, ii. 312, 133. Signed by Norbert. M. Y. Two obv. puncheons and one die.

No. 41. Birth of Prince Charles. *Med. Ill.*, ii. 453, 61. Signed by Norbert. M. Y. Obv. die; Rev. die.

No. 42. Prince James. *Med. Ill.*, ii. 204, 519. Signed by Norbert. M. Y. Obv. puncheon; Rev. die.

No. 43. Unpublished. M. Y. Puncheon which may be George of Denmark; a puncheon of William III, helmeted and laureated (see *Brit. Num. Journal*, vol. ix, p. 270), and also a puncheon probably intended for the rev. of the latter, representing Mary (*ibid.*, p. 271).

No. 44. Duke of Beaufort. *Med. Ill.*, i. 589, 267. This was amongst the puncheons taken to England by James Roettiers, who re-engraved the head, because that originally made by John was broken.

No. 45. Prince Rupert. Unidentified.

No. 46. Clarendon. Unidentified.

No. 47. Lauderdale. *Med. Ill.*, i. 550, 208. Signed by John. Sn. pub. 16. Sl. 7. M. Y. Obv. puncheon and die; Rev. puncheon and die.

No. 48. Charles II of Spain. Van Loon, iii, p. 42. Sn. pub. 23. Sl. 18. M. Y. Obv. puncheon and die; Rev. puncheon and die.

No. 49. Charles XI of Sweden. *Med. Ill.*, i. 549, 206. M. Y. Obv. puncheon; Rev. die.

No. 50. Czar of Muscovy. Unidentified.

Nos. 51-3. Elector of Bavaria (Maximilian II, Emanuel). See generally Beierlein, *Med. u. Münzen des Gesammthausen Wittelsbach*. M. Y. Die of the rev. described (45 mm.); puncheon and die of a slightly larger obv. (49 mm.) signed R.; die of a rev. **SEMPER ILLAESA VIRESCIT** (49 mm.). Of the pieces published in Beierlein, die of obv. of 1584; puncheon and die of obv. of 1590-2; two dies of rev. of 1590; two of obv. of 1592; one of rev. of 1592-4. Also die of obv. of jeton as 1585, but undated; die of rev. as 1591, but date in Roman numerals; and die of a rev. **SVMMA LATENT** as 1591, but undated and diam. 40 mm.

Nos. 54-6. Late Elector of Cologne (Joseph Clemens). Beierlein, No. 1777. M. Y. Die of a medal or thaler signed N.R.; **IOS. CLEM. ARCH-COL. S. R. I. ARCHICAN.** Bust r. in ermine; also an unfinished die of the same, 37.5 mm.

No. 57. Duchess of Richmond. *Med. Ill.*, i. 541, 195. Sn. unpub. 3. M. Y. Puncheon and die from which Young struck some few impressions. No rev. is known for this or the four following pieces.

No. 58. Duchess of Richmond. M. Y. Small unpublished puncheon for obverse.

No. 59. Duchess of Mazarin. *Med. Ill.*, i. 565, 232. Sn. unpub. 2. M. Y. Unfinished die from which only the electrotype in Brit. Mus. has been struck; also puncheon highly finished.

No. 60. Duchess of Cleveland. *Med. Ill.*, i. 547, 204. M. Y. Puncheon and die. Struck by Young only.

No. 61. Duchess of Portsmouth. *Med. Ill.*, i. 555, 216. Sn. unpub. 4. M. Y. Puncheon and die. Only strikings by Young known.

No. 62. The Cæsars. This collection of puncheons was taken by James Roettiers to England, where he was advised by Dr. Mead to leave the Cæsars without any legend round the head, and to place the name on the reverse within a laurel crown. This, according to Nightingale (see *Num. Chron.*, vol. iii, p. 57), "he afterwards performed", but no finished medals have been traced. Sn. unpub. 1. M. Y. Thirteen obv. puncheons, of which two are almost duplicates; two of the twelve heads are reproduced in dies; Rev. a puncheon for the laurel wreath.

No. 63. The late Elector Palatine. Unidentified.

No. 64. English pattern crown 1709. Uniquespecimen in Brit. Mus., described by E. Burns, *Coinage of Scotland*, vol. ii, pp. 536-7; figured *Brit. Num. Journal*, vol. iii, p. 257. M. Y. Obv. two puncheons, one die; Rev. unfinished puncheon of arms. A smaller puncheon of a similar bust is probably intended for a sixpence.

In 1708 the busts, all laureated, but undraped for gold, draped for silver, were ordered to left, but as the coined silver was executed to right it is possible an undraped head-puncheon, although to right, may be

for the guinea. Another undraped puncheon is to left, but it is not laureated. Yet another is laureated, but agrees with the die of a larger medal, see No. 38. The Scottish pattern crown (Burns, 1094) of 1716 is made from the same obverse puncheon as the English of 1709; five dies for obv. and two for rev. are in Young's collection. The obv. dies may have been originally designed in 1708. Young produced confusion by combining dies for the guineas, hypothetically using a medal die with English title with an unfinished Scottish reverse (see Burns, 1096), and a die with draped bust, probably intended for a shilling, bearing the Scottish legend, with the finished reverse (Burns, 1095). Two puncheons and an undated embryo reverse die with Scottish arms may be, as per Roettiers's list, for the 1708-9 coinage. There are two other unfinished and three finished guinea reverse dies. For details of these intended coinages, see *Brit. Num. Journal*, vol. iii, pp. 230-9 and 248-56.

VI.

EXTRACT CONCERNING THE DIES FROM
JOHN ROETTIERS'S WILL.

Copy of an Article of the Will of Mr. John Roettiers of the Parish of St. Andrews Holborn made at London—March 13— $\frac{1689}{1700}$ and proved in the Prerogative Court of Canterbury on July 13—1703.

Item—I do give and bequeath to my friend Peter Vanderbergh of London merchant one of my Executors hereafter named *all my Dyes, Puncheons for Medals & graving tools*, and also all my aggats and other stones wrought and unwrought in trust that the said Peter Vanderbergh shall with all convenient speed after my decease *sell all my said Dyes Puncheons Tools* aggats and stones and distribute the neat proceed thereof (the charges of and about the sale being first deducted) viz. One fourth to my son Norbertus, one

fourth to my daughter Teresa Maria, one fourth to Maria Lucia, and one fourth to the children of my son Jacobus Roettiers deceased, & I give to my said daughters Teresa Maria and Maria Lucia all my plate to be equally divided amongst them. It is my will nevertheless that if my other estate shall not be sufficient to pay the said Legacies to my wife and daughters, payment shall be made to them respectively out of the said dyes, Puncheons, Tools, Aggats and other stones before my dividend.

Will signed & sealed in y^e presence of—

Thomas Bowdler, Edwd. Bunnys, & Ant. Wright proved before Dr. Exton Surrogate to Sir Richard Raines & y^e Probate signed by Thos: William Deputy Register

July 16—1703.

VII.

EVIDENCE OF ROBERT BRYERLEY.

Sir,

Pursuant to your desires I here give you as faithful an account as possibly I can, and to y^e best of my knowledge in relation to the Kings Closet. My intimacy wth M^r Norbert Roettiers mov'd him to communicate many of his affairs to me, and soon after the death of his Father M^r John Roettiers he frequently talked to me of his Fathers Closet, as he then called it: wherupon I pressed him for several years to gett it over, it being then in his Sister or Mother in law's hands; he accordingly writt about it, and the answers he received rowld upon pretentions and Shares his Sisters, & his Brothers Children had in it by right of successions; and proposals from England were made for selling the Closet, & dividing y^e product as abovementioned, wherunto M^r Roettiers would never consent affirming often to me that he could not do it, by reason there were many pieces in it which belonged to the Crown, and called it the Kings Closet. After a long intercourse of letters M^r Norbert Roettiers gives security to his Sisters to pay y^m Three hund^d pounds Stirl^s to y^e best of my remembrance & to let his brothers Children have their Share in proportion without which he could not get the said effects.

When he had comply'd with y^e said Conditions y^e Punchions and Dyes were brought to Dieppe, by his Brother in law M^r. Bishopp; M^r. Roettiers gott an order of y^e Court of France for bringing them up, and went down himselfe for y^e more careful performance. After his return speaking

of the said Closet he very frequently called it y^e Kings Closet (as I believe S^r Harry may well remember) and has often talked with heat of the danger of parting with it.

This Sir is the full knowledge y^t I have in regard to that affaire, which I faithfully deliver to y^e best of my remembrance, & shall be ready on all occasions in my power to shew y^t I am with all respect

Sir,

Your most Obedient &
most humble Servant
Robert Bryerley.

Paris

Fryday y^e 19th March
1728.

VIII.

OBSERVATIONS FROM JAMES III's SIDE ON MADAME ROETTIERS'S MEMOIR.

The Memoir speaks all along in y^e Style of Mr. Roettiers Cabinet & Collection of Medals—w^h is begging the Question ; and is a very different Language, from what M^r. Roettier himself allways used on that occasion.

The closet of y^e Kings Medals he constantly called them & never spoke of them otherwise than as belonging to him.

Let y^e Widow prove that every Governmt. of Ed. treated with the Sisters to buy of them all those Puncheons & Dyes (as the Property of y^e Graver and not of y^e Crown) while they were in England & forthcoming ; so that y^e Governmt could, without purchasing them have got at them if they pleased. That is a point materiall to be made out : nor dos y^e Memoir clear it.

Quere, Whether y^e Puncheons & Dyes of France now in y^e custody of an Officer [His name is I think Delaune,¹² or something like it] are look^d upon as y^e property of that Officer (or as belonging to the King of France) so that when this Officer dys or is displaced, they would go to his Heyrs, & not to the Officers of y^e Crown, who should succeed him. This will go a great way towards determining the dispute.

She owns the Puncheons & Dyes for Coyns, now in her custody belong to the Crown. It was natural to have sent

¹² Nicolas de Launay was director of the Paris medal mint and goldsmith to Louis XIV and XV. He died, however, in 1727, and was succeeded by his son-in-law, Jules Robert de Cotte.

an Inventory of these together with that of the Medals; and to have owned that y^e one was the property of y^e Crown, the other not; If M^r. Roettier had thought there was any distinction. But believing all to be the Kings, he yet made a List only of y^e Medals, because his intention in transmitting that list, was only to get leave to strike more of the same sort and publish the whole set of them. Quære Whether when Old Roettiers the Father went to live in Red Lyon Street, he did not keep all those things he brought with him from the Tower in some Chest or Cabinet and show them only to the Kings Friends? As to y^e 8 years after y^e Revolution when he lived in the Gravers Apartment in the Tower and was employed as such there was no need he should make any Secret of such matters. However the late M^r. Roettier often said that that collection was for a great number of years kept private, for fear of being seized, and was by that means preserved. And he valued himself particularly for y^e Secrecy with which he brought them over; which was altogether needless if the property had been in his family and not in y^e Crown.

As to y^e private Medals, as they are called it is to be presumed that they were all struck, by the particular command, and at the expense of the Crown. It is certain that some of them were so; particularly the Medal of Col. Strangwick.¹³

Nor can it be doubted, but the Engraver General when by order of y^e Crown he strikes any Medals is payd all y^e charges of doing so; as well for making y^e Puncheons & Dyes as for working them off & for y^e Gold and Silver of which they consist.

If indeed the Graver makes any to dispose of himself, he has y^e use of the Dyes; but the Metal is supplied at his own charge; and in these two articles and his salary his profits consist—which I suppose to be the meaning of those words in y^e Patent, that grant to M^r. Roettier *all y^e Proffitt and benefit of such Medals*. However y^e Puncheons and Dyes, not being mentioned in those words cannot be supposed to be included in them.

It would not have been amiss, if y^e Memorialist had annexed an entire copy of that Patent, which might be of use to clear up the whole matter.

As to what is said about consulting the present Officers of the English Mint, for their decision of y^e point, it is

¹³ See V, No. 3, struck by order of Charles II.

indeed, considering the Kings present Circumstances, a very extraordinary proposal. M^{rs}. Roettiers family must needs be well with some of those Officers; & whatever is procured from them in her favour, will at the same time be in favour of themselves.

She should however take care, how she makes this matter too publick; least it should raise a claim of another sort, which she may be forced to comply with.

Mr. Taylor of the Temple & M^r. Price y^e Attorney, to whom she appeals, as acting in a commission from M^r. Roettier to get the Medals &c. into his hands, might probably know little of y^e Rights of y^e Crown. They had rather to be sure that Roettiers Family should have them, than That which is on the Throne; and they thought perhaps, that y^e getting them into Roettiers hands was the proper way of restoring them to y^e right Owner.

And indeed to do M^r. Roettier justice he frequently spoke of that Collection as belonging to y^e Crown, & styled it y^e Kings Closet of Medals; nor dos the Memorall give y^e least Hint of his ever saying, they belonged to himself: tho it is true, he had often said that it had cost him some money, to retrieve them.

If that Summ was as the Memorall says—about £40,000¹⁴ given by M^r. Roettier to his Sisters, we may consider how valuable the collection must needs be; since M^r. Roettier is supposed to have had a Right to his share in them, which he did not purchase; and to be sure as to y^e other Shares, had a very good bargain.

It is alledged that the Old Puncheons & Dyes for striking Medals by order of y^e Crown before the Restoration remain not now in the proper Officers hand at the Tower.

Perhaps so nor is it a wonder that during the long Rebellion they should be embezzled. Besides before the Restoration there was little done of that kind by y^e Order of our Kings, that was very curious; and that consequently was worth enquiring after or claiming when y^e King returned.

It is the practise of all Officers upon great Revolutions to plunder as much as they can of what is committed to their charge. Old Roettier might intend to reserve what he took for y^e Crown upon a new Restoration. But seeing no likelihood of that and having been long in possession of those things without any demand made of them he might at

¹⁴ 40,000 livres; see No. IV.

last think fitt to order them by his Will to be delivered over to his son (who was then abroad, & had the Survivorship of his Patent) upon his paying such and such sums to his sisters in whose possession they were.

In a word to pretend that the Puncheons and Dyes are y^e Gravers, and that the Crown has a right only to the Medals actually struck by its order; is just as reasonable as it would be for y^e Master of y^e Royall Imprimerie, to claim y^e Mattresses or Fonts, in which all y^e letters from time to time are cast and allow y^e Crown a Right only to y^e sets of Letters themselves, used for printing.

Any man at first sight sees the absurdity of such a pretence.

Endorsed

Observations on M^{rs}. Roettiers Memoir.

IX.

JAMES III's ANSWER TO MADAME ROETTIERS.

The King having read and considered M^{rs}. Roettiers Memoire desires that an entire copy of Old M^r. Rotiers grant from King Charles the 2nd as engraver general may be transmitted to him. H.M. desires also that enquiry may be made at Paris whether Puncheons of such medals are understood to belong to the King or to the Engravers and their heirs &c. H.M. would willingly also have the same enquiry to be made in England provided it can be done in a private manner and by a person not employed by M^{rs}. Rotier who will not barely depend on the accounts of the Officers of the Mint those who are evidently partys in a controversy of this nature and whose right might possibly be different if their patents or commissions be so.

H.M. also desires to see a copy of late M^r. Rotiers Will and to know what proof his Widdow can bring of his having *ever considered these puncheons as his property* and whether he ever pretended to dispose of them particularly as his own in any form at his death.

The King considers one allegation in the Memoire extraordinary that asserts that private people have not the property of puncheons made at their expense since no Engraver has pretended to keep the puncheons of any one Medal struck for H.M. in Italy. H.M. is sensible that had they been graved by his Engraver General that he would of

course have left them in his hands, but has not as yet seen a reason to think that they would have the less belonged to him because they were left in the custody of the proper Officer nor does he conceive that his engraver can have any pretention of this kind if they be not founded on an ¹⁵ by his Warrant.

H.M. desires also to know what proof can be brought of the Government of England having treated in order to buy these puncheons *at any time when they might have had it in their power to seize them.*¹⁶

It is certainly far from H. Mys. intentions to do any wrong to M^{rs}. Roettiers or her children and if he were to remove these puncheons out of the hands of young Mr. Rotier he would take into consideration what money should appear to have been paid by the late M^r. Rotier singly to recover the possession of these things.

But as they are evidently of more value to H.M. and the Royal Family than to any body else and that the King has seen nothing as yet to make him think any other ways than that the puncheons of all Medals struck for the late King or King Charles or for any other persons whether private or public do by their order belong to him he cannot allow of their being disposed of in any manner of way. But H.M. consents to refer the decision of this point of right to any person of honour who shall be agreed upon as an impartial judge in this matter in case M^r. Rotier can during his minority refer it effectually with his Mothers consent and in case it be found he cannot, H.M. is willing that the decision be deferred till M^r. Rotiers Majority, provided that he and his Mother sign the List and engage not to dispose of them in the meantime in any manner or way under a proportionable penalty. This proposal is so just that H.M. thinks it will answer M^{rs}. Rotiers intention as well as his according as they are expressed in a Memoire and in a Letter signed Phillips and H.M. consents that M^r. Rotier should in the meantime proceed in the design of

¹⁵ Copy shows a blank between "an" and "by".

¹⁶ "The Government of England" seized all the dies in 1697, when John and his son James Roettiers were turned out of the Tower for suspected treason, but the Treasury Board decided that "Roettiers is to have his dyes and puncheons that are usefull onely for medalls and have no relation to coining money". See *MS. Treasury Books*, T. 29, vol. ix, fol. 253. I have told the story in detail in *Brit. Num. Journal*, vol. viii.

gravings copper plates from the puncheons and publishing the book mentioned in the Memoir if he thinks fit so to do.

Endorsed—The Kings answer to Mr^s. Roettiers Memoire—March 29. 1728.

X.

EVIDENCE SIGNED PHILIPS SUPPORTING MADAME ROETTIERS'S CLAIM.

Sir,

Mr^s. Roettiers being required to give some account of her late husbands sentiments with regard to his property in the puncheons and dies, which his Father left by his Will to be sold, and which the late Mr. Norbert Roettiers bought of his two sisters four year ago and had brought over into France, she has appealed to me as best acquainted with his sentiments; which indeed I thought might be well enough known by his purchasing of them at so considerable a rate, too great indeed to be given for a thing in which his sisters had no right: however as I will never be wanting to do anything in my power to bear testimony to truth and to promote justice, I have since I am called upon to declare the truth in this case, waved all other considerations and drawn up the declaration annexed which I now send you the truth of which I can upon occasion affirm upon oath.

There is one enquiry relating to this affair which to me seems natural to be made, viz. whether the King pays any money to his Engraver General for the puncheons & Dies that he makes for Medals for I suppose it is upon this presumption that the Kings claim is founded, and yet I never knew anybody that is ready to presume it, ever able to name any case in which such payment was actually made or to specify the sum so paid. For my part I never heard that any money was paid but for the working of y^e Medals made of such bullion as the Crown sends into the Mint, nor can I learn by all the enquiry I have made that the crown pays anything for making the puncheons & dies for Medals. I know that when a new broad seal is to be made (as in y^e case of the demise of a Prince or such considerable changes in the State as the Union in which case the old seal is a perquisite of the Lord Keepers) the Crown gives a fee of 200^l to the Engraver General for making it, but I never heard that any such or any other sum was ever given for the making puncheons for Medals: If there was there is

certainly an entry of it in the Accòmpts of the Household Mint & Treasury, which are kept with great exactness in England, & as they are impartial Witnesses in this case, may be easily searched by impartial persons.

'Tis a short search which I wish had been already made, but as it may be easily done, & seems to be likely to be decisive in the case I flatter myself that you will pardon the mention of it now made by

Sir,

Your most humble
& most Obedient Servant
Philips.

April 25. 1728.

XI.

EVIDENCE SIGNED BY THOMAS CARTE ON THE SAME SIDE.

I Thomas Carte Clerk being required to declare what I know of the sentiments of the late M^r. Norbert Roettiers with regard to the Puncheons & Dies for Medals which his father by will ordered to be sold for certain uses, and which the said Norbert purchased of his sisters and caused to be brought over into France about four years ago, do out of the duty which I owe to truth and justice make the following declaration viz.

That I have often heard the said Norbert Roettiers lament his fathers being in such circumstances as to be obliged in order to make a proper provision for his family, to give orders for the selling of his puncheons & dies for Medals, the thing in the world to which he was the most averse as being infinitely desirous to keep all his work in his family, in so much that when he made any puncheon for Medals of particular persons, for which the sum of 200 lb was his stated price, he would never agree to part with the property of the puncheon, but only obliged himself to strike as many medals for such particular persons as they desired & furnished him with metal for striking, but the said Norbert always considered those puncheons as his Fathers absolute property & thought that he had a right to sell or dispose of them as he saw fit; That the said Norbert expressed himself as very uneasy at the disposition his father made of them by his Will & used all the interest he had with his sisters to keep them from selling them out of their family being always in hopes of being able to purchase them himself; That in the year 1723 William Taylor, Esq^{re}. Barrister of Law & nephew

to the late Dr. Taylor being at Paris, the said Norbert desired him upon his return to make an agreement with his sisters for the purchase of the said Medals, which the said Mr. Taylor accordingly did & the said puncheons & dies were brought over hither in the beginning of A.D. 1724. That as soon as the said Norbert had got over the said puncheons & dies he set about executing a project which several curious men friends to the Kings cause put him upon as a thing which would be of service to his Majesty by spreading Medals of his own & the Royal Family of Stuarts over Europe, & particularly over England, & as what would be likewise of considerable advantage to himself.

The project was to strike sets of Medals from his Fathers and his own puncheons & to have a Book wrote to give an account of the occasion of striking each Medal as well as to represent the form of it. Great numbers of these puncheons & dies not being finished, some of them cracked and it being necessary to make others to compleat the history of the Royal Family, the executing of this project could not be done without a vast deal of labour and expense; however he was so possessed of the notion that it would be of service to the Kings cause, that he determined to go on with the project, and engaged me in the said year 1724 to write the Book to give an account of the said Medals, I accordingly undertook it, and at his request drew up a letter to give the King an account of this project which the said Norbert signed and sent to his Majesty in Oct. 1724.

Ever since that time till his death, I was in a manner constantly with him, have been with him to wait on the Premier President of Rouen, Abbe Bignon, Pere Chamillard Abbe de Bosc & abundance of other curious and learned men to take measures for the better executing the same project which has been the subject of several hundred conversations between us; And I solemnly declare that by all his discourse it appeared to me that he always considered the said puncheons & dies (after he had bought them) as his own absolute property, to which nobody else had any right or pretensions, & that I never imagined by any expressions that he dropped, that the crown of England or that his present Majesty had any property in them: & though to tempt the Kings friends to come to see his closet, he has sometimes called it the Kings closet, I never understood it in any other sense than as it contained the pictures and representations of his Majesty and his Royal Ancestors; and however other people might understand the meaning of such

an expression, & I think it impossible for me after the continual conversation I had with him on the subject of these very puncheons & dies for three years before he died, to mistake his meaning, & therefore I declare that he always spoke of them to me as his own absolute property, and am ready to make a more solemn affirmation of it whenever I am called upon to do so.

Done at Paris this 25th

day of April 1728.

Tho: Carte.

XII.

COPY OF OBLIGATION SUBMITTED BY MADAME ROETTIERS.

Whereas we whose names are underwritten have in our possession several puncheons and dies for Medals which were left by the late Mr. John Roettiers Engraver General of England by his will to be sold for certain uses, and were afterwards purchased by the late Mr. Norbert Roettiers Graver general to their Majesties of Great Britain & France and left among his effects at his death and accordingly entered in the inventory of them upon that accident, as well as contained in a catalogue of puncheons for Medals sent to his Britannick Majesty by the said Norbert in October 1724 & whereas certain suggestions have been used as if we have intended to alienate them. We therefore Winifried Widow of the said Norbert do hereby oblige and engage ourselves not to alienate the said puncheons or to part with them out of our possession till I the said James Roettiers come to be of age. Done at Paris this 25th. day of April 1728.

W. Roettiers

J. Roettiers.

Signed in the presence

of

Tho: Carte.

XIII.

LETTER FROM JAMES EDGAR, JAMES II^d's PRIVATE SECRETARY,
TO COLONEL O'BRYEN, RETURNING MADAME ROETTIERS'S
OBLIGATION WITH A NEW DRAFT.

Sir,

Bologna May 24 1728.

The King having considered the papers transmitted by you in yours of the 26 Aprile concerning his pretensions

to the property of the Puncheons & Dyes for Medals remaining in the custody of M^{rs}. Roettiers, Observes that though he desired to see a copy of the Will (if any be) of the late Norbert Roettiers, yet no such thing is sent, If there be such a paper it must be on record, and H.M. repeats his orders that a copy of it should be sent to him.

The King observes also that M^r. Carte's Declaration is single & contrary to the accounts H.M. has received from different persons, every one of which he thinks deserves to be equally credited, but in so far as the evidence of the said M^r. Carte can be of use to M^{rs}. Roettiers or her son, when the point of right at present in controversy is to be determined it will then doubtless be considered.

H.M. has read a letter signed Phillips, which he supposes to be writ by M^r. Carte¹¹ who seems to be agent for M^{rs}. Roettiers in which are the following words:

"There is one enquiry relating to this affair which to me
 "seems natural to be made, vizt. Whether the King pays
 "any money to his Engraver General for the puncheons
 "& dyes that he makes for medals, ffor I suppose it is upon
 "this presumption that the Kings claim is founded, and yet
 "I never knew any body that is ready to presume it, ever
 "able to name any case in which such payment was actually
 "made, or to specify the sum so payd. For my part I never
 "heard that any money was payd, but for the working off
 "the Medals made of such Bullion as the crown sends into
 "the Mint, nor can I learn by all the enquiry I have made,
 "That the crown pays anything for making the Puncheons
 "& Dyes for Medals. I know that when a new Broad seal
 "is to be made (as in the case of the demise of a Prince or such
 "considerable changes in the State as the Union, in which
 "case the old seal is a perquisite of the Lord Keepers) the
 "Crown gives a fee of £200 to the Engraver General for
 "making it, but I never heard that any such, or any other
 "sum was ever given for the making Puncheons for Medals;
 "If there was there is certainly an entry of it in the accompts
 "of the Household, Mint, & Treasury which are kept with
 "great exactness in England, and as they are impartial
 "Witnesses in this case may be easily searched by impartial
 "persons."

¹¹ Thomas Carte, on suspicion of Jacobitism, had escaped to France in 1722 and there lived under the name of Philips until 1728, when on the intercession of Queen Caroline he was allowed to return to England.

To this important enquiry, which Mr. Carte allows to be decisive in the present case, H.M. thinks he finds a very clear and distinct answer in the Commission granted to Mr. John Roettiers & his brothers by K. Charles the 2nd, which in the first place Grants to them solely "to make frame and engrave the designs and effigies of H.M. in such sizes & forms as are to serve in all sorts of coynes gold or silver together with all medals of all sorts & metals Representing the Kings & dear Consorts Effigies, as also all other coind peices of the nature aforesaid that might convey to posterity any mark or character of prosperous and worthy successes accidents or great actions". And after giving them also a particular authority to have in their custody such engines and instruments as are necessary for framing the said Medals, gives to the said Engravers a yearly salary "for the exercise and execution of the said service and place of making of the first designs of The Kings image belonging to the Mint and Medals of all sorts as aforesaid". By which it seems very plain that the Engravers receive their yearly salary for engraving the said puncheons, and that they want a particular power to authorise them even to keep them in their custody, they being comprehended under the words *Engines, Instruments & Devices* mentioned in the said letters patent.

Yet whatever may appear to be in this, As H.M^s. intentions are altogether just, He was unwilling to sue for a determination in this matter during the minority of Young Mr. Roettiers, provided that he had been assured that these things should not be alienated till his pretensions should be determined; H.M. is still in the same sentiments; but is noways satisfied with the form of the engagement you have now sent, which he Therefor has ordered to be returned to you, & has sent you a Draught of another, To which purpose He expects M^{rs}. Roettiers and her son will sign an obligation drawn up by a notary publick, or in such other form as according to law may be a proper security. If the persons concerned refuse or delay to comply with H.M^s. desire, which is so just It is his pleasure that you immediately take such steps as by Law may put it out of their power to dispose of those things till his pretensions are examined & judged, and if particular powers be wanting from H.M. to this purpose, he desires you would send them to be signed by him in due form, without loss of time, for though H.M. has during the course of this matter shown his consideration for the children of the late Mr. Roettiers yet he will not be trifled with.

These are H.M's. sentiments on this affair, which I am commanded to transmit to you, To which I shall only add that I am with great respect

Sir

Your most Obedient and
most humble Servant
James Edgar.

XIV.

COPY OF THE OBLIGATION RETURNED.

Omitted as being the same as document No. XII, but endorsed :

Copy To Col. O Bryen about the Puncheons in Roettiers custody, and of a new Draught of an obligation in that respect.

May 24th 1728.

XV.

DRAFT OF OBLIGATION AS MODIFIED ACCORDING TO JAMES III's INSTRUCTIONS.

Omitted as being the same as XVI, but with spaces left for names etc.

XVI.

THE OBLIGATION WITH DETAILS FILLED IN.

Whereas We Winifred Widow of the late Norbert Roettiers Graveur General to Their Majesties of Great Britain & France and James Roettiers son of the said Norbert Roettiers have in our custody several puncheons and Dyes for Medals engraved by Mr. John Roettiers constituted Engraver General to King Charles the Second King of England &c of Happy memory by letters patent, bearing date the third day of July in the 21st. year of his reign, Of which the following List contains a true exact and faithful account vizt. (Here must be inserted & copied the Inventory or List of the Puncheons & Dyes for Medals already transmitted to the King) and though the said John Roettiers did leave the said Puncheons & Dyes by his Will to be sold for certain uses, after the misfortunes of the Royal Family, and were purchased accordingly by the late Mr. Norbert Roettiers his Son,

Engraver General to Their M^{ties} of Great Britain and France—Yet Whereas it is pretended in the name of His Majesty James the 3rd. King of England &c That the said Puncheons and Dyes do belong to him, As having been engraved by the Engraver General to King Charles his Uncle whose patent bears him to have received his yearly salary for graving of such Puncheons & Dyes as is alleaged in behalf of his said Majesty, And since his said Majesty is willing to delay the decision of this point of right till the Majority of me the said James Roettiers son of the said Norbert Roettiers, provided security is given that the said Puncheons and Dyes shall not be sold in the meantime, We therefore Winifred Widow of the late Norbert Roettiers, and James Roettiers his son, Do hereby Oblige and Engage ourselves not to alienate sell or anyways dispose of the puncheons & Dyes of Medals abovementioned during the minority of me the said James Roettiers, nor at any time thereafter until the said point of right of His Majesty aforesaid be determined.

Done at &c.

NOTICE OF RECENT PUBLICATION.

La Zecca di Benevento. By Memmo Cagiati, pp. xxx and 124. Milan, Cogliati, 1916-17.

The thanks of students of early Italian numismatics are due to that indefatigable writer, Signor Memmo Cagiati, for this convenient monograph on the mint of the Dukes and Princes of Beneventum. Since Warwick Wroth's *Catalogue of the Vandals, &c.*, was published in 1911 a good deal of new material has come to light; all this, and some unpublished coins, Signor Cagiati has gathered together, and illustrated by means of figures in the text. We note here that he accepts M. Arthur Sambon's attribution of coins to Audelais (A.D. 731-2); reserves his opinion on the question of the pieces attributed by Muratori to Duke Gregory (732-9); and classifies under King Liutprand (742) the coinage with the symbol of the open hand, carrying a little farther the suggestion of Wroth, who had already connected the symbol with Liutprand, but had cautiously left the coins among the uncertain of the period of Gisulf II (742-51). A useful book.

G. F. H.

MISCELLANEA.

THE MEDALS OF GIAMBATTISTA CASTALDI.

SOME confusion exists in the published descriptions of the medals of this man which are attributed to the artist who signs "ANIB" and to Galeotto respectively. I have noted the following varieties. They are all cast, and, unless otherwise described, of bronze or brass.

I. *With the signature ANIB.*

1. *Obv.*—Bust of Castaldi l., with long beard slightly forked, wearing a cuirass, with scroll-ornament on the breast. Inscription: **IO·BA·CAS·CAR·V·CAES·FER·RO·REG·E·BOE·RE·EXERCIT·DVX**, and, below the bust, **ANIB**. Pearled border.

Rev.—Nude female figure, with girdle under her breasts, reclining r., holding sceptre in r., crown in outstretched l.; she leans against a hill-side, above which is a trophy of Turkish arms (cuirass, shields, scimitar, battle-axe, and turbaned helmet); in the side of the hill is a cave, at mouth of which reclines the river-god Marotz, with water flowing from his urn; on r. a tree; landscape background. Inscription: **TRANSILVANIA·CAPTA**. Pearled border.

(a) Florence, 45 mm. Supino, No. 311.
(β) London, Viet. and Alb. Mus. (Salting), 45 mm. (γ) Loebbecke Auct., *Katal. Taf.* X. 143. Æ. gilt, 45 mm. (δ) Piot Auct., *Catal.* No. 678. Æ. gilt, 45 mm. (e) Mr. Maurice Rosenheim, 45·5 mm.

2. *Obv.*—Same.

Rev.—Same model, but with the word **MAVRVSCIVS** inserted in the foreground below the reclining figure.

Armand, I. 175. 1. Van Mieris, III, p. 273.
(a) Berlin, 44 mm.; *Katal. Simon*, No. 242.
(β) Brescia (Brozzoni bequest), 45 mm.; Rizzini, No. 248. (γ) London, Brit. Mus., 45 mm.
(δ, e) Naples, 43 mm.; A. de Rinaldis, Nos. 135-6.

(ζ, η) Paris, 45 mm., 43 mm. (θ) Dupriez Auct. Mai 1902, *Catal.*, Pl. II. 37, 45 mm. (ι, κ) Merzbacher Auct., *Katal.*, 1912, Taf. I. 305, 45 mm.; 1914, Taf. I. 5, 44 mm. (λ) Mr. Henry Oppenheimer, 44 mm.

II. *In same style as I, but without signature.*

1. *Obv.*—Bust of Castaldi I., with long beard slightly forked, wearing a cuirass, differently decorated from that on previous medals (strap with semicircular ornaments passing over shoulder), and scarf passing from r. shoulder over breast; inscription as before (including the mistake **EXERGIT**). Pearled border.

Rev.—Castaldi, bare-headed, in armour, standing to front, receiving sceptre from a woman who approaches from l.; on r. a man, crowned, nude to waist, wearing kilt and cloak over r. shoulder, approaches him; on l., behind the woman, a Turk wearing a turban. Inscription: **CAPTIS
SVBAC·TVSISQ·REG·NAVAR·DACIÆ·
E·OLIM·PERSA·TVRC DVCE.** Pearled border.

Armand, I. 175. 3. Van Mieris, III, p. 276. (α) Brescia (Brozzoni bequest), 46 mm.; Rizzini, No. 250. (β) London, Brit. Mus., 45 mm.; Keary, No. 92. (γ) Vienna, 45 mm. (δ) Loebbecke Auct., *Katal.* Taf. X. 144, 45 mm., Æ. gilt. (ε) Merzbacher Auct., *Katal.*, 1914, Taf. I. 6, 45 mm. (ζ) Mr. Henry Oppenheimer, 44 mm. (ex Faure Auct., 1913, *Catal.* Taf. X. 568).

2. *Obv.*—Same as II. 1.

Rev.—Female figure, wearing tunic and cuirass, seated, leaning her head on her l. hand, her r. behind her back tied to a trophy (Turkish helmet, cuirass, shields, battle-axe, sword, spear); on l., small river-god reclining, leaning on urn from which stream flows across foreground; below this, **MAVRVSCIVS**. Inscription: **LIPPA
CAPTA** (leaf). Pearled border.

Armand, I. 175. 2. Van Mieris, III, p. 275. (α) Brescia (Martinengo bequest), 46 mm.; Rizzini, No. 249. (β) Florence, 45 mm.; Supino, No. 312. (γ) London, Brit. Mus., 46 mm.;

Keary, No. 91. (δ) Do., Vict. and Alb. Mus. (Salting), 45 mm. (ϵ) Naples, 45 mm.; A. de Rinaldis, No. 134. (ζ) Quadras y Ramon, *Catal.*, 13576, 45 mm. (η) Mr. Maurice Rosenheim, 45 mm.

III. *By Galeotto (Pier Paolo Romano).*

1. *Obv.*—Bust of Castaldi l., with long beard, not forked; wearing cuirass, cross of St. James suspended on breast, cloak knotted on l. breast. Inscription: **IO·BA·CAS·CAR·V·CAES·FER·RO·REG·E·BOE·RE·EXERCIT·DVX** (the last two letters of the inscription extending on to the lower portion of the bust). Pearled border. Sometimes signed **P.P.R**

Rev.—Nude female figure (on a larger scale than in I. 1) reclining r.; no girdle; her r. touches a sceptre which lies on the ground, her l. holds out a crown; she leans against a trophy (cuirass, scimitar, helmet), and a tree is also behind her; from the ground issues a stream which flows in the foreground; on r., more trees and landscape background. Inscription: **TRANSILVANIA·CAPTA**. Pearled border.

Armand, I. 228. 5. Van Mieris, III, p. 273. (α) London, Brit. Mus., E. 45 mm. (after-cast, no trace of signature). (β) Naples, 45 mm.; A. de Rinaldis, No. 288 (no signature). (γ) Paris, 45 mm.; Armand, *loc. cit.* (δ) Vienna, 46 mm. (signature?). (ϵ) H. G. Gutekunst Auct., 1910, *Katal. Taf. IV.* 45, 44 mm. (no trace of signature).

The Paris specimen is the only one recorded as having the signature of Galeotto—a point which in the present conditions it is impossible to verify.

2. *Obv.*—Bust l., the head apparently from same model as in III. 1, but the bust completely altered; wears cloak fastened with bulla on l. shoulder, and medallion on chain. Inscription as on III. 1, last two letters not encroaching on, but partly covered by, bust. No signature. Pearled border.

Rev.—Same as III. 1.

Lanna Auct., *Katal. Taf. 14*, 219, *Æ.* gilt, 45 mm.


G. F. H.

VI.

PRIMITIAE HERACLIENSES.

THE Heracleian mint was not so productive as those of neighbouring cities, and, while famous for the fine style of its earlier staters, has never attracted very great attention, although the main outlines of the chronological sequence of the coins have been established. See Head, *Hist. Num.*², p. 72 seq. The earlier coins bear no inscription beyond the ethnic, but before the middle of the fourth century B.C. adjunct letters and abbreviations of names begin to appear and continue henceforward. The M^cClean collection in the Fitzwilliam Museum includes twenty-six staters—a large number for this series—and it seemed that several varieties might be unique. On searching for parallel specimens I was very much interested to notice the great variety of letters which occurred on a comparatively small number of coins. At the same time it was apparent that Münsterberg's list of "Beamtennamen" for Heraclea (*Num. Zeit.*, 1911, p. 79), although including no abbreviations of less than three letters, was even within these limits very incomplete, such examples as ΚΛΗ, ΚΛΩ, ΕΥΦΡ, ΝΕΩΝ, ΕΦΣΩ-ΔΑΜΟΣ, ΣΩΣΙΒΙΟΣ, ΑΡΙΣΤΩΝ, and ΑΡΙΣΤΟΞΕ-ΝΟΣ being among those omitted. In fact, his list of eighteen names and abbreviations may be increased to thirty-five, apart from the single letters and combinations of two letters. It seemed, then, worth while to

print, in the first place, a full list of these letters; for any future attempt to fix the die sequences at Heraclea is certain to meet with many difficulties owing to the great rarity of most varieties. Secondly, although not part of my original purpose, this list has suggested some notes on the theory, as applied to Heraclea, that these abbreviations represent artists' signatures.

Unfortunately, so many of these coins are described in the catalogues without illustration or indication of weight and date that, for greater convenience, it has been necessary to classify the inscriptions according to their length rather than in chronological groups. The weight, where it could be ascertained, has been given only in those cases which occur in the later discussion; but it may be assumed that most unweighed coins are probably earlier than the reduced standard of c. 280 B.C. With one or two exceptions, noted as they occur, all the coins given below are silver staters. To the 35 examples of at least three letters we may add 27 smaller abbreviations and the monogram  (HPAKA). These are used singly or in combination in about 80 different ways, though the total number of coins examined is only about 220.¹ Further, 38 of these are of the type 4 (*a*), 14 of the type 5 (*v*), 13 of the type 1 (*l*), and 12 of the type 5 (*d*). Nearly 50 of the 80 combinations are only known to me by a single specimen, and for twelve of them the most modern authority is to be found in the works of Carelli and Garrucci.

¹ Using the British Museum, Hunter, McClean, Leake, Ward, Warren, and Jameson collections; the works of Imhoof-Blumer, Sambon, Carelli, and Garrucci; and the sale catalogues of home and continental sales for the past thirty or forty years.

1. *Single letters or combination of two letters on one side of coin.*

- (a) A Warren 62 = Hirsch *Cat.*, xx. 46; Sotheby Sale, May 2, 1905, 47.
 (b) E Strozzi 962.
 (c) Σ B. M. 13; Warren 61; Strozzi 958; Caprotti 175.
 (d) X Merzbacher *Cat.*, Nov. 2, 1909, 2222; Sotheby Sale, April 20, 1909, 34.
 (e) Φ Late Collector 40.
 (f) K Hirsch *Cat.*, xv. 516; Merzbacher *Catalogues*, Nov. 2, 1909, 2225, 2226; Nov. 15, 1910, 84.
 (g) I (Unable to trace reference.)
 (h) EY McClean Coll.; Maddalena 324; Hirsch *Cat.*, xxx. 145; Milan Sale, Aug. 13, 1912, 237. (Of full weight.)
 (i) ΓO Knowles Sale, 1908, No. 76 (1).
 (j) 93 B. M. 14; Jameson 240.
 (k) H3 McClean Coll. = Benson 41; Paris Sale, May 9, 1910, 61.
 (l) HH B. M. 48; McClean Coll.; Hunter 15; Hartwig 204, 205, and eight others known, all struck on the reduced standard.
 (m) HA Jandolo-Tavazzi *Cat.*, ix, Rome, April 6, 1908, 61. (Reduced weight: 6.4 grms.)
 (n) NI (Drachm) O'Hagan 45.
 (o) ΦI Carelli, Pl. clx. 12.

2. *Two or three single letters or combinations, on one side of coin.**On the obverse only.*

- (a) AΛE and EY
 (b) AΛE, EY and I
 (c) AΛE, EY and IΞ
 (d) ΔK and Φ
 (e) KΛE
 (f) KΛE and B
 (g) KΛE and EY
 (h) ΦΛA

On the reverse only.

- (i) AΛ and Z (?). See note.
 (j) AΘA
 (k) ΓA and ΓΩ
 (l) KAA
 (m) ΠOA

(a) Hartwig 199; Hamburger *Cat.*, xi, April 1909, 165; 166 (?); Rome Sale, April 6, 1908, 62; Martini, 1904, 63; Hirsch *Cat.*, ix. 108. The first four of reduced weight, the others unweighed.

(b) B. M. 39; McClean Coll.; Ward 46; Hunter 13 and two others. All of reduced weight.

(c) Hirsch *Cat.*, xxix. 46 (6.5 grms.).

(d) McClean Coll.; Hartwig 196; Hirsch *Catalogues*, xxx. 144, 145; xxxi. 34.

(e) Hirsch *Cat.*, xvi. 83 (6.47 grms.).


(f) Hartwig 200.

(g) (Unable to trace reference.)

(h) Bunbury 111.

(i) B. M. 30; Caprotti 176 (without Z). I have seen B. M. 30, and believe that Z (?) of the catalogue really represents N final of [HPAKΛEIO]N.



(j) B. M. 36 and 38 (?); Ward 45; Benson 42, 43; and nine others, but probably sometimes identical with the K-ΑΘΑ coin (4 a below).

(k) Strozzi 970. This coin has  on the obverse.

(l) Montagu (2) 34; Comte de D, Paris, 1889, 6.

(m) Nervegna-Martinetti 431.

3. *With a single letter or combination of two letters on both sides of the coin.*

<i>Obverse.</i>	<i>Reverse.</i>	
(a) A	A	Carelli, Pl. clx. 8.
(b) K (?)	AΛ and Σ	Hunter 9.
(c) Λ	Γ	B. M. 42.
(d) E	ΣI	Paris Sale, June 22, 1906, 96.
(e) Σ	EY	Carelli, Pl. clx. 13 = Imhoof-Blumer, <i>M. Gr.</i> , p. 2, 8.
(f) Z	Φ	B. M. 12.
(g) 	IA	B. M. 46 (99 grs.).
(h) 	ΦI	B. M. 51 (85 grs., pl.); Forrer, <i>Notes sur les signatures, &c.</i> , p. 359, 3 (ref. to Molthein Sale incorrect).

4. Letters on both sides, the longest combination not more than three letters.

Obverse.	Reverse.	
(a) K	ΑΘΑ	See below; the most common of all Heracleian coins.
(b) K	ΑΘΛ	Montagu (2), 36; Wm. Rome Sale, 24; Sotheby, July 11, 1899, 7.
(c) ΗΑ	ΔΩΡ	B. M. 49 (98.5 grs.); Caprotti 185 (6.55 grms.); Hirsch <i>Cat.</i> , xiv. 78 (6.44 grms.).
(d) Α, Λ, Φ	ΚΑΛ	Knowles Sale, 1908, 75 = Jameson 233 (7.41 grms.).
(e) Δ	ΚΑΛ	Benson 40; Carfrae 10.
(f) Δ, Κ, Φ	ΚΑΛ	B. M. 28; Ward 44.
(g) Δ, Σ (?), Φ	ΚΑΛ	B. M. 29.
(h) Α	ΚΛΩ	Carelli, Pl. clx. 6.
(i) Φ	ΚΛΩ	<i>Ibid.</i> , p. 85, 3*.
(j) ΕΥ	ΓΟΛ	Paris Sale, Dec. 19, 1907, 26.
(k) Ε	ΦΙΣ	Carelli, p. 86, 8*; cp. No. 17 description with Pl. clxi. 17.
(l) ΕΥΦ	Σ	Leake 1.

(a) B. M. 33 and four others; six specimens in McClean Coll.; nearly forty specimens known to me.

(c) ΗΕ (*obv.*) ΔΩΡ (*rev.*) is read on Jameson 253.

(k) Under No. 17 Carelli gives a variety without Ε, but prints Ε on his plate.

5. Involving any longer inscription.

(a) Α	ΑΡΙΣΤΩΝ	Jameson 234 (7.56 grms.).
(b) ΑΓΑΣΙΔΑΜ, Β	ΗΑ	B. M. 46 (99 grs.).
(c) ΑΡΙΣΤΟΞΕ- ΝΟΣ, Α	ΑΡΙΣΤΟΤΕ	Imhoof-Blumer, <i>Gr. Münz.</i> , p. 2, Pl. liv. 2 = Garrucci, p. 132, No. 34.
(d) ΑΡΙΣΤΟΓΕ or ΑΡΙΣ- ΤΟΤΕ, ΚΛΕ and Β		Many variant readings; perhaps both ΑΡΙΣΤΟΓΕ and ΑΡΙΣΤΟΤΕ; Hirsch <i>Cat.</i> , xxx. 150 gives ΑΡΙΣΤΟΓΕΝ; Γ twice given for Β; no ΚΛΕ or Β in Bunbury 111; cp. also Hartwig 200. See note below.

(e)		ΑΡΙΣΤΟΔΑ- ΜΟΣ and KY	Garrucci, Pl. ci. 38.
(f)	𐀀	ΑΡΙΣΤΟΔΑ- ΜΟΣ	<i>Ibid.</i> , 39.
(g)	𐀀	ΑΡΝΙΑΣ, ΓΑ	Imhoof-Blumer, <i>M. Gr.</i> , p. 2, 10 (7.83 grms.).
(h)		ΑΡΙΣ	Sambon, <i>Recherches, &c.</i> , p. 288, 18 (6.41 grms.).
(i)	E	ΑΡΙΣ	B. M. 31, 32; Hunter 10; three in McClellan Coll.; Hartwig 198.
(j)	ΑΡΙΓ		Bunbury 114.
(k)	ΑΡ ΙΓ in two lines	ΛΕΟΝ and ΙΑ	McClellan Coll. = O'Hagan 44. Cp. B. M. 52 and note below.
(l)	ΕΥΘΥ		Trist Sale, 1895, No. 13; <i>Num. Chron.</i> , 1896, p. 4.
(m)	ΕΥΟΥ		G. R. Smith Sale, 1890, 441 (really the same as last?).
(n)		ΕΥΜΕΝΙΟΣ, ΑΡΙ	Mionnet, i, p. 153, No. 501.
(o)	Σ	ΕΥΦΡ	Imhoof-Blumer, <i>M. Gr.</i> , p. 2, 5, where ΕΥΦΑ is also recorded.
(p)	ΝΙ	ΕΦΣΩΔΑ- ΜΟΣ	McClellan Coll. = Strozzi 969.
(q)		ΦΙ and ΝΕΩΝ	Hirsch <i>Cat.</i> , xii. 12.
(r)	𐀀	ΦΙ and ΝΕΩΝ	McClellan Coll. (6.47 grms.) = Strozzi 969 (2) (wrongly described with- out ΦΙ).
(s)	ΦΙ	ΣΩΣΙ	Strozzi 971 (no wt.); drachm of 3.68 grms. Jameson 247.
(t)	ΦΙ	ΣΩΣΙΒΙΟΣ	Carelli, p. 87, 24, but see note below.
(u)	ΦΙ	ΣΩΣΙΜΟΣ	Strozzi 965 (no wt.).
(v)		ΦΙΛΟ	See note below. B. M. 45 (97.9 grs.); McClellan Coll. (91.6 grs.).
(w)		ΦΙΛΩ	Sambon, <i>Recherches, &c.</i> , p. 288, 17 (6.41 grms.).
(x)	ΙΑ	ΦΙΛΩ	Benson 44; B. M. 50; Martini 64; Maddalena 326; Merzbacher, Nov. 15, 1910, 86. All of re- duced weight.
(y)	ΙΑ and Ι	ΦΙΛΩ	McClellan Coll. (6.45 grms.); Hunter 16 (102.1 grs.); Strozzi 966 (no wt.); Hirsch <i>Cat.</i> , xxx. 151 (6.5 grms.).

(z)		ΦΙΑΩ	Hirsch <i>Cat.</i> , xxi. 339; Paris Sale, May 9, 1910, 63. No wts.
(aa)		ΦΙΑΩ, ΞΑ	Hirsch <i>Cat.</i> , xxx. 153. Wt. 7.65 grms.
(bb)		ΦΙΑΩ, ΞΑ	Strozzi 967; Nervegna-Martinetti 436; Merzbacher, Nov. 15, 1910, 85 (6.42 grms.); Ratto, Genoa, April 26, 1909, 846 (6.45 grms.); Jameson 252 (6.58 grms.).
(cc)	ΑΠΟΛΑ	CEPT	Diobol, B. M.

(d) Nine other examples noted; where weighed, always on the reduced standard.

(g) Imhoof-Blumer, *op. cit.*, corrects the false readings ΦΑ—ΡΥΦΑC or ΕΥΦΑC.

(i) One of the McClean coins has ΕΙΙ - - ΙΒ.

(k) O'Hagan 44 not a variant without ΞΑ (see descr.), as the plate proves. Imhoof-Blumer, *M. Gr.*, p. 3, 11 reads ΛΕΩΝ, and notes a possible variant ΑΚΩΝ.

(t) Löbbecke, *Z. f. N.*, x, p. 71, publishes a coin without ΦΙ, but with ΣΩΣΙ ΒΙΟΣ in two lines (wt. 7.48 grms.); also Sambon, *Recherches*, &c., p. 287, 14 (7.75 grms.).

(v) Also Hunter 14 (100.4 grs.); Ward 47 (103.5 grs.), and ten other examples. Eleven of these of reduced weight, two unweighed, but Montagu (2) 35 given as 119½ grs. Compare 5 (g) and (aa)

both with and of full weight. There is a low-weight stater without letters, but with a thunderbolt symbol, B. M. 47; McClean Coll.; Caprotti 180; Hirsch *Cat.*, xiii. 132.

No account has been taken above of diobols with ΕΥ or ΥΞ and Σ (Carelli, Nos. 29, 30, or ΑΧ, ΤΗ and Φ, *ibid.*, 43);² of ΦΙΑ on the reverse of a gold ½ stater in Paris (Sambon, *Recherches*, p. 288, 34); of ΦΙΑΙΣΤΙΩΝ (Head, *Hist. Num.*,² p. 73), since I cannot find a specimen; of Trist Sale, 15, a wrongly catalogued coin of the Heracleans from Cephaloedium. For forgeries reading ΑΘΗ and ΧΑΛΚ or ΑΧΦ and ΧΑΛΚ, see Carelli 3 and 4. The rare coins with ΑΘΑΝΑ (ΑΘΑΝΑΕ, Bunbury 112)³ do not concern the present inquiry.

² Compare Jameson 243 with ΙΦ, ΤΗ on reverse.

³ ΑΘΑΝΑΣ Jameson 241.

Many attempts have been made to explain the various letters and abbreviated names which appear upon so many of the coins of the Sicilian and South Italian towns. The most cautious and conservative view is that they stand for the names of magistrates. Others, more bold, contend that we have to do with the abbreviated signatures of artists, who sign sometimes as proud witnesses of conscious artistic merit, sometimes as responsible mint officials. This theory is based on the certain fact that artists' signatures do occur, notably at Syracuse. In some cases these signatures are in microscopically small letters; on other coins only the first two or three letters of the name are given, the letters then being of larger size, as large, in fact, as those of the ethnic. The artist Kimon will sometimes sign in full in small letters and add a large initial **K** elsewhere on the same coin. The main facts concerning signatures at Syracuse are too well known to need even brief mention here. Fresh ground was broken by Mr. R. S. Poole in his article "Athenian Coin Engravers in Italy" (*Num. Chron.*, 1883, pp. 269 seqq.). He maintained that **Φ** placed in an inconspicuous position on some early coins of Thurium and Terina was an artist's signature. Others have identified this **Φ** with the artist who signs **ΦPY** on later Thurian coins, and so rendered the further step to the known artist **ΦPYΓΙΑΛΟΣ** not hard to take (P. Gardner, *Types of Greek Coins*, p. 121; Regling, *Terina*, Winckelmannsprogramm, 1906, p. 44). This **Φ** is thought to have worked at Thurium and Terina between c. 430-420 B.C. (Evans, *Num. Chron.*, 1912, p. 38). A little later an artist who signs **Γ** appears at Terina (*ibid.*, p. 38). Here we may note

that contemporary coins of Velia bear the same letter Φ , but that, as there is a later fourth-century artist Philistion at Velia, these fifth-century coins of Velia are referred to an "earlier Philistion" by Poole and Evans (*Horsemen of Tarentum*, p. 114, note 142). Probably most Greek numismatists regard Φ and Γ at Thurium and Terina as artists' signatures (Evans, *Num. Chron.*, 1912, p. 35), although even in the case of Φ and Γ this view has not passed unchallenged (H. von Fritze and H. Gaebler, *Nomisma*, 1907, p. 16, and 1914, Exkurs B, p. 54; see also E. J. Seltman, *Journ. Int.*, 1913, pp. 3-10).⁴ Some alternative explanations have been beside the mark. Thus the late J. R. McClean's proposal to interpret Φ and Γ as numerals (*Num. Chron.*, 1907, p. 107) must surely be rejected, although accepted by M. Jean de Foville (*Rev. Num.*, 1908, p. 7).

It is probable that Φ and Γ have a better claim to represent artists' signatures than many other letters and abbreviations commonly explained in the same way. At any rate, they are often, though not universally, small and inconspicuous on the coins of Thurium and Terina. It is curious, therefore, that so much attention has been paid to these particular examples, while the development of the theory to further instances has, as a whole, escaped detailed criticism.⁴ For them we must turn to those pages in the *Horsemen of Tarentum* which deal with artists' signatures. That Sir Arthur Evans still adheres to

⁴ Mr. Seltman's article confines itself, in the main, to the single letters on coins of Thurium. He protests, however, against the whole theory in a sober judgement with which those who have examined a number of alleged examples must agree.

the views there expressed is clear from his more recent article on the engravers of Terina (*Num. Chron.*, 1912, p. 40). In his earlier work he seeks to explain many abbreviated names as those of artists, to identify some of these with longer abbreviations and full names, and finally to show that many of these artists worked for different mints. For example, the artist Philistion is thought to have worked for Tarentum, Velia, Heraclea, Thurium, and Metapontum, although his full name only occurs on the Velian coins⁵ (*Horsemen of Tarentum*, pp. 110-12). It is apparent that such coins must be roughly contemporary. An interval of fifty years between any of them, while not impossible, would be disconcerting; an interval of from eighty to one hundred years is obviously impossible. Apart from the definite exclusion of certain coins, such a gap would be fatal to a general method which is largely concerned with similarities in style.

We will first consider the case of ΦI or ΦH ,⁶ $\Phi I \Lambda I$, $\Phi I \Lambda I \Sigma$ (different forms of the same artist's signature according to Sir A. Evans), who first appears at Tarentum in Period 4 (*Horsemen of Tarentum*, p. 106). When his work on Tarentum was first published Evans dated Period 4 to c. 344-334 B.C., but he is now convinced that the whole period must be thrown back so as to *finish* not later than 375 B.C. (*Num. Chron.*, 1912, p. 51, note 61). Thus ΦI was working at Tarentum c. 400-375 B.C. On p. 111 of the earlier work he is

⁵ Head, *Hist. Num.*, p. 73, gives the name in full for Heraclea, but I cannot find an example.

⁶ For ΦH see Evans, *op. cit.*, p. 102, note 132. Why should ΦH be an alternative way of signing a name which began ΦI ? Are $\Phi I \Lambda O$ and $\Phi I \Lambda \Omega$ at Heraclea different ways of signing the same name?

identified with the Philistion of Velian coins dated c. 325 B.C. This is almost impossible, but owing to the new dating of Tarentum Period 4 the point need not be pressed; at the same time, the work of Philistion at Velia may have been dated somewhat too late. We must, however, notice that Φ I occurs on coins of Velia and Metapontum which bear the triquetra symbol. They have therefore been brought into relation with Agathocles and dated to c. 300 B.C. (C. T. Seltman, *Num. Chron.*, 1912, p. 7). Mr. Seltman does not notice that the substantial correctness of his date for these coins is proved by the occurrence of the Velian coin *in mint condition* in the Beneventan find dated by Sir A. Evans on other grounds to c. 310 B.C. (*Horsemen of Tarentum*, p. 93). It is clear that this Φ I can have nothing to do with the Tarentine coins.

Moreover, since Φ I is found in conjunction with the abbreviations KAA, API, ΔAI, and ΣIM at Tarentum, and since these abbreviations occur at Heraclea, Metapontum, and Thurium, Evans (*op. cit.*, p. 110) has suggested that the collaboration of Φ I at Heraclea is to be inferred, though he admits that Φ I may sometimes stand for Φ IAO or Φ IAΩ, an abbreviation which does not seem to occur at Tarentum. In any case, the fact emerges that, so far as style was concerned, Sir Arthur Evans found no difficulty in grouping as roughly contemporary the Φ I coins of Tarentum with the Φ I and Φ IAO coins of Heraclea.⁷

⁷ It should be mentioned that when the greater part of this paper was read at a meeting of the Society in November, 1917, Sir Arthur Evans explained that he had always regarded the Φ IAO group as later. I leave the passage as I had written it because my point is that with one exception there are no Heracleian didrachms with Φ I earlier than c. 300 B.C.

The Φ I coins at Tarentum are now said to have been struck before 375 B.C., though we have noticed that when Evans wrote in 1889 they were dated after 344 B.C. But the Φ IAO or Φ IAN group at Heraclea are struck on the reduced standard. They are therefore later than 280 B.C.—a century later than the Φ I coins of Tarentum, Period 4. The question then arises, what coins of Heraclea bear the letters Φ I, and is there better evidence for placing these coins c. 375 B.C.? The answer, so far as I can give it, is to be found in the coins 1 (*o*), 3 (*h*), and 5 (*q*), (*r*), (*s*), (*t*), and (*v*).

Now the $\overline{\text{A}}\text{-NE}\Omega\text{N-}\Phi$ I coin (5 *r*) is of reduced weight. The Φ I-NE Ω N coin (5 *q*) is unweighed. The Φ I- Σ Ω Σ I stater is unweighed, but the drachm is of full weight (5 *s*). The Φ I- Σ Ω Σ IBIO Σ coin (5 *t*) rests on the authority of Garrucci, but two staters are recorded with Σ Ω Σ IBIO Σ alone (note to 5 *t*), and these are of full weight. The Φ I- Σ Ω Σ IMO Σ coin is unweighed (5 *u*), and the $\overline{\text{A}}\text{-}\Phi$ I coin (3 *h*) only weighs 85 grs., but is plated. It is probable, however, that this is a plated coin of the reduced series. If not, it is so closely connected with the reduced series that it must have been struck within the decade preceding 280 B.C. Wherever I have found a coin with the monogram $\overline{\text{A}}$ weighed, it has been, with two exceptions to be mentioned below, struck on the reduced standard; while the reverse type of this coin, which shows Herakles crowning himself, has only once been noted by me in a full-weight stater (5 *g*). Moreover, it will surely be admitted that the coins with the full names Σ Ω Σ IBIO Σ , Σ Ω Σ IMO Σ , with one of which Σ Ω Σ I- may be connected, cannot, even though all of

them be of full weight, have been struck much before the time of the reduction. Types, style, and the long form of the inscription all plead for as late a date as possible, and a provisional suggestion of c. 300 B.C. cannot be far wrong.

We have thus disposed of all the Φ I coins of Heraclea with one exception. This is the coin described and illustrated by Carelli, Pl. clx. 12 (10), which rests ultimately on the authority of Avellino. This coin, if genuine, would date well before c. 350 B.C., as it shows the early type of Herakles struggling with the lion. The particular scheme here chosen is excessively rare on staters, for, instead of standing, the hero is kneeling on his r. knee and holding his club in the r. hand, as though preparing for a blow, instead of strangling the lion with both hands. It would, however, be impossible to draw any general conclusions from this single and peculiar coin. It is remarkable that exactly the same scheme occurs on the next coin on Carelli's Plate (clx. 13). Here the letters EY replace Φ I.* This coin was originally published by Imhoof-Blumer.⁹

Having presented the facts regarding Φ I coins at Heraclea in the manner best suited to my argument, a *caveat* regarding the Φ IAO group must now be entered. It cannot be stated that *all* these coins are struck on the reduced standard. I have examined thirty specimens, of which twenty-one were struck on the reduced standard while seven were unweighed. Montagu Sale (2) No. 35 has its weight given as 119½ grs. This is a coin with Φ IAO alone. It so happens that this

* But if EY is the same as EY P (see below), who originated this novel scheme—EY[Φ P] or Φ I, and why should both sign?

⁹ See further below.

is the commonest coin of the group. Of fourteen specimens only two were unweighed, and of the others the Montagu coin is the only one of unreduced weight. The second exception is Hirsch *Cat.*, xxx, No. 153, where a weight of 7.65 grms. is recorded for a coin with $\overline{\text{A}}-\text{A}-\Phi\text{I}\Lambda\Omega$ (5 *aa*). Now this coin has the rather rare three-quarter-face head of Athena for obverse type, and thus must stand in close connexion with a McClean coin of full weight where $\text{AP I}\Gamma$ is read with the three-quarter-face head while ΛEON and A are found on the reverse (5 *k*). On another full-weight specimen ΛEON is read (5 *k*, note), while $\overline{\text{A}}-\text{A}-\text{APNIA}\Sigma$ are found on yet another full-weight stater (5 *g*) where the reverse type shows Herakles crowning himself. But this type and both $\overline{\text{A}}$ and A are far commoner on staters of reduced weight. We have no need, then, to suppose that any of the weights have been wrongly given in the catalogues, a thing in itself quite possible. We can simply state as a fact that the great majority of the ΦI or $\Phi\text{I}\Lambda\text{O}$ coins are of reduced weight, and so later than 280 B.C., while exceptions can be assigned with every probability to a date not earlier than c. 290 B.C.¹⁰

The ΦI coins of Heraclea can, then, have nothing to do with the ΦI coins of Tarentum Period 4 struck before 375 B.C. But this exposes an inherent weakness in the whole of any argument which relies to a great extent on the cumulative effect produced by noting small resemblances in type and style. It is clear that in the case of the ΦI coins these *criteria* have failed. Moreover, we have every right to assume that no

¹⁰ With the exception of the coin in Carelli mentioned above.

explanation of Φ I is suitable unless it takes all the evidence into consideration. If Φ I, Φ IΛΙΣ &c. is an artist working at Tarentum c. 375 B.C. and is the same as the Philistion at Velia c. 325 B.C.; granted also that an earlier Philistion worked at Velia c. 420 B.C.: then we must imagine a third and even a fourth artist of this name to engrave the Φ I dies at Velia, Metapontum, and Heraclea c. 310-300 B.C., and those later dies for coins of reduced weight after 280 B.C. at Heraclea and Croton (*Num. Chron.*, 1916).

We may now turn to the very rare Heracleian stater signed, we may admit, by the artist $\text{EY}\Phi\text{P}$ — in small letters on the exergual line. "The Herakleian artist, again, who signs $\text{EY}\Phi\text{P}$ in minute letters on the exergual line, varies the practice by placing a conspicuous EY in the field above it between the legs of the struggling Herakles" (*Horsemen of Tarentum*, p. 119). Much more, then, might we expect the $\text{EY}\Phi$ of Leake 1 to be identifiable with this same artist. But this coin has the poor standing figure of Herakles for reverse type¹¹ where $\text{EY}\Phi\text{P}$ shows the fine composition of the hero strangling the lion common to the earliest staters of Heraclea. It is true that some of the staters marked EY show this type. But the $\text{EY}\Phi\text{P}$ coins exhibit a stern-featured head of Athena, her helmet decorated with a griffin. The signature, too, is treated in a manner recalling that of $\text{M}\Lambda\text{O}\Sigma\Sigma\text{O}\Sigma$ at Thurium, who was working before c. 388 B.C. I should be inclined to place the $\text{EY}\Phi\text{P}$ coin not far from that date. But such coins with EY as I have seen show a

¹¹ The standing Herakles crowned by a small Nike. I have re-examined the coin and confirm the reading $\text{EY}\Phi$ without any possibility of a further letter.

much later type of Athena head, with a figure of Scylla throwing a stone in place of the griffin or the Scylla with a rudder. We can hardly date them earlier than c. 350 B.C. But if **EY** on these coins is identical with **EYΦP**, who is the **EY** on the much later coins of reduced weight (2 *a*, *b*, *c*)? He must be a later artist **EY**. His credentials to that rank are very sound, for he appears after the longer abbreviation, **ΑΛΕ**. Thus on the theory of Sir A. Evans **ΑΛΕ** is the magistrate, **EY** the artist, perhaps the "artist" who appears at Tarentum "shortly before the reduction of the standard". We are justified in asking whether the **EYΦP** who appears on the mediocre distaters and staters of Thurium is also to be identified with this "later **EY**", or whether he is a third artist. His style might be said to resemble that of **EYΦ** on the Leake coin already mentioned above. But with regard to the **EY** coins of Heraclea c. 400-350 B.C., why should these not be connected with the abbreviation **EYΘY** (5 *l*) or the **EYΦA** mentioned by Imhoof-Blumer (see under 5 *o*). I must here admit that my examples of **EY** show the letters on the obverse, and that I have been unable to find a specimen of the coin upon which Sir A. Evans lays so much stress (with **EY** just above the exergual line of the reverse) other than Imhoof-Blumer, *M. Gr.*, p. 2, 8 = Carelli, Pl. clx. 13 (3 *e*). As both this and the **EYΦP** coin (5 *o*) read **Σ** on the obverse they suit his argument very well,¹² but it will hardly be maintained that a distinction can be drawn between coins with **EY** on the obverse and those with

¹² But on reading this article in proof, I notice that the Leake coin also reads **Σ** on the reverse (4 *l*), and thus confirms my argument, for it is of poor style.

EY on the reverse. If we consider the claims of **EYΘY**; the coin with this abbreviation published in *Num. Chron.*, 1896, p. 4, 3 (5 l) has on the reverse a small vase between the legs of Herakles. This same symbol occurs on a **EY** coin in the McClean Coll. and others (1 h), where the Athena head of the obverse is very similar to that of the **EYΘY** coin. Already the cataloguer of the **EY-ΠΟΛ** coin (4 y; from the same obverse die as the McClean coin just mentioned) has hesitated between the rival claims.

These may seem trivial points, but it is as well to get the data concerning them as exact as possible, in view of what they are supposed to prove. It is clear that the equation **EY** = **EYΦP** is very uncertain, and that if **EY** is an artist working c. 370 B.C. we must fall back on the expedient of "a later **EY**" to dispose of the coins of 280 B.C.

We will now consider the case of **ΑΡΙΣΤΟΞΕΝΟΣ**. Garrucci, p. 132, No. 34, describes a coin already published by Imhoof-Blumer (*Gr. Münz.*, p. 2, Pl. liv. 2) where this name is engraved on the crest of the helmet, and **ΑΡΙΣΤΟΞΕ** is repeated on the exergual line of the reverse. There is also an **A** on the obverse. The coin is of the ordinary types of the earlier Heracleian staters. Sir Arthur Evans proposes to assign other coins reading simply **A** to the same artist, and to identify him with an **API** who appears on certain coins of Tarentum. On the Tarentine coins **API** appears in association with **ΚΑΛ**, an abbreviation also found on coins of Heraclea. **ΚΑΛ** therefore is another artist working for both mints.

That Aristoxenos is an artist's signature is probable enough. That **A** and **API** are shortened forms of this

name is possible, but not credible on the evidence offered. For example, *Warren Cat.*, No. 62 (1 *a*), with the rich treatment of Athena's hair and the lion jumping upon Herakles's left thigh, must surely be later than the **ΑΡΙΣΤΟΞΕΝΟΣ** coin. The reverse is quite unusual. Would **ΑΡΙΣΤΟΞΕΝΟΣ** sign in full on his earlier work and be content with **A** on a later and more original design? Moreover, in the succeeding period at Heraclea, when the standing type of Herakles is adopted, we get a number of coins reading **ΑΡΙΣ**. Are they the advanced work of Aristoxenos, or do they belong to a later artist of this name? If **A** and **API** are artists' signatures, surely **ΑΡΙΣ** on these somewhat later coins must fall into the same category. And if **ΑΡΙΣ** is another form of this artist's signature, why did he always sign **API** at Tarentum, a form possibly never occurring at Heraclea?¹³ Or why should they not stand, one and all, for the Heracleian name **ΑΡΙΣΤΩΝ** (*Jameson Cat.*, No. 234), or even the later Aristodamos or Aristoge . . . ?¹⁴

As for **ΚΑΛ**, evidence of his collaboration with Aristoxenos is found in the Tarentine coins signed **K-A** and the somewhat later ones, with **ΚΑΛ-API** (Evans, *op. cit.*, p. 55). The idea is elaborated on pp. 67-74. On p. 67 the on the famous gold stater of Poseidon and Taras is expanded to **Κ[ΑΛ]**, and in a later note (*Num. Chron.*, 1912, p. 51) a suggestion that **E** on the obverse of this coin represents the signature of Euainetos is approved by Sir A. Evans. Apparently the *floruit* of **ΚΑΛ** dates from c. 380 B.C. On pp. 72-3 of the *Horsemen of Tarentum* the close

¹³ Authority for **API** seems to rest on Mionnet. See 5 (*n*).

¹⁴ Who, as Sir A. Evans is forced to conclude, were magistrates.

connexion between **K** and **A** is insisted upon, and staters of Heraclea and Metapontum are once more adduced to point the probable identity of **A** with **ΑΡΙΣΤΟΞΕΝΟΣ**.

But it seems that when the touchstone of the Heracleian coins is applied, the whole argument is shown to be worthless. On p. 72, note 91, *B. M. Cat.*, Heraclea 28, 29 are quoted. Though used simply to illustrate the work of **KΑΛ**, the passage occurs in the middle of the **KΑΛ-ΑΠΙ** argument, and it should surely have been pointed out that the obverses of these coins show neither **K** nor **A**, but in one case **Δ**, **K**, **Φ** and in the other **Δ**, **Σ** (?), **Φ**. Compare also 3 *b*, 4 *a*, *b*, *d*, *e*, *h*, and 5 *a*.

Moreover, **K-A** occur on the earlier Tarentine coins, **KΑΛ-ΑΠΙ** on the later. But at Heraclea **KΑΛ** occurs on the coins with the earlier type of Herakles strangling the lion, while **K** comes on the later coins with Athena in a Corinthian helmet and the standing Herakles. Do such coins assist the **K[ΑΛ]-Α[ΠΙ]** theory? These coins with **K** are the commonest of the Heracleian staters. I have met nearly forty specimens, and they always read not **K-ΑΠΙ** but **K-ΑΘΑ**, though rarely **ΑΘΑ** is given in the catalogues. Lastly, if the **K** coins were assigned to a **KΑΛ** working c. 380 B.C., the Heracleian chronology would resolve itself into staters before c. 360 B.C. and those c. 300 B.C. and later. There would be very few coins to fill the intervening gap.

The Heracleian coin with **ΑΘΑ** suggests a further consideration. Why is the work of this most prolific Heracleian artist—assuming for the moment that he was an artist—not found at Tarentum? Is it merely an accident that the artist who has left most work at Heraclea has left nothing at Tarentum? That, assuming

as proved this artistic intercourse between the south Italian towns, some of them did not cross to Sicily? That, conversely, the great Sicilian artists of the signed tetradrachms at Syracuse did not work for a rich town like Tarentum? At Terina, indeed, Sir Arthur Evans has discovered the first four letters of the name of the artist Euainetos written in very tiny characters on the nymph's ampyx. He claims this discovery as a proof that the letters Φ and Π are correctly regarded as artists' signatures, and takes the opportunity of confirming his theory as set forth in the earlier work on Tarentum (see *Num. Chron.*, 1912, p. 42, and for Tarentum, p. 40). But the lesson to be learnt from EYAI on the coin of Terina is rather that the best artists signed in almost imperceptible characters, and although this may often be true of Φ and Π at Terina and Thurium, it is rarely so in the great majority of Sir A. Evans's examples.¹⁵ In any case, the absence of the great Sicilian names, apart from isolated instances, on the coins of South Italy, seems to me very remarkable if all these letters and abbreviations represent the signatures of artists. And although they have not all been claimed as such, how can we accept A, E, K, KAA, API, Φ I, &c. as artists, while ignoring the claims of AΘA, ΔΩP, NI, and many others? No explanation can be regarded as satisfactory unless it covers the whole ground.

It may be presumed that when the chronological die sequences have been worked out for the south Italian towns, especially for Metapontum and Velia, a better judgement on this question will be possible, but it is

¹⁵ Compare, however, Evans, *op. cit.*, p. 78, IV. Type G, p. 79, K, and p. 80, L for KAA and Φ I in minute letters at Tarentum.

to be doubted whether the theory of artists' signatures will be advanced save in the specific cases which are already allowed by a consensus of expert opinion. I have simply attempted to deal with some test cases at a small mint where the chronology in broad outline is fixed by the small number of types found there; even these I have only dealt with, practically speaking, in their relations with coins of Tarentum. It is known, for example, that $\text{A}\Theta\text{A}$ and ΦI occur on coins of Metapontum. And a curious combination on a coin of this town is to be found (Evans, *op. cit.*, p. 72, note 93)— KAA the "artist" of c. 380 B.C. with ΦIAO who is only found at Heraclea on one or two exceptional coins before c. 280 B.C.

It may, I think, fairly be urged that conclusions drawn concerning the identity of coin engravers at Heraclea and Tarentum are unsound because they rest on unsound data. Whether, in spite of this, the letters are abbreviations of artists' names is a thesis which does not seem open to direct proof or the reverse. So far as I can see, there is little to say in favour of it. If correct, it is curious that the best Sicilian practice, by which the artist signed in tiny letters, was so rarely followed; it is curious, too, that evidence of marked artistic intercourse between Sicily and the Greek towns of Italy has yet to be produced, though the case of Euainetos at Terina has been noticed. Finally, the number of names which must on this theory be given to artists at Heraclea is for this small mint so abnormal as to form in itself a serious argument against accepting this doctrine.

S. W. GROSE.

VII.

THE CHRONOLOGY OF THE COINAGE OF ANTIOCHUS VIII OF SYRIA.

(SEE PLATE VIII.)

It is not too common in history to meet with a personage who lives up to his accepted nickname. On investigation we find that Richard Crookback was not notably deformed, that Warwick the King-maker can hardly be called the "last of the barons" with any approach to accuracy, that the "Merry Monarch" is no good summing up of the character of the rather sardonic Charles II, and that Le Roi Soleil was hardly a sunny character. Hence comes a feeling of relief when for once we come on a notable individual of whom it may be said that he fulfils, and more than fulfils, the expectation we have formed of him from the sobriquet which tradition has attached to his name. Antiochus VIII, the second son of Demetrius II and his unamiable spouse Cleopatra, daughter of Ptolemy Philometor of Egypt, was, as Appian informs us, known as *Grypus*, the hook-nosed.¹ Many sovereigns have been blessed with an aquiline profile; but assuredly in all the portrait gallery of ancient and modern times none was ever possessed of such a formidable griffin-like beak as this Seleucid monarch. Looking at his portrait on the coins of his later years, we may assuredly call

¹ App. Syriaca, 68.

him not a hook-nosed man, but the most hook-nosed man that ever lived. By the time that he had reached the age of forty-five, the tip of his nose was making a perceptible effort to grow down towards his upper lip.² If he had reached old age the problem of the nut-cracker would apparently have been reached, for his strong projecting chin was also growing.³ But the dagger of a treacherous minister cut short the life of the much-beaked king before the final developments had the chance of appearing.

It was, I think, this tremendous nose which first attracted me towards the study of the chronology of the coins of a monarch who turned out on examination to be a person of considerable interest, numismatically as well as historically. His reign was long for that of a Hellenistic king, since he was first recognized in 125 B.C., and maintained himself on the throne till 96 B.C., a term of thirty years in all. And his life and wars synchronize with the final break up of the Seleucid empire: none of his successors ever again ruled over the whole of the broad lands from Taurus to the River of Egypt. After him came a few years more of civil war, and the final disaster of the dynasty, which fell before the sword of the Armenian "Great King" Tigranes. The coinage of Grypus gives us a key to the progressive downfall of the Seleucidae—his first coins are quite up to the level of the art of any of his second-century ancestors. His last have slipped down towards the hieratic and stereotyped semi-barbarism of those of the sons and nephews, who

² See especially *Pl. VIII. 8, 9*.

³ For a recent note on a bust of Grypus discovered at Athens, see *Bulletin de Correspondance Hellénique*, 1915, p. 30.

disputed the crown after his death. My main object to-day is to lay out the general lines on which the chronology of his various issues must be distributed.

So little was this sinking of numismatic art during Grypus's reign appreciated by the earlier students of the Syrian coinage, that down to thirty years ago his last issues were wrongly attributed to his son and namesake Antiochus XI, another "Epiphanes" in the official nomenclature of the dynasty. They are found so placed even in Dr. Percy Gardner's excellent catalogue of the coins of the house of Seleucus in the British Museum series, which came out in 1878. In Dr. Head's *Historia Numorum* they are rightly attributed, and no one now has any doubt that this numerous series of tetradrachms should be given to the father and not to the son, whose issues were very scanty, as might have been expected from the shortness of his reign. In Pl. VIII. 7 will be seen one dated coin which, if it had been known thirty years ago, would have prevented the wrong attribution, since the date which it bears, ΘΣ or 209 of the Seleucid Era, obviously falls into the time of the elder king, who was murdered in 216 A.S., and not into that of his son and homonym, whose regnal year was 220 A.S. There can be no doubt that all the ill-designed coins with the type of a seated Zeus and the simple inscription ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ ΕΠΙΦΑΝΟΥΣ belong to Grypus, and only those with the longer legend ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ ΕΠΙΦΑΝΟΥΣ ΦΙΛΑΔΕΛΦΟΥ to his son. The latter have a very young head, while the former show a portrait well advanced in middle life. And the nose of Philadelphus, though decidedly aquiline, does not approach in size that of his rightly nicknamed parent.

To proceed with the chronicle of the issues of Grypus. He was born in 141 B.C. or 171 of the Seleucid Era, during the first reign of his father Demetrius Nicator, which lasted from 146 to 138 B.C. When Demetrius was taken prisoner by the Parthians, and spent eight years in Eastern captivity, his wife, the Egyptian Cleopatra, married his successor and brother Antiochus VII. The latter, a very favourable specimen of the Seleucid dynasty, did no harm to his step-children, who were all very young. Indeed we know that he had one of them about his court during the last year of his life. But after nine years of reign Antiochus VII—Sidetes as he is generally named—died in battle with the Parthians, and Demetrius escaped from captivity and recovered his throne, his wife, and his children in 129 B.C. His short second reign of five years, however, was a period of ever-increasing trouble and disaster, and during his struggle with the usurper Alexander Zabina he appears to have sent his sons for safety to Athens. It was from thence, at last, that we hear that Grypus was recalled to Syria in 125 B.C., and the fact that Arrian says that he was educated in Athens is sufficient proof that his stay in Greece must have covered at least the two or three last years of his father's life. Probably Demetrius sent him away when he saw that the rebellion of Zabina was making head, and that the outlook was bad.

Grypus returned to take up a most troublous heritage, whose horrors recall the grimmest episodes of ancient Greek tragedy. His father, finally defeated in battle near Damascus by Zabina in 126 B.C., had been assassinated immediately after, by his own governor in Tyre, where he had taken refuge. It was rumoured

that his wife was, if not the instigator, at least a consenting party to the murder. The story would seem improbable but for the subsequent conduct of this abominable woman. On the death of Demetrius his eldest son Seleucus, aged eighteen or nineteen at the time, assumed the diadem and the leadership of his father's broken party. He gave his mother none of that share in the royal power which she claimed, and after a quarrel all our authorities, Appian, Eusebius, Justin, and the epitome of Livy, agree that she had him assassinated. She then reigned for some months in her own right, as is attested by the rare tetradrachms which bear her head alone, and the inscription **ΒΑΣΙΛΙΣΣΗΣ ΚΛΕΟΠΑΤΡΑΣ ΘΕΑΣ ΕΥΕΤΗΡΙΑΣ**, all of the date 187 A.S. or 125 B.C. Finding, however, that the public opinion of the army was not favourable to the open domination of a woman, a thing never before seen in Syria, she within a few months sent to Athens for her younger son, and proclaimed him on his arrival as her co-regent, under the title of Antiochus Epiphanes. This surname was not drawn from his own branch of the Seleucid house, since he descended not from the well-known monarch of that name, the enemy of the Maccabees, but from his elder brother Seleucus IV. Being only sixteen years of age at his accession, Grypus was too young to stand in his mother's way for some time, and the queen was able to do as she pleased. It was for her benefit that the armies based on the Phœnician cities of which she was in possession gradually warred down the usurper Alexander Zabina, and after three years of hard fighting finally overthrew him and occupied Antioch in 123 B.C.

For two years after the death of Zabina Cleopatra

and her son continued to rule together. Their joint coins are not uncommon, and are found of both the weight-systems prevalent in Syria, of Phoenician standard from Sycamina⁴ and other mints of the coast, and later of Attic standard from Antioch and other cities which were gradually recovered from Zabina. They bear dates from 189 to 192 A.S., i. e. from 123 to 121 B.C. The type of the tetradrachm is always the heads of mother and son side by side, that of Cleopatra in front and occupying the more important position. Grypus, seen behind her, shows a very youthful profile, his aquiline nose already well marked, but not yet giving promise of the enormous size to which it was later to attain. To say the truth he generally looks on these pieces rather a silly youth—which (as his later history shows) he certainly was not [Pl. VIII. 1].

In 125 B.C. Grypus had been sixteen—by 121 he was twenty—and four years made a vast difference, and had turned the boy into a man, and a masterful one. The danger to the dynasty having ceased with the fall of Zabina, there was no common interest to bind together the imperious and unscrupulous mother and the high-spirited son. We are told that the young king began to assert himself, and that Cleopatra saw her autocracy imperilled. She resolved to rid herself of her second son, as she had five years back of her elder. Grypus was warned, and had his brother's death (perhaps his father's also) in his mind. As the dramatic story goes in Appian and Justin, he came in one day heated from the chase, and was tendered a cup of cooling drink by the queen. His suspicions

⁴ So attributed at least in *Brit. Mus. Coins of the Seleucidae*, p. 85.

were roused, and he forced her to drink from it first herself; she did so, and died on the spot. Antiochene wits, as we read, made much fun out of the title of **ΦΙΛΟΜΗΤΩΡ**, "the lover of his mother", which had been borne by Grypus along with that of Epiphanes during his years of subservience to her rule: it came from his maternal grandfather Ptolemy VI. It is to be presumed that the ironical comment never reached the royal ears. Naturally the title was dropped after the unfortunate domestic event of 121 B.C.

There is no reason to suppose that his matricide sat very heavily on the soul of this second-century Orestes. It had been a case of kill or be killed, and public opinion took the disappearance of Cleopatra with perfect equanimity. From 121 B.C. to 116 B.C. Grypus reigned alone over all the remaining possessions of the house of Seleucus—Syria, Phoenicia, and Cilicia—and these were the last years in which a single sovereign was to bear rule over them all. From 116 B.C. till the fall of the dynasty in 69 B.C. there were to be forty years and over of incessant civil war.

In these five years of peaceful rule, between his twentieth and his twenty-fifth years of age, the character and the nose of Grypus developed. Physically he was an active and virile person: he married while still very young Tryphaena, daughter of Ptolemy VIII—one would have thought that he would have kept at all costs from having anything further to do with the abominable and incestuous family to which his mother had belonged. By her he had a very large family, five sons and several daughters, though she died before 113 B.C. But exactly how long their wedlock lasted we cannot tell. It may very probably have been

his mother who imposed his cousin on him as a bride before her fall. Of his private life we are told that, like many of his ancestors, he was a greater lover of ostentatious state, and that he lavished much money on splendid feasts in the groves of Daphne. Also that he was a poet—a few scraps of his verse have come down to us embodied in quotations in the physician Galen.⁵ Oddly enough their subject is snakes and poison—a topic that one would have expected that the son of Cleopatra would have avoided in his literary excursions.

To these years 121–116 B.C., and the three of civil war, 116–113 B.C., that followed, belongs undoubtedly the greater part of the coinage of Grypus showing his second standard portrait. There are four main issues of tetradrachms, all having as their obverse the king's portrait as a young man, well grown out of the boyishness that appears on the face that is coupled with that of Cleopatra on his earlier coinage, during his mother's co-regency. The griffin's beak is growing all the time—it is decidedly more prominent on the latest dated of these coins.

The issues are first a Phoenician set, with the usual reverse of the eagle and palm-branch. The specimen chosen as an illustration is one issued at Ascalon in 193 A.S., before Grypus had been reigning on his own account for more than a year. He is twenty-one, and looks no older in this very youthful and rather pleasing portrait.⁶

The second and far more common set is that which represents on its reverse Zeus Ouranios standing to

⁵ Galen, Book XIV, 185.

⁶ Pl. VIII. 2.

left, sometimes draped, sometimes undraped, holding a star in his right and a sceptre in his left hand. This issue appears to extend over the whole five years of Grypus's undisputed reign over all Syria and the three of subsequent civil war.⁷ Most of the issues are undated, but those which are give all the years from 193 A.S. inclusive to 197. The head is generally very pleasing, and even handsome, despite of the too-prominent nose. Of the two specimens illustrated in the plate, the one without a date and bearing the mint-mark **M** was evidently struck in the very beginning of the period,⁷ the other [Pl. VIII. 4] gives Grypus as he looked at the age of twenty-five, on the eve of the outbreak of civil war.

The third and fourth sets of the tetradrachm-issues of Grypus's first reign must be separated from the first two, because, unlike these, they never show the very young portrait that appears on some of the coins with *obv.* Eagle and palm-branch, and *rev.* Zeus Ouranios, but all display a more mature face which must belong to a man of twenty-five to twenty-eight rather than to a man between twenty and twenty-five. It is unfortunate that (unlike the other two series) they seem to include no dated specimens. I should feel inclined to put them all into the three years of the civil war of 116–113 B.C. One of the sets is undoubtedly a local issue of Tarsus extending over a very few years, and almost certainly developed because Grypus had lost his capital Antioch for a time. The other, which like the Tarsiot emission is quite scarce, is the limited issue of tetradrachms of

⁷ A specimen in the Hunterian cabinet is dated 113 B.C.

⁸ Pl. VIII. 3. In my own collection.

which the reverse represents Pallas Nikephoros standing to left. It bears the mint-marks of several unidentifiable towns—never apparently that of Antioch [see **PL. VIII. 6**].

The Tarsiot issue [**PL. VIII. 5**] has a reverse type of local significance, the Altar or Pyre of Sandan, which the Greeks ignorantly called the tomb of Sardanapalus. It represents a sort of altar bound with garlands, and surmounted by a conical erection within which is an oriental divinity standing on the back of a horned lion and holding a double-axe in his hand. This type was not a new one: it had been used before by Antiochus VII (Sidetes), by Demetrius II during his second reign, by Alexander Zabina, and by Grypus himself while he was ruling only as the coadjutor of his mother. I fancy that in all these cases the Tarsiot mint had been working only because the Antiochene mint had been in the occupation of an enemy. Sidetes had probably used it while he was contending with Tryphon during the first year of his reign, while the usurper was still controlling northern Syria, and had not been driven southward. Demetrius II lost Antioch early in his second reign to Alexander Zabina. Cleopatra and Grypus had possession of Cilicia and the Tarsus mint long before they recovered Antioch. In the case of each of them the Tarsiot coins are extremely rare, and were obviously issued only for a short time. This is especially the fact with regard to Sidetes, whose normal issue, with the reverse of the standing Athene, are among the most common Seleucid coins, while his Tarsiot issue is of the highest scarcity.

The civil war, to which these rare issues of Grypus with the Pyre of Sandan and the standing Pallas

belong, was the posthumous revenge of the dead queen Cleopatra. Just as that strange woman had sent Grypus to Athens for refuge during the period when her first Seleucid husband, Demetrius II, was being beaten down by Alexander Zabina, so she had already, on the return of Demetrius from Parthian exile, dispatched to Cyzicus, in the remote kingdom of Pergamus, her son by her second Seleucid spouse, Antiochus Sidetes. This had happened in 129 B.C., when the boy cannot have been more than seven years old, and was possibly a year younger. He had by 116 B.C. attained the age of twenty or twenty-one, and was old enough to be used as a tool by the enemies of Grypus, or even to dream for himself of recovering the throne of his father, possibly of avenging on Grypus the death of that most unamiable princess their common mother. It was, at any rate, Cleopatra's precaution in putting the son of her later husband out of the reach of the son of her earlier husband which had kept in existence a pretender for the Seleucid diadem, and rendered the ruin of Grypus possible. The exile declared that his life had been attempted by emissaries sent out to seek him by his half-brother the king, who had endeavoured to get him poisoned. Grypus, as we have already seen, was sufficiently associated with the idea of poison in more ways than one: it is quite impossible to say if the accusation brought against him was justified.

At any rate, it was made at a time when the political situation rendered an attack on Grypus opportune. The Syrian king had just mixed himself up in one of the never-ending civil wars of Egypt. He was allied to the reigning king Ptolemy Soter II, and opposed to

his younger brother and rival, Ptolemy Alexander, of Cyprus. In 116 B.C. simultaneously Antiochus of Cyzicus landed in Syria and got possession of some of the coast cities, and Cleopatra, the divorced wife of her brother Ptolemy Soter, and his bitter enemy, came to join the pretender with a large body of Egyptian mercenaries raised in Cyprus by Ptolemy Alexander. They were married, and their wedlock linked the Syrian and the Egyptian civil wars. The strife for the Seleucid crown raged for three years, the scales inclining more than once to favour alternately the younger and the elder of the two half-brothers. In the midst of the struggle Antiochus of Cyzicus, now officially styling himself **ΦΙΛΟΠΑΤΩΡ** as the dutiful admirer of his father Sidetes, got possession of Antioch, Grypus and his army being apparently driven into Cilicia, though certain cities in northern Syria, including Seleucia, continued to hold out for him. But presently Grypus returned in force, and succeeded in recovering his capital: we know of this fact from a horrid story in Appian. It runs as follows:—Cleopatra, the wife of Antiochus Philopator, was in Antioch when it fell: she took sanctuary at the suburban temple of Artemis, in the groves of Daphne. Queen Tryphaena, the wife of Grypus, asked her husband to have Cleopatra—her own sister—taken from the temple and put into her hands, not because she wished to save her from humiliation, but because she had a special hatred for her. Grypus refused; whereupon the queen sent a band of her own private guard to drag the unfortunate princess from her sanctuary, without her husband's knowledge. But Cleopatra entered into the inmost shrine, and threw her arms round the sacred image,

nor would she loose her clasp when the guards tried to drag her away. Whereupon one of them, irritated by her shrieks and imprecations, raised his sword and cut through both her wrists, so that she fell down and bled to death.

It may have been this horrid incident which turned the hearts of men so much against Grypus and his house, that in the next year he was completely defeated by Philopator, lost Antioch, and was driven out not only from Syria, but from Cilicia also. His blood-thirsty queen Tryphaena was captured by the victor, who put her to death in revenge for the murder of his own wife. Grypus had to abandon his kingdom altogether, and flew to Aspendus in Pamphylia, in the land of the Cilician pirates, where he was in exile for two years (113-111 B.C.). Meanwhile Philopator, in possession of nearly the whole realm, was striking in these years two types of tetradrachm which are very rare—the one at Tarsus with the local reverse of Sandan's Altar, the other with the figure of Zeus seated, a favourite old Seleucid type which belongs especially to the mint of Antioch. There was no other period of Philopator's twenty years' reign in which he was in solid possession of both these places for a considerable time, and the type of his portrait on them shows that these issues belong to his early manhood. For he is clean-shaven on all the Antiochene and most of the Tarsiot pieces, while on all his later coins, dated from 111 onwards, he shows a short bushy beard, which he wore till his death in 95 B.C. It is clear then that these rare tetradrachms belong to the period of his greatest prosperity, and of his half-brother's exile in 113-111 B.C.

In 111 B.C. Grypus returned from his refuge in Asia Minor with a newly-levied mercenary army, and recovered the northern part of his former dominions, including Antioch. This sudden revulsion on the part of the Syrians can only be ascribed to dissatisfaction with the rule of Philopator during the three years of his complete success. We are told that although active and courageous he was a great drinker and hopelessly frivolous. He spent much of his time with mimes and conjurors, and had a childish interest in ingenious mechanical toys. He was evidently one of those princes who are not bad leaders in war, but fail utterly when tried by the touchstone of peace. There had been no clear advantage won for the realm by evicting Grypus in order to enthrone his half-brother.

But Grypus, though he had recovered Antioch and the valley of the Lower Orontes, and evidently Cilicia also, was wholly unable to expel Philopator from the south. The latter held his own in Phoenicia and Coele Syria, and from 110 B.C. to 96 B.C. they warred against each other with no definite triumph for either side. For great part of these fourteen years the hostilities were of a trifling sort—both kings were exhausted, and as Josephus observes,⁹ they were "like athletes, who having failed to bring each other down by strength, are yet ashamed to retire, and protract their match with long breathing times and rests". The period is mainly notable in Seleucid history as that in which the royal power over the great cities slipped away—to win support the brothers granted "autonomy", Grypus to Seleucia in 108 B.C., Philopator to Sidon in

⁹ *Jewish Antiquities*, xiii, § 327.

111, to Tripolis in 105, and to Ascalon in 104. Tyre and Aradus had got similar immunities somewhat earlier. All these places show their quasi-independence by issuing, instead of the normal Seleucid coinage with the king's head, new types with the city gods (as at Tyre and Tripolis) or goddesses (as at Sidon, Aradus, and Ascalon) on the obverse, while the reverse always announces that the place is **ΙΕΡΑ ΚΑΙ ΑΥΤΟΝΟΜΟΣ**, and gives the date of the year since its independence was conceded.

On recovering great part of his realm in 111-110 B.C., Grypus proceeded to issue a currency of tetradrachms which entirely differed from those of his first reign. We do not again find either the standing Zeus Ouranios, nor the Pyre of Sandan, nor the Pallas Nikephoros as the reverse type: these are never met in conjunction with his later portrait. He chose instead to revert to the familiar Seleucid type of the seated Zeus Nikephoros, as it had been issued in earlier years by Antiochus Epiphanes, Antiochus V, and the two Alexanders, Bala and Zabina. It had been revived by Philopator during the three years in which he had been in possession of Antioch and the metropolitan mint. Grypus continued it without a break, while Philopator, when deprived of Antioch, fell back on the type of Pallas Nikephoros, which he had used in the early years of the civil war, before he got hold of the Syrian capital. There are no late Zeus-tetradrachms of Philopator, all the coinage of his last fifteen years of reign being of the Pallas type, save some exceedingly rare pieces with the old Phoenician eagle and palm-branch, and others still rarer with a standing Tyche. I am inclined to deduce from this fact that the type of the seated Zeus had got identified with the Antiochene

mint for the time being, and that its appearance on the money of one of these later Seleucidae means that he was in possession of the capital. This would seem to work as a hypothesis, for the kings of the next generation—Seleucus VI, Antiochus X, Eusebes Philopator, Antiochus XI Philadelphus, Demetrius III, and Philip—all at one time or another, and for a term of some years, held Antioch, and their normal type was the seated Zeus. But all of them occasionally lost Antioch, and then no doubt fell back on other types such as the Pallas Nikephoros, which is the common type of Seleucus VI, and the archaic goddess full-face, which Demetrius III displays much more frequently than the Zeus-type.

However this may be, it is certain that all the later tetradrachms of Grypus bear the seated Zeus Nikephoros, in a garland of laurel leaves tied at the top. They may be divided into two classes—in the first the portrait is that of a man still in comparatively early middle age, and the Zeus is of fairly good style. In the later ones the king looks all his forty-odd years, his beak has developed to its most formidable dimensions, and the Zeus on the reverse has become much more stiff, hieratic, and stumpy in build. These tetradrachms are almost without exception undated, and it was only this year that I chanced to hap upon one of the earlier type with a clear Seleucid date $\Theta\Sigma = 208$ A.S. or 104 B.C., of which a reproduction is given on PL. VIII. 7. The interest of this coin is that it shows that the final much-beaked portrait of the latest issues has not yet come in—i.e. all the coins similar to the last two shown in the plate, nos. 8 and 9, must belong to the last eight years of Grypus, 104 B.C. to 96 B.C. They are considerably commoner than those

with the portrait showing him in early middle age, though the existence of the first type must have ranged over at least the years 111 B.C. to 104, and that of the second from 104 to 96—only one year longer. Clearly the Antiochene mint was much more prolific in its issues during the final period of Grypus's long reign. This comparative scarcity of the coins belonging to the period 111–104 B.C. may perhaps be attributed to the fact that the civil war—as has been already said—seems to have languished for some time soon after Grypus's restoration, while we know that it blazed up again with redoubled force after 103 B.C., when the old king got Egyptian succours and a new Egyptian wife—Selene, the sister of the unamiable Tryphaena—and started a more vigorous attack on his half-brother Philopator.

The attack did not succeed, and Grypus was still waging war on Philopator when he was assassinated in 96 B.C. by his prime minister Heracleon of Berrhoea. He had reigned for thirty years, but was still only forty-six years of age: his portrait on his latest coins looks like that of an older man, but it must be remembered that his life had been stormy, and that Levantine princes age early. Comparing the last two coins shown on **PL. VIII**, we may note that the portrait shown on No. 8 is decidedly the more elderly, and that the Zeus on the reverse is much more weakly drawn and badly executed. We are on the eve of arriving at the abominably wooden effigies of the god which appear on the coins of Grypus's heirs, Seleucus VI, Antiochus XI, and Philip, where the type is a disgrace to a mint which, only thirty years before, was still capable of turning out neat and dignified designs.

C. OMAN.

VIII.

A CHRONOLOGICAL ARRANGEMENT OF THE COINS OF CHIOS; PART IV.

(Continued from p. 353, *Num. Chron.*, 1916. SEE PLATE IX.)

PERIOD X. 84 B. C.—THE REIGN OF AUGUSTUS.

IN spite of her boasted autonomy Chios from now onwards was as much subject to Rome as any ordinary province of the Empire. Verres disregarded her peculiar rights and pillaged her statues as freely as in cities where no such privileges existed. The most that can be said of her position as independent ally of the Romans is that she preserved her magistracies and civic laws as well as the right to coin silver. In 28 B. C. Augustus confirmed the so-called liberty of the island and no doubt restricted it as well, and in 15 B. C. came his monetary reform when the right of coining gold and silver was definitely reserved to the reigning Emperor. Whatever may have happened in this respect in other parts of the Empire, we have no reason to suppose that at Chios any drachms were struck after the accession of Augustus with the exception of those bearing the inscription ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ ΔΩΡΟΝ [Pl. IX. 12-13]. I am inclined to place these drachms rather later than the coins with the title ΣΕΒΑΣΤΟΥ [Pl. IX. 11], which may be dated *circa* 30 B. C., and to attribute them to the time of

Antiochus II of Commagene, who reigned from 38 to 20 B.C.

Two different suggestions with regard to the date of these drachms have already been made. M. Théodore Reinach thought that they were probably struck during the reigns of either Antiochus I or II of Commagene,⁹⁹ and Dr. Imhoof-Blumer that Antiochus IV, or the Great, of the same dynasty,¹⁰⁰ was the king whose generosity they commemorate. The former gives as his reason for preferring Antiochus I or II the fact that the close of the first century B.C. was remarkable at Chios for the acts of benevolence performed in the interest of the state by outsiders. The latter pronounced in favour of Antiochus IV simply on account of his wealth.

Now, of these three monarchs, Antiochus I reigned from 69 to 38 B.C., and this seems to me to be altogether too early a date for the style of the coins, though the period of the next reign, especially the last few years of it, would do very well. I am accordingly deciding, as I say above, for Antiochus II. Very little is known about him. But the friendly bearing of his father towards the Greeks is on record,¹⁰¹ and we may assume, as Reinach apparently does, that the son pursued a similar policy. The period of Antiochus IV, on the other hand, A.D. 38-72, is as much too late, from the point of view of style, as that of Antiochus I is

⁹⁹ "La Dynastie de Commagène", from *L'Histoire par les Monnaies*, p. 247, note (1).

¹⁰⁰ *Griechische Münzen*, Nos. 398-9. Dr. Head took the same view, *Hist. Num.*,² p. 601.

¹⁰¹ He called himself on his inscriptions Φιλορόμιος Φιλέλληρ, among other titles.

too early, at any rate so far as regards the better known of the two types concerned [Pl. IX. 12]. The details of both Sphinx and amphora are much more in keeping with what may fairly be regarded as the coinage of the late first century B.C. than with the issues that I am attributing to the time of Nero. This will be readily grasped by comparing the coin illustrated, Pl. IX. 17, with any of the later types. The former represents a group of bronze coins practically identical in style with these drachms, and since the bronze coins in question cannot well be dated later than the reign of Augustus, then this issue of the drachms at any rate must be assigned, as I am assigning them, to his contemporary Antiochus II of Commagene.

It is true that there were two issues and that the second type [Pl. IX. 13], which is represented to-day by a single specimen only, does look to be of later date than its companion. It must at any rate have been struck in a different year judging by the change in the magistrate's name alone. But if the two types are not to be regarded as of approximately the same date the latter would have to be carried down to the reign of Antiochus IV—as suggested by Dr. Imhoof-Blumer for all these coins—since the period of the intervening reign or reigns in Commagene was practically one of anarchy. And though there is not so much in the workmanship or lettering of the second type that is inconsistent with this theory, as in the first one, the improbability that two such issues should have been made by two different monarchs so widely separated in time is very great. Moreover the apparent difficulties suggested by the difference in style are, I think, capable of being overcome, as I shall try to

show later on, and we may conclude that the two types were issued within a few years of one another at the most.

In any case it seems more likely that the gift under consideration should have been made at a time when there is reason to suppose that the Chian state was in want of money than that the coins recording the gift should be relegated to a later period of which we have no such knowledge. Whether the poverty that evidently existed during the Augustan age was directly due to the ravages of Mithradates may be doubted, though the seeds of it were probably sown by those disasters.

At the end of the introduction to the last period we left the islanders struggling to re-establish themselves on their return from exile with the apparently gratuitous help of the citizens of Heraclea Pontica. Pliny the Elder, who makes the most of the Chian autonomy, relates¹⁰² that Cicero paid a visit to Chios—presumably in 78–76 B.C. (see above in reference to type No. 66 β – δ)—when the inhabitants were engaged in rebuilding their walls and repairing other damage recently done to the city. After that we hear nothing of an authentic nature relating to financial difficulties till the account we possess of Herod the Great's visit to the island in 12 B.C.¹⁰³ He then appears to have spent some little time there, to have paid the debts owed by the people to the imperial *procurator*, and to have assisted them in restoring some of their monuments.

This is the most circumstantial account we have of a monetary grant being made to Chios by a foreigner,

¹⁰² *Hist. Nat.*, xxxvi. 6. 46.

¹⁰³ Josephus, *Jewish Antiquities*, xvi. 2. 2.

though it is not the only one. Julius Caesar is described in one of the local inscriptions¹⁰⁴ as a benefactor of the island, but in his case the term may only have been used in a general sense. Also, in addition to the drachms recording the gift of the Antiochus whose identity is in dispute, there is a unique variety [Pl. IX. 10], of about the same date apparently as the drachms with ΣΕΒΑΣΤΟΥ, which seems to refer to some act of generosity on the part of a Roman settler in the island.

All these records, it will be noted, point to events that occurred before the end of the first century B.C.

Why Herod should have behaved so bountifully towards an obscure Greek state is not clear, but it seems probable that the Chian population at this period included a Jewish colony of some importance. A similar reason very likely called forth the assistance of the king of Commagene, while the Roman benefactor no doubt held property in the state.

One of the features of the period now under review is the number of coins contained in it that are capable of being dated with some approach to accuracy. Besides the three issues of drachms just mentioned there is the bronze coin with a galloping horseman on the obverse [Pl. IX. 14] that was evidently modelled on the Republican issues of various members of the Calpurnia Gens, 88-50 B.C.¹⁰⁵ From the analogy of other local coins this Chian issue must have followed its Roman prototype at some considerable distance, though, as I shall try to show, it was probably struck several years before the accession

¹⁰⁴ Boeckh, *C. I. G.*, No. 2214 g.

¹⁰⁵ See Grueber, *Brit. Mus. Cat. of Roman Republic*, Pls. xxxiii, xlv, and xlvii.

of Augustus. Then there is the other bronze coin bearing the name **ΤΙ·ΚΛΑΥ·ΓΟΡΓΙΑΣ·ΔΩΡΟΘΕΟΥ**. [Pl. IX. 17] to which attention has already been drawn, first with regard to the two last elements of the inscription, and secondly with regard to the strong resemblance that it bears to the greater part of the drachms of King Antiochus. The two first words, apparently Tiberius Claudius, cannot represent the Emperor, and one must suppose that some loyal citizen of Chios assumed the name of Augustus's successor after the latter's mission to Armenia and popular victory over the Parthians. As this took place in 20 B.C. the suggestion just made that both this issue and the disputed drachms should be ascribed to some such date is thereby strengthened.¹⁰⁶ The same remark as regards style applies equally to the bronze coins with the name **ACMENOC**.

These different landmarks have each in turn tempted me to fix a definite limit to the end of this period, but I have reluctantly felt obliged to reject them all as incapable of being applied sufficiently widely. The obvious line of division between this period and the next, and the one that I have decided to follow, is that separating the old style of coins, both silver and bronze, from the true imperial issues bearing marks of value. We do not know exactly when these issues began, though it is natural to connect them with the monetary reform of Augustus. Various points of style, however,

¹⁰⁶ Still further evidence in favour of this is furnished by an inscription found in the modern town of Chios (*C. I. G.*, No. 2242) consisting of the name **ΚΛΑΥΔΙΟΣ ΦΗΧΝΟΣ** (*sic*). From type No. 88 below it will be seen that a magistrate with the latter name, there correctly spelt **ΦΗΣΙ[ΝΟΣ]**, was in office when Antiochus made his gift to the island.

seem to show that they were introduced gradually, and did not replace the older issues once for all. I am therefore taking refuge in the vagueness of the phrase "reign of Augustus", which allows for the overlapping of the two styles, while not defining the limits of either too closely.

With regard to the coins belonging to the early part of the period it will be seen that the silver issues attributed to these years are less plentiful than those that I am supposing to have immediately preceded the exile in Pontus. This is what might have been expected, though it will be understood that the selection I have made is mainly arbitrary, helped out by the peculiarities of style that I am noting below. According to the arrangement I am suggesting there are only fourteen names extant on drachms to cover the fifty-four years between 84 and 30 B.C., and all these except three are represented by only one or two specimens each. A novelty in the silver coinage is the introduction of a divisional piece, probably a diobol [Pl. IX. 9]. From the style of the few specimens that we have these coins seem to have been struck to accompany some of the last autonomous drachms, though, in the absence of any magistrate's name, this cannot be stated with certainty. The issues are undoubtedly late, in any case, and no other similar ones appear to have been made.

The bronze belonging to this part of the period is more plentiful than the silver, both in the number of issues known and in the quantity of their individual specimens. There are a few pieces of large module—22 mm. average [Pl. IX. 3]—which may possibly have been struck before the coining of silver was resumed.

I base this suggestion chiefly on grounds of style, though it is possible that the coins in question ought to be placed nearer to the imperial issues bearing named denominations.

The chief characteristic in the style of this period, taken as a whole, is the much greater variety to be observed among the designs of the coins than at any previous period. Though the main elements of the types are still unchanged there is an absence of that conservatism which, from whatever cause it may arise, is a proof of local patriotism, and has been such a noticeable feature of the Chian series hitherto. The introduction of Alexandrine tetradrachms, though it was a step taken by most of the Greek states of the day, may be said to have been the first sign that this spirit was on the wane. All the same, the old types both for drachms and bronze coins were faithfully preserved, as we have seen, till at least half-way through the second century *A.C.* There was a little slackening then, exemplified by the way in which the design for drachms breaks up into the five separate groups of type No. 66, and by the new bronze type No. 67, but the coins now to be described show a different design for nearly every issue. There would no doubt have been a tendency to adhere to old traditions for a while when the Chians first returned from their exile, and this has encouraged me to begin this period with the small bronze coins of type No. 74 [Pl. IX. 4], and others of kindred style both silver and bronze [Pl. IX. 1 and 3], instead of including the first named at least among the somewhat similar issues attributed to the last period (type No. 67). After this last flicker of conservatism the individualistic types probably began

to appear, and the change was no doubt hastened by a greatly increased number of foreigners among the citizens. Apart from its inherent probability this supposition is confirmed by the names recorded on the coins. Among the later issues little groups can occasionally be picked out with a design common to all the coins composing them, like type No. 76 *a* in silver, and Nos. 78 and 83 in bronze, but they are quite rare exceptions.

Real innovations in type, which are most unusual and only to be found on bronze coins, appear when the Roman influence began to make itself strongly felt [Pl. IX. 14 and 19]. The former of these, to which attention has already been drawn, is clearly an agonistic type connected with the local games in honour of Dionysus.¹⁰⁷

The accession of Augustus seems to have been marked by a momentary improvement in the style of the coins, and by a certain archaism in their lettering.

The pre-Augustan drachms still to be described may be divided into the three main types that follow.

69. *Obv.*—Sphinx with sketchy curled wing, and hair fastened in knot behind with a loose lock or two hanging on neck, seated l. on plain exergual line, sometimes lifting farther forepaw. Human breast clearly defined. In front of it varying symbol, usually grapes and prow; and the whole, generally, in border of dots. Work in low relief.

Rev.—Tall thin amphora with lip between magistrate's name ρ . and $\chi\iota$ \circ Σ l. In field l. varying symbol, as a rule, and the whole in wreath of varying design or border of dots.

¹⁰⁷ For references to games in inscriptions see Boeckh, *C. I. G.*, Nos. 2214 and 2221 b; also Fustel de Coulanges, *op. cit.*, p. 308.

Α. ↑↑ 19.00 mm. 49.7 grains (3.22 grammes). Attic drachm. Paris Cabinet, Waddington, No. 2009. [Pl. IX. 1.] Also in Coll. at Public Library, Chios.

↑↓ 19.00 and 17.00 mm. 47.2 and 45.8 grains (3.06 and 2.97 grammes). Attic drachm. Brit. Mus. Cat. Ionia, Chios, No. 53, and Berlin Cabinet. Also in McClean Coll., Fitzwilliam Mus., Cambridge.

ΑΡΤΕΜΙΔΩ
ΡΟΣ *Obv.* has bunch of grapes over prow l. *Rev.* Aplustre to l. and vine-wreath tied below (1). Aplustre to l. and border of dots (2).

(probably) ↑? 19.00 mm. 59.0 grains (3.82 grammes). Attic drachm. Munich Cabinet, published by Imhoof-Blumer, *Griech. Münz.*, No. 387.

ΑΣΦΑΛΗΣ *Obv.* has bunch of grapes. *Rev.* Thyrsus *lemniscatus* to r. and vine-wreath.

↑↑ 19.00 mm. 51.1 grains (3.31 grammes). Attic drachm. Paris Cabinet, Waddington, No. 2010.

↑↑ 18.00 mm. 47.5 grains (3.08 grammes). Attic drachm. Berlin Cabinet.

ΔΕΚΜΟ[Σ] *Obv.* has no border (1), but aplustre over prow l. in both. *Rev.* has wreath to l. and olive-wreath border.

↑↑ 18.50 mm. 63.9 grains (4.14 grammes). Attic drachm. Paris Cabinet, Waddington, No. 2013. [Pl. IX. 2.]

ΛΕΩΝΙΔΗΣ *Obv.* has Sphinx holding thyrsus sloped over farther shoulder. *Rev.* has kithara l. and spear r., and ivy-wreath tied below.

↑↑ 17.50 mm. 45.5 grains (2.95 grammes). Attic drachm. My collection.

↑← 19.00 mm. 43.5 grains (2.82 grammes). Attic drachm. Vienna Cabinet.

ΜΕΝΕΚΡΑΤΗΣ *Obv.* has Sphinx raising farther forepaw over prow pointing upwards. *Rev.* has wreath to l. but no border.

↑↑ 19.00 mm. 51.7 grains (3.35 grammes). Attic drachm. Berlin Cabinet.

ΜΟΣΧΙΩΝ *Obv.* has bunch of grapes to l. *Rev.* Vine-wreath tied below and no symbol.

↑↑ 18.00 mm. 45.8 grains (2.97 grammes). Attic drachm. Paris Cabinet, No. 5003.

↑← 20.00 mm. 48.6 grains (3.15 grammes). Attic drachm. Vienna Cabinet.

ΣΚΥΜΝΟΣ *Obv.* has Sphinx raising farther forepaw over prow l. *Rev.* has cornucopias to l. but no border.

The bronze coins that I would ascribe to the beginning of this period, some of them being possibly earlier than type No. 69, are the following:

70 a. *Obv.*—Sphinx as on most of the coins described under type No. 69 seated l. or r. on exergual line of varying design with bunch of grapes before it, sometimes held in its upraised forepaw. Border of dots. Low relief.

Rev.—Tall thin amphora with lip between magistrate's name r. and **ΧΙΟΣ** l. No symbol. The whole in vine-wreath tied below.

Æ. ↑↑ 24.00 mm. 127.6 grains (8.27 grammes). Berlin Cabinet.

ΑΓ[Γ]Ε -- *Obv.* has Sphinx l. on plain exergual line and no border.

ΔΙΟΝΥ -- Details lacking. Coll. of Prof. Pozzi, Paris.

↑↑ 22.00 mm. 107.3 grains (6.95 grammes). Paris Cabinet, No. 5095. [PL IX. 3.]

↑↑ 22.00 mm. 124.2 grains (8.05 grammes). Paris Cabinet, No. 5096.

↑↑ 20.50 mm. 123.4 grains (7.99 grammes). Leake Coll., Fitzwilliam Mus., Cambridge.

ΜΗΤΡΟΔΩΡ[ΟΣ] *Obv.* has Sphinx r. on winged caduceus holding grapes in farther forepaw.

- 70 β. Same as preceding, with **ΜΗΤΡΟΔΩΡΟΣ**, except that the amphora has no lip and there is no magistrate's name.

Æ. ↑↑ 22.00 mm. 125.0 grains (8.10 grammes).
Vienna Cabinet.

71. *Obv.*—Sphinx of same style seated r. or l. generally on plain exergual line with bunch of grapes before it. Border of dots. Low relief.

Rev.—Amphora with or without lip between magistrate's name r. frequently written in two lines, and **ΧΙ ΟΣ** l. with symbol between the letters as a rule. No border.

Æ. ↑↑ 15.00 mm. Wt. ? Dealer's stock in Chios, 1913.

ΑΠΟΛΛΩΝ[ΙΔΗΣ] *Obv.* has Sphinx r.
Rev. Cornucopiae(?) as symbol.

↑↑ 14.00–12.25 mm. 43.4–26.2 grains (2.81–1.70 grammes). Paris, Berlin, Vienna, and Brit. Mus. Cat. Ionia, Chios, No. 89.

ΑΣΠΑΣ
ΟΣ *Obv.* has Sphinx r. *Rev.* Caps of
Dioscuri and stars as symbol.

↑↑ 14.50–14.00 mm. 37.0–23.6 grains (2.40–1.53 grammes). Berlin Cabinet, Coll. E. T. Newell, and my collection.

ΓΟΡΓΙΑΣ *Obv.* has Sphinx r. raising farther forepaw over grapes. *Rev.* Cornucopiae as symbol.

↑↑ 13.50 mm. 41.7 grains (2.70 grammes).
Athens Cabinet.

ΓΥΘ[Ι]ΩΝ *Obv.* has Sphinx l. raising farther forepaw over grapes. *Rev.* has indistinguishable symbol.

↑↑ 12.50 mm. Wt. ? Athens Cabinet.

ΘΕΟΔΩΡΟΣ *Obv.* has Sphinx l. on winged caduceus. *Rev.* has caps of Dioscuri and stars as symbol.

↑↑ 14.50–12.50 mm. 30.1–28.6 grains (1.95–1.85 grammes). Berlin, Munich, and Athens Cabinets. One specimen out of two at Athens found in Delos, and published

J. Int. d'Arch. Num., 1911, p. 85. Also my collection, illustrated. [Pl. IX. 4.]

**MHN $\overline{\Delta\Omega}$
POΣ** *Obv.* has Sphinx l. wearing *modius* on winged caduceus. (One of the Athens specimens has Sphinx r.) *Rev.* Caps of Dioscuri and stars as symbol.

↑↑ 15.00 mm. Wt. ? Sir H. Weber's Collection.

ΠΥΘΙΟΣ *Obv.* has Sphinx l. *Rev.* Caps of Dioscuri and stars as symbol.

↑← 14.00 mm. 35.8 grains (2.32 grammes). Athens Cabinet.

ΣΩΣΙΒΙΟ[Σ] *Obv.* has Sphinx l. *Rev.* Owl(?) as symbol.

72. *Obv.*—Similar to preceding, but of more varied design and in rather higher relief.

Rev.—Similar to preceding, but type generally enclosed in a border.

Æ. ↑← 13.00 mm. Wt. ? Coll. in Public Library, Chios.

↑↑ 12.50 mm. 30.7 grains (1.99 grammes). Berlin Cabinet.

ΑΡΓΗΟΣ *Obv.* has Sphinx l. No grapes. *Rev.* Eagle as symbol. Border of dots.

↑↑ 14.75 and 13.50 mm. Wt. ? Paris Cabinet, illustrated [Pl. IX. 5], and Munich Cabinet.

↑↑ 13.50 mm. Wt. ? Berlin Cabinet.

**ΔΙΟΔΩ
POΣ** *Obv.* has Sphinx holding up bunch of grapes in farther forepaw on serpent staff. No border. (1) has type to l.; (2) to r. *Rev.* has type in ivy(?)-wreath with head-dress of Isis as symbol (1); no symbol (2).

↑↓ 15.50 mm. 29.5 grains (1.91 grammes). Coll. E. T. Newell; also in Copenhagen Cabinet (K. Whitte's No. 126), but weight not known.

**MENIT
ΠΟΣ** *Obv.* has Sphinx r. on club. No grapes. *Rev.* has type in wreath like foregoing with caps of Dioscuri and stars as symbol.

↑↑ 15.25-11.75 mm. 27.6-24.4 grains (1.79-1.58 grammes). Hunterian Coll., No. 48. Paris, Berlin, and Vienna Cabinets.

ΠΤΟΛΕΜ
ΑΙΟΣ *Obv.* has Sphinx l. with ear of corn in front. *Rev.* Star as symbol. Border of dots.

↑↑ 13.50 mm. Wt. ? Athens Cabinet, found in Delos, and published *J. Int. d'Arch. Num.*, 1911, p. 59.

[**Σ**]Ω**ΣΤΡΑ**
ΤΟΣ *Obv.* has Sphinx l. holding up bunch of grapes in farther forepaw. No border. *Rev.* Cornucopias(?) as symbol. No border.

73. Similar to No. 71, but of rather later style and with border of dots on reverse.

Æ. ↑← 13.50 mm. Wt. ? Paris Cabinet.

↑← 16.50 and 15.00 mm. Wt. ? Dealer's stock in Chios, 1913, and Berlin Cabinet.

ΔΕΚΜΟΣ *Obv.* (1) has Sphinx l. holding aplustre in r. forepaw and placing l. on prow. (2) has Sphinx r. raising farther forepaw over prow. No grapes. *Rev.* has wreath as symbol in both.

Drachms with the two following names seem to be later than any of those described under No. 69.

74. *Obv.*—Sphinx seated l. on plain exergual line similar to No. 69, but of rougher style and in higher relief. Before it bunch of grapes.

Rev. Amphora with lip between magistrate's name r. and **ΧΙΟΣ** l. No symbol.

Æ. ↑↑ and ↑↓ 20.00-18.75 mm. 55.6-52.3 grains (3.60-3.39 grammes). Atticdrachms. Berlin Cabinet, published by Imhoof-Blumer, *Gr. Münz.*, No. 384; Paris Cabinet, Waddington, No. 2015; and two specimens in Coll. F. Pozzi, weights unknown.

↑↑ 19.50 mm. 50.1 grains (3.25 grammes). Attic drachm. Berlin Cabinet.

ΠΑΥΣΑΝΙΑΣ *Obv.* has border of dots in both, but (2) has type to r. *Rev.* has vine-wreath tied below.

↑↑ 18.50 mm. 55.1 grains (3.57 grammes). Attic drachm. Paris Cabinet, Waddington, No. 2017. [Pl. IX. 6.]

ΣΙΑΛΙΣ *Obv.* has no border. *Rev.* has border of dots.

The following bronze coins may be contemporaries of the foregoing:

75. *Obv.*—Sphinx, similar to type No. 72, seated r. or l. on plain exergual line without border.

Rev.—Amphora between magistrate's name r. and **ΧΙΟΣ** l., usually without either symbol or dotted border.

Æ. ↑↑, ↑↓, and ↑← 14.50–13.25 mm. 37.5–24.6 grains (2.43–1.59 grammes). Berlin Cabinet, B. Yakountchikoff's, Chios Library, and the writer's collections.

**ΑΡΙΣΤΟ
ΚΛΗΣ** *Obv.* has Sphinx to r. wearing *modius*, and raising farther forepaw over prow, sometimes pointing upwards. No grapes. *Rev.* sometimes in border of dots.

↑← 13.00 mm. 26.9 grains (1.74 grammes). My collection.

ΗΓΗΜ[ΩΝ] *Obv.* has Sphinx to l.

↑/ 14.00–12.75 mm. 42.1 grains (2.73 grammes). My collection; also in Paris and Berlin Cabinets, but weights not noted.

ΣΩΣΙΝΙΚΟ[Σ] *Obv.* has Sphinx to l. *Rev.* has wreath as symbol, and **ΧΙ ΟΣ**.

↑↑ 13.00 mm. 37.8 grains (2.45 grammes). Coll. E. T. Newell; also private coll. at Chios, weight not noted.

ΣΩΣΤΡΑΤΟΣ *Obv.* has Sphinx r. wearing *modius*. No grapes, but latter specimen has dotted border.

To one of the four preceding bronze types must probably also be added the following, further particulars of which I have been unable to obtain :

Æ. ↑ ? 15.00 mm. Wt. ? Cat. of Léopold Welzl de Wellenheim's Coll., vol. i, No. 5792.

ΑΙΔΗΜΟ - - *Obv.* has Sphinx l. raising farther forepaw over prow.

A still later group of drachms than type No. 74 is the following, with which must be associated the new divisional piece :

76 a. *Obv.*—Squat-shaped Sphinx seated l. on plain exergual line, wing curled more like the late coins of Period IX, but style much inferior, head-dress resembling turban, and both forelegs on ground. In front bunch of grapes. The whole in border of dots. Comparatively high relief.

Rev.—Amphora without lip between magistrate's name r. and ΧΙ·Σ l. No symbol. The whole in vine-wreath tied below.

Æ. ↑↑ 19.00 mm. 59.4 grains (3.85 grammes). Attic drachm. Berlin Cabinet, Imhoof-Blumer's *Griech. Münz.*, No. 375.

ΑΟΗΝΑΙ·Σ

↑ ? 20.75 mm. 56.8 grains (3.68 grammes). Attic drachm. Dr. Imhoof-Blumer's Coll., 1912.

[Π]ΑΤΑΙΚΙΩΝ

↑↑ 19.50 mm. 61.0 grains (3.95 grammes). Attic drachm. McClean Coll., Fitzwilliam Mus., Cambridge. [Pl. IX. 7.]

·Ι·ΑΝΗΣ

76 β. *Obv.*—Similar to preceding, but type larger and in lower relief.

Rev.—Amphora without lip between ΧΙΩΝ r. and ΓΛΑΥΚ·Σ l. in vine-wreath tied below.

Æ. ↑↑ 19.75 mm. 54.8 grains (3.55 grammes). My collection [Pl. IX. 8], published *Num. Chron.*, 1911, p. 93, No. 2.

77. *Obv.*—Squat-shaped Sphinx as above seated l. without exergual line in dotted border. No grapes.

Rev.—Amphora with or without lip between **XI·N** r. and bunch of grapes l. No magistrate's name, and no border.

Æ. ↑↑ 11.00 mm. 18.85 grains (1.22 grammes). Attic diobol (?). Berlin Cabinet, Imhoof-Blumer's *Kleinasiat. Münz.*, i, p. 102.

↑↑ 12.00 mm. 16.36 grains (1.06 grammes). Attic diobol (?). Berlin Cabinet, Imhoof-Blumer's *Monn. Grecques*, p. 297.

↑↑ 12.00 mm. 19.60 grains (1.27 grammes). Attic diobol (?). Munich Cabinet.

[Pl. IX. 9.]

In (1) the inscription is rendered **XIOW**, and (2) has no dotted border on *obv.* but the Sphinx is seated on a line.

The following bronze coins seem to be contemporaries of the last two silver types :

78. *Obv.*—Squat-shaped Sphinx like types Nos. 76-7, but in low relief, seated r. or l. Before it bunch of grapes. Dotted border.

Rev.—Amphora with or without lip between magistrate's name r. and **XI·Σ** l. Neither symbol nor border.

Æ. ↑↓ and ↑↑ 10.00 mm. 14.2 grains (0.92 gramme). Athens Cabinet, and Coll. in Public Library, Chios.

ΑΘΗΝΑ[**Ι·Σ**] *Obv.* has Sphinx r.

↑↑ 12.50 mm. 31.0 grains (2.01 grammes). My collection, found in Chios.

ΑΜΑΝ·[**Σ**] *Obv.* has Sphinx l.

↑↓ 14.50 mm. 39.7 grains (2.57 grammes). Berlin Cabinet.

ΗΓΗΜ[**ΩΝ**] *Obv.* has Sphinx l.

↑↓ and ↑↑ Size ? Wt. ? Coll. in Public Library, Chios, and dealer's stock, Chios, 1913.

-- **·ΝΤΙ·Σ** *Obv.* has Sphinx l. but no grapes.

79. *Obv.*—Naked horseman galloping l. and brandishing whip in uplifted r. hand.

Rev.—**ΧΙΟΣ** or **ΧΙΟΝ** to r. of thyrsus, adorned with fillets, standing upright in ivy-wreath tied below.

Æ. ↑↑ 20.00 mm. 150.5 grains (9.75 grammes). Athens Cabinet. Found in Delos with other Chian coins of imperial times, and published *J. Int. d'Arch. Num.*, 1911, p. 89.

↑↑ 21.00 mm. 69.4 grains (4.50 grammes). Berlin Cabinet, Imhoof-Blumer's *Monn. Grecques*, No. 136.

↑↑ 18.50 mm. 83.1 grains (5.39 grammes). Paris Cabinet, Waddington, No. 2021.

[Pl. IX. 14.]

↑↑ 20.50 mm. 167.6 grains (10.86 grammes). Brit. Mus., recent acquisition.

(1) and (2) have **ΧΙΟΣ**, and (3) and (4) **ΧΙΟΝ** to r. of thyrsus on reverse.

The drachms probably struck a little previous to, and coincident with, the accession of Augustus are the following:

80. *Obv.*—Sphinx, resembling that of type No. 69 with **ΑΡΤΕΜΙΔΩΡΟΣ** but in higher relief, seated l. on plain exergual line; both forelegs on ground. Before it bunch of grapes. The whole in dotted circle.

Rev.—Amphora with lip between **ΠΑΒΙΡΙΟΣ** r. and **ΧΙΟΣ** with crescent in field l.; sometimes star above it. The whole in dotted circle. Concave field.

Æ. ↑↑ (one specimen has ↑↓) 20.00–17.00 mm. 49.5–41.2 grains (3.21–2.67 grammes). Attic drachm, or Roman denarius, reduced. Brit. Mus. Cat. Ionia, Chios, No. 57, Paris Cabinet, Berlin Cabinet, &c.

81. *Obv.*—Small Sphinx of careless style seated r. on plain exergual line; both forelegs on ground. Around **ΦΟΥΡ - - ΣΣΙΦΑΥΛΟΣΦΙΛΟΠΑΤΡΙΣ** ε.

Rev.—Amphora without lip between ΔΙΟΓΕΝΗΣ l. and ΕΥΔΗΜΟΣ r. No border.
ΧΙΟ[Σ]

Æ. ↑ ← 19.00 mm. 58.3 grains (3.78 grammes). Attic drachm, or Roman denarius. Berlin Cabinet, published by Imhoof-Blumer, *Griechische Münzen*, No. 394. [Pl. IX. 10.]

82. *Obv.*—Sphinx, like type No. 80, seated r. or l. on plain exergual line. Before it bunch of grapes. Above ΣΕΒΑΣΤΟΝ ∩. The whole in dotted border.

Rev.—Amphora with lip between ΔΙΟΓΕΝΗΣ l. and ΕΥΔΗΜΟΣ r. No border.

Æ. ↑↑ (one specimen has ↑↓) 20.00–17.00 mm. 48.5–37.3 grains (3.14–2.42 grammes). Attic drachm, or Roman denarius, reduced. Brit. Mus. Cat. Ionia, Chios, No. 102, Hunt. Coll., Berlin Cabinet, and Paris Cabinet, illustrated. [Pl. IX. 11.]

The bronze coins that seem from their style to be contemporary with the above are the following:

83. *Obv.*—Sphinx, of style similar to type No. 82, seated l. on plain exergual line; both forelegs on ground. Before it bunch of grapes. The whole in dotted border.

Rev.—Amphora with lip between magistrate's name r. and ΧΙΟΣ l. No symbol. The whole in dotted border. Concave field.

Æ. ↑↑ 15.25 mm. 27.0 grains (1.75 grammes). Berlin Cabinet. [Pl. IX. 15.]

ΑΡΙΣΤΟΜ[ΑΧΟΣ?]

↑↑ 14.25–13.00 mm. 25.3–20.2 grains (1.64–1.31 grammes). Vienna Cabinet, my coll., and W. S. Lincoln's stock, 1913.

ΑΘΗΝΑΓ[ΟΡΑΣ]

↑↑ 15.00–12.00 mm. 26.6–15.3 grains (1.72–0.99 gramme). Berlin Cabinet (two specimens) and dealer's stock in Chios, 1913.

ΗΡΟΚΡΑΤ[ΗΣ]

↑↑ 15.50-13.00 mm. 28.0 grains (1.82 grammes).
Berlin Cabinet, Sir H. Weber's Coll.,
E. T. Newell's Coll., and private coll. in
Chios.

ΦΑΙΝΟΜ[ΕΝΟΣ ?]

84. *Obv.*—Squat-shaped Sphinx seated l. on palm-leaf wearing *modius*, and holding wreath in upraised farther forepaw.

Rev.—Amphora without lip with ΑΡΙΣΤΑΙΧΜΟΣ ζ to l. and ΧΙΟΣ to r. in incuse circle.

Æ. ↑← (one specimen ↑↓) 15.00-13.50 mm. 34.2-31.8 grains (2.22-2.06 grammes). Brit. Mus. Cat. Ionia, Chios, No. 103, illustrated [Pl. IX. 16], Athens Cabinet, and Coll. in Public Library, Chios.

85. *Obv.*—Sphinx, similar to type No. 82, seated l. on plain exergual line. Before it winged caduceus. The whole in border of dots.

Rev.—Amphora with lip between ^{XI}ΑΠΟΛΛΩΝΙΟΥ to r. and ^{OC}ΙΕΡΩΝΥΜΟΣ to l. in shallow incuse circle.

Æ. ↑↑ 19.00-17.00 mm. 37.7-35.5 grains (2.44-2.30 grammes). Brit. Mus. Cat. Ionia, Chios, No. 106, Paris Cabinet, No. 5011, and Berlin Cabinet. (This specimen has a star between O and C of ΧΙΟC.)

86. *Obv.*—Sphinx of similar style seated l. on plain exergual line raising its farther forepaw. Dotted border.

Rev.—Amphora with lip between ΦΑΥΣΤΟΣ r. and ΧΙΟΣ with star l. Dotted border. Concave field.

Æ. ↑← 19.25 mm. 50.9 grains (3.30 grammes). Paris Cabinet, No. 5070.

↑← 18.50 mm. 53.9 grains (3.49 grammes). Vienna Cabinet.

87 a. *Obv.*—Sphinx of similar style, but lower relief, seated l. raising farther forepaw? No border.

Rev.—Amphora with lip between χ l. and ι r. No magistrate's name. No border visible.

Æ. $\uparrow\downarrow$ 22.75 mm. 60.7 grains (3.93 grammes).
Vienna Cabinet.

87 β. *Obv.*—Sphinx l. as above, but with both forelegs on ground. Before it aplustre (?). Border of dots.

Rev.—Amphora with lip between χ l. and ι r. in border of dots. No magistrate's name.

Æ. $\uparrow\uparrow$ 14.00 mm. Wt.? Dealer's stock in Chios, 1913.

The very late drachms with the name Antiochus are the following:

88. *Obv.*—Sphinx of very rude style seated l. on plain exergual line holding wreath in farther forepaw. In exergue ΦΗΣΙ[ΝΟΣ]. The whole in dotted border.

Rev.—Amphora with lip between ΒΑΣΙΛΕΩΣ
ANTIOΧΟΥ r. and
ΔΩΡΟΝ l. The whole in olive-wreath tied to l.

Α. $\uparrow?$ 19.00 mm. 49.4 grains (3.20 grammes).
Attic drachm, or Roman denarius, reduced.
Paris Cabinet, Babelon's *Rois de Syrie*, p. 210,
No. 1589. [Pl. IX, 12.]

$\uparrow?$ 18.00 mm. 45.5 grains (2.95 grammes).
Paris Cabinet, Babelon's *Rois de Syrie*, p. 210,
No. 1590.

$\uparrow?$ 20.50 mm. 42.3 grains (2.74 grammes).
Paris Cabinet, Waddington, No. 2008.

$\uparrow?$ 19.00 mm. 30.1 grains (1.95 grammes).
Vienna Cabinet.

89. *Obv.*—Sphinx, of still ruder style, seated l. on plain exergual line holding bunch of grapes (?) in farther forepaw. In exergue ΜΙΝΥ[ΚΙΟΣ?]
No border.

Rev.—Amphora without lip and, possibly, with a bunch of grapes countermarked upon the shoulder, between ΒΑΣΙΛΕΩΣ[C]
ANTIOΧΟΥ r. and ΔΩΡΟΝ l.
The whole in dotted border.

- R. $\uparrow\downarrow$ 19.00 mm. 44.75 grains (2.90 grammes).
Attic drachm, or Roman denarius, reduced.
Berlin Cabinet, Imhoof-Blumer's *Griechische Münzen*, No. 399. [Pl. IX. 13.]

The remaining bronze coins without marks of value which appear to be of about the same date as the preceding are as follows:

90. *Obv.*—Sphinx, like type No. 88, seated l. on plain exergual line. Before it aplustre (?). Sometimes border of dots.

Rev.—Amphora with lip between AC/ΛENOC r. variously arranged, and XIOC l. No border. Concave field.

- Æ. $\uparrow\leftarrow$ (one specimen has $\uparrow\downarrow$) 18.50–16.75 mm. 62.9–35.9 grains (4.08–2.33 grammes). Brit. Mus. Cat. Ionia, Chios, No. 105, Hunterian Coll., Nos. 50–1, Paris, Athens, Munich, and Vienna Cabinets.

- 91 a. Same as preceding, but without symbol on obverse.

Æ. $\uparrow\leftarrow$ 12.00 mm. 12.96 grains (0.84 gramme). Vienna Cabinet.

- 91 β. *Obv.*—Sphinx seated l. holding bunch of grapes in farther forepaw. Border of dots.

Rev.—Kantharos with AC/ΛEN to l., and OC above ζ, and XIOC to r.

- Æ. $\uparrow\leftarrow$ 13.50 mm. 18.05 grains (1.17 grammes). Berlin Cabinet.

$\uparrow\leftarrow$ 13.25 mm. 20.8 grains (1.35 grammes). My collection.

92. *Obv.*—Sphinx, like type No. 88, seated r. on plain exergual line. Before it club. Border of dots.

Rev.—Amphora with lip between O to l. and X to r.

Around TI·KΛAY·ΓOPΓIAC·ΔΩPOΘEOY·
Sometimes in shallow incuse circle, or concave field.

Æ. ↑↓ and ↑↑ 18.00-16.00 mm. 51.7-35.9 grains (3.35-2.33 grammes). Brit. Mus. Cat. Ionia, Chios, No. 104, Hunterian Coll., No. 49, Paris Cabinet, Waddington, No. 2020, illustrated [Pl. IX. 17], Athens Cabinet, found in Delos, and published *J. Int. d'Arch. Num.*, 1911, p. 93, &c.

93. *Obv.*—Sphinx, of better style than preceding and more like type No. 84, seated l. on plain exergual line. Before it thyrsus. No border.

Rev.—Amphora with lip. In field l. XIOC No magistrate's name, and no border.

Æ. ↑ ? 9.50 mm. 10.0 grains (0.65 gramme). Coll. B. Yakountchikoff. [Pl. IX. 18.]

94. *Obv.*—Sphinx, of slightly varying form, seated r. or l. on plain exergual line in dotted border.

Rev.—Thyrsus, standing upright in ivy-wreath showing a double row of leaves, with XIOC l. and magistrate's name r.

Æ. ↑← 10.00 mm. 23.2 grains (1.50 grammes). Brit. Mus. Cat. Ionia, Chios, No. 44.

ΑΘΗ -- Sphinx to l.

↑↓ 11.50 mm. Wt. ? Coll. in Public Library, Chios.

↑↓ 10.75 mm. 15.1 grains (0.98 gramme). My collection.

ΕΤΙ[ΑΙΟC?] Sphinx to r. raising farther forepaw.

↑↑ 10.00 mm. 16.1 grains (1.04 grammes). Brit. Mus. Cat. Ionia, Chios, No. 45.

[Pl. IX. 19.]

ΗΓΗ -- Sphinx to r.

Before commenting as usual on the details of the types just described a few general remarks with regard to the issues selected for the opening years of this period are first due.

The question as to which coins preceded and which

immediately followed the exile in Pontus must remain largely a matter of conjecture. Still, it would come nearer to being decided if we could find a certain number of issues distinguished by some characteristic common to them all, and later than, or at least as late as, any of those ascribed to Period IX. In searching for such a characteristic I have been guided by the following considerations. The duration of the exile being so brief, it seems almost certain that the old types would have been revived after it, as already suggested, at any rate for a time. Bearing that in view it would then seem that we must look for some difference of technique rather than for a more or less important change in detail as our distinguishing mark. Now a considerable number of the late Chian coins are struck in much lower relief than any of those recorded hitherto, and it is this low relief, I think, that supplies the means of discriminating between the two groups of coins in question.

The prow on the obverse of some of the issues ascribed to the present period is a detail that cannot fail to attract attention because of its far greater prevalence later on. But a few coins bearing this addition to the main design have already been attributed to types Nos. 66-7 on account of their style, and its inauguration may therefore be said to belong to the last period. It is seen much more frequently now, however, and we appear to have reached a moment when the prow and the bunch of grapes were competing for the post of honour as distinctive emblem of the Sphinx, with the result still left uncertain. The drachms of type No. 69 nearly all have a prow on the obverse, sometimes accompanied by, and sometimes

without, the bunch of grapes, while only one issue of the earlier high-relief drachms is so distinguished (type No. 66 γ with $\text{MHTPO}\Delta\Omega\text{PO}\Sigma$). In the case of the bronze the contrary is the case, none of the issues of types Nos. 70-1 showing the prow, though several of those belonging to type No. 67 did so, but it is not at all certain that types Nos. 69, 70, and 71 are exact contemporaries.

The coins struck in low relief, whether they bear a prow or not, make no such demands for an extension of their period into the early years of the first century. Even the best executed among them are, on the whole, of later appearance than anything ascribed to Period IX, and are quite suitable for filling the gap, so far as their numbers will allow them to do so, between 84 B.C. and the uncertain date when types showing Roman influence began to be issued. This low relief is particularly noticeable in the case of the Sphinx's wing, which must have been, so to speak, sketched upon the die, instead of being boldly blocked out as formerly. Some of the intermediate types, such as Nos. 74 and 76 α in silver and most of Nos. 72 and 75 in bronze, are modelled in comparatively high relief, as well as those immediately connected with the accession of Augustus, as already observed. The small bronze type No. 71 is really the key to the whole arrangement on account of its similarity to type No. 67 of the last period, the close connexion between these two being undeniable. But since the same cannot be said of any of the drachms described under type No. 69 and their predecessors of type No. 66, it almost looks as if the first issues of the period now under review had consisted of bronze only. This theory is supported by the presence

of the large bronze pieces of type No. 70, so similar to the small type No. 71, by the absence of any names common to these two bronze types and the silver one No. 69, and by the occurrence of the prow symbol on the obverse of the only bronze issue that bears the same name as one of the drachms. This is type No. 73, which, as already pointed out, is of later style than No. 71, although the drachm with the same magistrate's name, **ΔΕΚΜΟΣ**, is among the earliest issues of type No. 69. Since this is pure hypothesis, however, I am not pressing the point, as in the somewhat similar case of types Nos. 56-7 of Period VIII, but am giving the drachms the precedence in the usual manner.

Another almost inevitable consequence of this separation according to style of coins that are such near contemporaries is that a few of the magistrates' names are almost certain to occur in both periods. This will be found to be the case, and I look upon the four names noted below under this head as those of men who held office both before and after their banishment by Mithradates. The same remarks might of course be applied to the symbols, several of which, like the aplustre, caps and stars of the Dioscuri, and the head-dress of Isis, will be recognized here. But the probability of identity in these cases is not so great, at any rate not where the objects of fairly frequent occurrence, like the aplustre, are concerned.

No. 69. The issues of this group of drachms with the names **ΑΡΤΕΜΙΔΩΡΟΣ**, **ΔΕΚΜΟΣ**, and **ΣΚΥΜΝΟΣ** seem to be the earliest. [Pl. IX. 1.]

The style of the Sphinx is not bad, and recalls that of type No. 57 (Period VIII), rather than that of any variety of the later type, No. 66, which might have

been expected to have served as a model for these coins if there had been any really close connexion between them. The amphora throughout is of the long thin type with a lip, first met with on coins of type No. 66 β, but only occasionally then. The wreath, when it is used, is, like the obverse type, in very low relief, and in the case of the issue with ΔΕΚΜΟΣ it is composed of olive-leaves. On the one with ΛΕΩΝΙΔΗΣ [Pl. IX. 2], which represents the later and more individualistic portion of the group, an ivy-wreath is found. This form of wreath has already been noted once on the bronze type No. 67 with ΑΙΣΧΙΝΗΣ, and later on it will be seen fairly frequently.

I have unfortunately not seen the coin with ΑΣΦΑΛΗΣ, but I am including it among these issues on the strength of its symbol, a thyrsus. This emblem has so far only appeared once as a symbol (type No. 66 β with ΑΡΤΕΜΙΔΩΡΟΣ), but its use becomes fairly common in this period, though it extends over too long a time, so far as one can tell, to represent the same magistrate.

With regard to the magistrates whose names are recorded we may note Ἀρτεμίδωρος, as being the first of the four men whom I am supposing to have served in this period as well as in the last.¹⁰⁸ Δέκμος is one of the witnesses to the foreign element in the population referred to above. The name is no doubt a form of Decimus. Μενεκράτης has already been met with on one of the tetradrachms of Alexandrine types, but, as was observed in the comment on type No. 60, there can be no question of this drachm having been among

¹⁰⁸ See type No. 66 β.

its contemporaries. The *Σκύμνος* recorded here may quite well have been the geographer of that name as he flourished *circa* 90 B.C.

The lettering throughout is of the ordinary type with "apices", a little larger on the whole and, I think, later than anything included under type No. 66. The only unusual form is that of the *Ω* on the issues of *Ἀπρεμίδωπος*. *κ* and *φ* both have their uprights prolonged above and below the level of the other letters quite consistently, but the later form of *ι*, already noted in type No. 67, does not appear.

The weights, like the lettering, support my claim to place all these coins later than those I have attributed to the last period. The twenty-three specimens that I have been able to examine, representing this type and Nos. 74 and 76, its near contemporaries, average 51.9 grains (3.36 grammes), while, as was observed above when commenting on type No. 57, sixty-five specimens of types Nos. 63 and 66 average 56.2 grains (3.64 grammes). A few unusually heavy pieces stand out from the rest, such as those of *Λεωνίδης* in type No. 69, and of *Ἀθήναιος* and *Φάνης* in type No. 76 *α*, but they are much rarer than the similar exceptions in the earlier groups. On the whole the standard may be said to have sensibly depreciated at this time, although, judging from the occasional heavy pieces, it had probably not been officially reduced, and the coins were no doubt still reckoned as Attic drachms.¹⁰⁹ A striking illustration of the lower weights ruling

¹⁰⁹ Compare the Athenian drachms of the new style, *Brit. Mus. Cat. Attica*, No. 335, &c., some of which are only slightly earlier than the present type. These all weigh round about 63 grains (4.10 grammes).

among the coins that I am attributing to this period, as compared with those in the last, is afforded by the issues of *Ἀπρεμίδωρος*. Out of eight pieces known to me with this name, four belong to what I call the earlier style of type No. 66 β, and four to the later, characterized by its low relief and the prow symbol on the obverse. The former weigh 61.9, 61.0, 59.0, and 56.6 grains, and the latter 49.7, 47.2, 45.8, and 41.2 grains, the last specimen being pierced.

The new symbols to be noted are the spear, the thyrsus already alluded to above, the kithara, and the wreath. The spear on the issue of *Δεωνίδης* is unique, but there seems to be no doubt that the object in question is a spear [Pl. IX. 2]. It looks like the Persian type of weapon with an apple or pomegranate at the butt,¹¹⁰ but it is difficult to say what significance it can have borne at Chios. The three other symbols may be looked upon as referring to the tutelary gods Apollo and Dionysus, whose statues appear at full length on some of the imperial bronze. The kithara is not seen again, but the thyrsus and wreath are widely used on the bronze coins that come between these drachms and the imperial issues. The cornucopiae, which also appeared in type No. 66 γ of the last period, may be taken as a link between these drachms and the small bronze type No. 71. The combination of aplustre and prow on the drachms of *Δέκμος* is curious, and indicative, to my mind, of the conventional use of the prow. It must have been regarded as so much a part of the type that no inconsistency was entailed in placing an aplustre

¹¹⁰ Herodotus vii. 42.

above it. The kithara and spear on the issue of *Λεωνίδης* are different, and suggest the presence of two magistrates in addition to the one who signs his name in full. The bronze types Nos. 62 and 67 afford evidence of a similar nature, but I have not observed it *before* on a silver coin.

The die-positions vary, but include more instances of $\uparrow \leftarrow$ than have hitherto been noted on silver coins. In recording this position I have not attempted at any time to distinguish between $\uparrow \leftarrow$ and $\uparrow \rightarrow$.

No. 70 *a* and *β*. The attribution of these rare coins is rather a difficulty. Enough has already been said about their similarity to types Nos. 69 and 71 to explain my reason for placing them at the beginning of this period. The winged caduceus in place of an exergual line [Pl. IX. 3] connects the group with type No. 67 on the one hand and with No. 71 on the other. The only point in which these large coins differ from the latter is the absence of a separate symbol, but in that they agree with the earlier type. The names include **ΜΗΤΡΟΔΩΡΟΣ**, which is that of the second of the four magistrates whose coins would occur both in this period and the last supposing that the present type is correctly placed.

The lettering is like that of the last type in every particular where comparisons are possible. The weights and die-positions are very regular, the former unusually so for a bronze series. If, as I have suggested, these coins were struck for a time in place of silver drachms this is to be expected, as more attention than usual would probably then have been given to their weights.

The sub-type No. 70 *β* is the third instance encountered so far of a coin being struck without a

magistrate's name after the use of names had been introduced.¹¹¹ From now onwards this peculiarity occurs so frequently as not to be worth noting.

No. 71. To appreciate fully the importance that I am attaching to this otherwise insignificant type I must invite a comparison of the coins illustrated on Pl. XI. 17-19 of *Num. Chron.*, 1916, with the one figured on Pl. IX. 4 of the present section. The general resemblance and yet strong points of difference between the two types will I hope then be clear, as well as my contention that the latter are of sufficient importance to justify their being used to signalize a new era. In addition to the low relief we have here a dotted circle on the obverse and no border on the reverse, but a symbol between the letters $\chi\iota\omicron\sigma$ to the left of the amphora. Certain instances will be observed, both in this type and the next, where the Sphinx is still seated on various objects as in type No. 67. Now that symbols on the reverse have become the rule with bronze issues it is hard to account for this object unless reference to a third magistrate be intended. The amphora does not as a rule show the lip that we have come to associate with the late coins, but this is not by any means a constant characteristic. The type is the most homogeneous of any of those ascribed to the present period, and comprises the greatest number of names. The low relief has rendered the coins particularly susceptible to wear, and, although certain issues among them are not at all rare, it is difficult to find a really well-preserved specimen. The prow is not seen on any of the issues. The *modius* or *kalathos*,

¹¹¹ See types Nos. 47 a and 53 a.

which appears occasionally from now onwards on the head of the Sphinx,¹¹² is so frequently seen on late coins in connexion with so many forms of worship that it is perhaps hardly worth mentioning. But the object is of especial interest at Chios as supporting the theory, put forward in the introduction to this study and in the comments on some of the archaic silver coins,¹¹³ that the Sphinx has a strong claim to be regarded as a chthonic emblem in its origin. No doubt its Dionysiac aspect had prevailed since the primitive days, but its representation here with the head-dress proper to the gods of the lower world makes it look as if the other view had survived as well. A simpler explanation may be that this particular rendering of the Sphinx is due to the slavish copying of some statue at a time when the true meaning of all such symbolism had been forgotten.¹¹⁴

Among the names¹¹⁵ are those of the two remaining magistrates whose coins I am dividing between the last period and this one, ΑΠΟΛΛΩΝ[ΙΔΗΣ] and ΓΟΡΓΙΑΣ. Under type No. 67 it was pointed out that *Γοργίας*, like *Μητροδώρος*, was probably among the latest of his group, so that the chances in favour of his

¹¹² It seems to have been used first on one of the drachms with ΚΟΡΩΝΟΣ, type No. 66 γ, above.

¹¹³ *Num. Chron.*, 1915, pp. 5 and 34. With regard to the lotus-flower and cock's head symbols, and the spiral ornament on the Sphinx's head.

¹¹⁴ Though not quite a parallel case, see Beulé's *Monn. d'Athènes*, pp. 246-8, for the adaptation of the head-dress of Isis to late representations of Ceres.

¹¹⁵ Mionnet's reading ΑΣΠΑΡΟΣ, *Méd. grecques*, vi, p. 389, No. 24, was probably taken from a coin of this type with ΑΣΠΑΣΙΟΣ.

reappearing here would consequently be increased. ΓΥΘ[Ι]ΩΝ is an unlikely looking name, though the Γ is clear on the coin. It may be that ΠΥΘΙΩΝ was the correct form. ΠΥΘΙΟΣ is also doubtful, being the attribute of a god, but it is probably a late or illiterate rendering of ΠΥΘΕΟΣ, which is fairly common on Ionian coins.¹¹⁶

The lettering is neat and the forms used are in complete accord with those of types Nos. 69 and 70, and are later, on the whole, than those of type No. 67. "Apices", which are here in general use, were only occasionally met with on coins of the last-named type, and Θ and Ω, which were exceptional before, have now almost entirely supplanted Θ and Ω. The weights are, generally speaking, lower than in type No. 67, and the die-positions are more regular. Among the symbols the owl might be reckoned as a new-comer, but it is uncertain. The almost regular employment of the caps and stars of the Dioscouri throughout the type is worthy of note, especially as they do not appear again. The symbol has been seen once before, however, on some of the drachms with ΖΗΝΙΣ (type No. 66 β), and the issue with ΜΕΝΕΚΛΗΣ (type No. 66 γ) had the twin stars alone. We must suppose that the four issues of the present type, and the one of the next one with the caps and stars, were all struck during the reign of the same eponymous magistrate, like the similar and still larger groups of types Nos. 62 and 67; and that, as suggested above, he may possibly have officiated during the last period as well.¹¹⁷ A similar comparison

¹¹⁶ *Brit. Mus. Cat. Ionia, Erythrae*, No. 191; *Clazomenae*, Nos. 22 and 49; and *Colophon*, No. 43.

¹¹⁷ The Rhodian series provides a very similar case in period

may be made between the cornucopiae of this type and No. 69, and the drachm with ΔΕΡΚΥΛΟΣ (type No. 66 γ).

No. 72. These coins can hardly be called a type, as they differ so much among themselves in minor details. Still, they have a better claim than any other group to be considered the successors of the last one. The wreath, sometimes seen on the reverses, takes quite a different form from any of those used in type No. 67. The name ΑΡΓΗΟΣ is presumably an illiterate rendering of ΑΡΓΕΙΟΣ. In a local inscription apparently belonging to the first century B.C. (*C. I. G.*, No. 2220) a Διδώρος Λυσικράτου is mentioned as having been honoured with a gold wreath for piety towards the gods and for good services to the state. It is just possible that the individuals referred to may be this Διδώρος and the Λυσικράτης of type No. 65. The Σώστρατος of this type no doubt also struck the coins with the same name described under type No. 75, as the latter cannot be very much later than this.

In contrast to the last type all the symbols used here are different. They have also all occurred on previous types, the eagle as far back as the drachms of No. 66 β. The coins of Πτολεμαῖος with an ear of corn on the obverse and a star on the reverse exhibit a feature that was seen frequently on the bronze type No. 62 α, but has not occurred since. The way in which the star was then used, in combination with nearly every other symbol of the series, its reappearance in similar fashion here, and its occasional employment in Imperial times

166-88 B.C., where five drachms with different names occur bearing the same symbol, the head-dress of Isis. See G. F. Hill's *Handbook of Greek and Roman Coins*, pp. 120-1.

when symbols were practically non-existent, looks as if the star had been some sort of mint-mark and not a magistrate's signet at all. The club also seems to have been of a similar nature.

No. 73. This issue, as has already been observed, shows more justification for being considered a contemporary of type No. 69 than any of the foregoing. It was obviously a companion issue to the drachm with the same name, even the wreath symbol appearing on both. This can only be said of one other bronze coin of the present period, viz. the one with the name **ΑΘΗΝΑ**[Ι-Σ] to be noted below.

No. 74. This type carries on the individualistic designs among drachms referred to in the opening remarks, and first noted among the later issues of No. 69. The features that principally distinguish the two issues described separately here are their lettering, and the absence both of the prow on the obverse and of a magistrate's symbol on the reverse. The former with **ΠΑΥΣΑΝΙΑΣ** provides one of the rare instances of a drachm with Sphinx to right. The latter with **ΣΙΛΛΙΣ** [Pl. IX. 6] is the second foreign name to be noted in the period. According to Pape the name hails from Tyre.

The lettering is curious, though not so distinctive as that of the next group of drachms. The "apices" are so faintly indicated as to be barely noticeable. The **O** is of the same size as the other letters, a sure sign of lateness and a form only encountered once in the Chian series hitherto, on the bronze coin of type No. 72 with **ΑΡΓΗΟΣ**. The **Υ** also has the late form **V**. Otherwise the lettering might be considered earlier than that of type No. 69.

The die-positions do not include any placed $\uparrow \leftarrow$, which will have been observed occasionally in the three previous bronze types and in the one that I take to be the contemporary of these drachms.

No. 75. These few bronze issues being characterized by the large O, by the absence of a symbol, and most of them by letters without "apices", I am suggesting that they may be the contemporaries of the drachms just described. They are not all quite consistent in these points, but it is difficult to decide where else to place those that show divergences.

Some of the issues with the name **ΑΡΙΣΤΟΚΛΗΣ** have a prow on the obverse in an unusual position, exactly like the one on the drachms of type No. 69 with **ΜΕΝΕΚΡΑΤΗΣ**. They also provide the only instance known to me among Chian coins of a *sigma* showing the square form **Σ**, intermediate between **Σ** and **С**.

The group is connected with type No. 72 on the one hand and No. 78 on the other by the different designs shown on the coins signed by the magistrates **ΣΩΣΤΡΑΤΟΣ** and **ΗΓΗΜΩΝ**. *Ἡγήμων* must rank as a new name in the Chian annals, though it may well be only a variant of the form *Ἡγέμων* recorded in the last period. Since there is no mention in the Wellenheim Cat. of a wreath on the reverse of the coin with the name **ΑΙΔΗΜΟ** --, which seems to be unique, it must necessarily fall into one of the four bronze groups belonging to this period. The reading of the name seems very uncertain.

No. 76 *a* is an unusually uniform type for the period and looks as if it had been separated from its predecessors by a few years. Even the weights agree in

being above the average of drachms struck at this time. But there can be no doubt, I think, as to the lateness of the issues. Their style alone declares it [Pl. IX. 7]. The Sphinx is uglier and worse drawn than on any coin yet examined, though the relief is higher than in most of these late issues. The amphora, too, is of a very late type, though without a lip, and the wreath is a degraded form of vine-wreath. The absence of symbols also seems to be a sign of the times, in spite of there being apparently only one specimen extant of each of these issues. Even allowing for the fact that certain issues were constantly being made without a symbol, as in type No. 61 with **ΑΓΓΕΛΙΣΚΟΣ**, No. 63 with **ΑΛΚΙΜΑΧΟΣ**, No. 66 *a* with **ΑΝΔΡΩΝΑΞ** &c., it seems highly improbable that we should be confronted here with a whole series of exceptions, extended moreover to the contemporary bronze coinage as well. It really looks as if we were in the presence of some change in the administration of the mint. The prow has temporarily disappeared from the obverse, and the bunch of grapes once more remains without a rival, though only for a while.

There is nothing particular to remark about the names. The restoration [**Π**] **ΑΤΑΙΚΙΩΝ** seems obvious, for, in addition to being a well-known Greek name of wide distribution, it has actually been recorded at Chios on a local inscription.¹¹⁸

The most remarkable feature of the group is its lettering, which is quite consistent throughout. The letters are carelessly formed and smaller than is usual at this time, and in some ways they look earlier than

¹¹⁸ Collitz and Bechtel, *loc. cit.*, No. 5679.

those on the other drachms already ascribed to this period. There are no "apices", for instance; the \odot is made smaller than its fellows, and, perhaps by accident in the only case where it occurs, has no dot; the \circ is invariably rendered by a dot only; the \vee of type No. 74 is replaced by Υ . With the exception of the \circ it is more on account of its style than of its particular forms that this lettering is remarkable, and because it has appeared once before in the Chian series. This was on the early drachms of *Ἀπρεμίδωρος* as described under type No. 66 β , in which case the lettering seems to have been in the nature of an experiment and, by a chance, may have served as a model for the present group.¹¹⁹

It is difficult to account for such sudden and wholesale changes except on the supposition that there was a temporary interruption of the coinage just previous to the issues represented by types Nos. 76-8 and perhaps No. 79 as well. But there is no indication from an historical point of view as to what can have caused this interruption.

No. 76 β . This sub-type, though in lower relief than the last and of somewhat bolder design [Pl. IX. 8], is evidently its near contemporary. This is shown, I think, by the style of the Sphinx and amphora, and by the lettering. In one point, however, the unique coin in question differs not only from the previous

¹¹⁹ The occurrence of \circ in the form of a dot appears to be sporadic both in time and place. Mr. G. F. Hill has drawn attention to it on coins of Audoleon of Paconia, 315-268 B.C. (*Handbook of Greek and Roman Coins*, p. 212), and it is found even earlier at Tarentum on a gold coin struck by Alexander the Molossian in 334 B.C. (*Horsemen of Tarentum*, p. 85, No. 2).

sub-type but from every other Chian issue hitherto described. It will be seen to bear the word **ΧΙΩΝ** on the reverse in place of **ΧΙΟΣ**, which had been the established form of inscription since letters first appeared upon the coinage. The ethnic in the genitive plural was the form finally adopted for the Imperial coinage, though the old and, for the Asiatic coast, uncommon place-name in the nominative singular held its own for a little while among the earliest of the new bronze pieces. On the assumption, then, that no silver was struck at Chios after the accession of Augustus we seem to have in this drachm the last autonomous issue that has survived, with the possible exception of type No. 80.

The way in which the magistrate's name is written on this coin, **ΓΛΑΥΚΟΣ**, is a proof that the Ionic dialect was no longer employed at Chios, for the same name appears under the form **ΓΛΑΟΚΟΣ** at Erythrae in the previous century (*Brit. Mus. Cat. Ionia, Erythrae*, No. 150).

No. 77. The style of these small pieces [Pl. IX. 9], their lettering, and everything about them mark them as the contemporaries of type No. 76 *α* and *β*, which seems to have belonged to a period of some activity. As will be seen these coins bear neither magistrate's name nor symbol, for the bunch of grapes on the reverse must not, I think, be regarded as the latter. Two out of the three specimens known bear what is presumably a blundered inscription **ΧΙ·Ν**, the Berlin specimen with **ΧΙΩΝ** appearing to show, although not decisively, that the usual form of inscription was intended.

Dr. Imhoof-Blumer has called these coins hemi-

drachms, but the weights are really too low for that denomination even at this period of degraded standards. Besides, as I have pointed out, the drachms of type No. 76 α and β , the suggested contemporaries of the present type, weigh considerably more on the average than the bulk of their immediate predecessors. These pieces, especially the one now at Munich, represent a full third of the drachms in question, and it therefore seems fair to assume that the old Ionic subdivision had been momentarily revived. A precedent for this is afforded by the mint of Erythrae, where Attic diobols were struck during the period 200-133 B.C. and possibly later as well.¹²⁰

The die-positions, being all $\uparrow\uparrow$, agree with those of type No. 76 which show a similar uniformity.

No. 78. Like the last type these bronze coins show all the characteristics of type No. 76. With regard to the magistrates whose names they record we may restore **ΑΘΗΝΑ** - - to *Ἀθηναίος* on the strength of the drachm with that name, and *Ἀμανος*, a Jewish name according to Pape, is another proof of the mixed nature of the Chian population at this time. This *Ἀμανος* may have been one of the colonists who seem to have aroused the sympathies of Herod. Both sizes and weights are very irregular.

No. 79. This rare coin betrays undoubted signs of Roman influence in its obverse type, as already observed, and makes a rude break in the hitherto uniform procession of Sphinxes. The substitution of **N** for **Σ** in the inscriptions of two out of the four specimens described suggests a connexion with the

¹²⁰ *Brit. Mus. Cat. Ionia, Erythrae*, Nos. 149-52 and 198-9.

diobols of type No. 77 and their corresponding drachms. This would mean, supposing that my attribution of the group in question is correct, that these agonistic coins were struck some time between 50 and 30 B.C. They are the forerunners of the well-known Imperial issues of Chios with a figure of Homer on the reverse.

The thyrsus adorned with fillets, which here forms the reverse type, may be compared with the symbol on the drachms of type No. 69 with **ΑΣΦΑΛΗΣ** and **ΛΕΩΝΙΔΗΣ**, and on a small bronze coin described below (type No. 93). The reverse of type No. 94 is also very similar to this one.

Nos. 80-2. We now come to the drachms that may fairly be considered to belong to the years bordering upon the accession of Augustus, which event I am supposing to have been commemorated by the issue of type No. 82 [Pl. IX. 11]. No. 80 falls into this category because of its style, lettering, and weight, which so closely resemble those of No. 82, and No. 81 [Pl. IX. 10] because of the magistrates' names that it bears.

The style of these coins has been referred to above. It seems reasonable to suppose that some effort should have been made to produce the best possible work under the circumstances, and, although the results are not remarkable, the obverse designs of types Nos. 80 and 82, at least, are an improvement over those of the types just described. These two issues may be said to resemble the best specimens of No. 69 more than any of the intervening coins described here. The concave field of No. 80 suggests that some even earlier issue had been taken as a model, for this feature has not been noticeable since type No. 63 β , although there were traces of it in Nos. 69 and 73.

The lettering of all three types will be seen to have reverted to the more usual forms, after the vagaries of types Nos. 76 and 78. In some ways it may even be termed archaistic, as witness the **E** with three bars of equal length in No. 82, and the **Φ** in No. 81 in place of **ϕ** or **·ϕ**, so much more generally employed at this time. On the other hand, the **Υ** of type No. 76 has gone back to the late form **V**, already noted on No. 74.

It is clear from the number of specimens known belonging to types Nos. 80 and 82, and from the way in which their weights agree, that a sensible reduction must now have been made in the standard. The heaviest specimen that I have noticed is one of the former type from Paris which weighs 49.5 grains (3.21 grammes). This denotes a much reduced *denarius*, not to speak of an Attic drachm, and may be compared with the Syrian silver coins of Nero's reign (Regling, *Z. f. N.*, xxxii. (1915) 146), marked **ΔΡΑΧΜΗ**, and those of Plarasa and Aphrodisias of the first century B.C. (*Brit. Mus. Cat. Caria and Islands, Plarasa*, Nos. 6-13) which weigh from 56.1 to 48.9 grains (3.63-3.17 grammes). No. 81, it is true, nearly reaches the level of type No. 76 *a*, which is unusually high even for an autonomous issue of the first century B.C., but it is represented by a single piece only. Moreover, as it was a special issue of an honorific nature, the mint officials may have been a little more generous in its case than usual.

PABIΠOΣ is the second Roman name to be recorded among the Chian magistrates, and his issue is remarkable as again showing symbols on the reverse. The crescent has not been so used before, and of course may be the magistrate's personal signet, though it appears

on one of the three-assaria issues of much later date, but it will be noted that the presence of the star, which also figures here, is not constant. This seems to confirm the evidence of type No. 62 *a*, which served to show that the star was more probably a mint-mark than a magistrate's symbol.¹²¹ Why symbols should suddenly have been reintroduced on these drachms and on some of the bronze of about the same time, after a considerable period during which their use was dispensed with, I am unable to suggest.

The name of the public benefactor in type No. 81, whom I am supposing to have been a Roman on account of the form in which his name is written, is unfortunately incomplete. Herr R. Münsterberg, in his most valuable catalogue of magistrates' names on Greek coins to which I have referred more than once, suggests (p. 264) that the inscription might be restored to Φούρ[ιος Γέ]σσι(ος) Φάϋλος Φιλόπατρις, which is very plausible. It may be remarked that some bronze coins of Smyrna, struck during the reign of Nero (*Brit. Mus. Cat. Ionia, Smyrna*, Nos. 285-7), bear the inscription ἈΓΕΣΣΙΟΣ ΦΙΛΟΠΑΤΡΙΣ on the reverse. Although they are of later date than this unique coin of Chios there must be some connexion between the Gessii concerned.¹²²

With regard to type No. 82 Dr. Imhoof-Blumer observes in *Griechische Münzen*, No. 395, that the reading ΣΕΒΑΣΤΟΥ is inaccurate, and suggests ΣΕΒΑΣΤΟΣ in its place. Dr. Imhoof must have seen

¹²¹ See remarks under type No. 72.

¹²² The Gessius of Smyrna was no doubt Gessius Florus, the procurator of Judaea in Nero's reign, who was a native of Clazomenae.

some badly preserved specimens, for, as Pl. IX. 11 shows, there is no doubt whatever that the last letter of the obverse inscription is Y. The complete reading of the inscription may have been Διογένης (καὶ) Εὐδήμος (ἄρχοντες or στρατηγοὶ τοῦ) Σεβαστοῦ. The actual title of the Chian magistrates at this time is not known for certain, though the phrase ΕΠΙ ΑΡΧ of the Imperial coinage is in favour of the former title. They were probably called στρατηγοί in the early oligarchical days,¹²³ and a late inscription already referred to (C. I. G., No. 2221 b) makes use of this title, and even differentiates between first and second στρατηγός.

It is worthy of note that the only cases in which two magistrates' names appear in full on the Chian coinage are those of the silver issues which we can describe with certainty as non-autonomous. There may be some connexion between this and the reintroduction of symbols referred to above. The traditional use of the bunch of grapes may be said to cease with these issues of Augustus after having figured on nearly every Chian coin during the previous 450 years. It will be observed on all the issues of the next bronze type—No. 83—which I look upon as the contemporaries of these drachms, and it seems to have been revived on a few of the first imperial bronze pieces, after which it disappears.

No. 83. These bronze coins [Pl. IX. 15] are a fairly uniform group, and have all the appearance, besides, of belonging to early imperial times. They are neatly executed, and their style and lettering, together with the use of the bunch of grapes, make it

¹²³ Herodotus v. 38. See above, p. 46 of *Num. Chron.*, 1915.

evident that they are contemporaries of the drachms just described. The concave field recalls type No. 80, and the amphora is like that on the drachms of type No. 76 and its allied groups. It is a curious fact that all these coins show irregular die-positions. They are only moderately rare.

The magistrates' names are all incomplete, but susceptible of restoration to names already familiar in the Chian series. This even includes the last, **ΦΑΙΝΟΜ[ΕΝΟΣ]**, if I was right in my conjecture as to the correct reading of the little coin described under type No. 65.

Nos. 84-6 comprise some diversified types which I take to be later than the last. Their style shows a beginning of the deterioration that is soon to become very marked [Pl. IX. 16], and the Sphinx with the raised forepaw appears again after a considerable interval. The names include the first instance of a patronymic attached to a Greek name, and another Latin name **ΦΑΥΣΤΟΣ**, though like the two others already noted it is used in the Greek manner. Mionnet's doubtful reading **ΛΥΣΤΟΣ** may be traced to a coin of this type. The lettering supplies the first lunate *sigma* so far met with, apart from the doubtful exception in one of the monograms of type No. 59 β (Alexandrine tetradrachms); and from now onwards the O is no longer made smaller than the other letters.

The sizes and weights, being both increased, are indicative of a time when silver was no longer being struck.

The die-positions, both here and in types Nos. 90-91 β, show a preference for †←, which up to this point has been exceptional.

Symbols appear again as observed under type No. 80, and are all objects that have already served in this way. The star is to be noted, in addition to the winged caduceus, on one of the three specimens representing type No. 85, but as the only symbol on type No. 86.

No. 87 *a* and *β*. These types without magistrates' names, and both represented by a single piece in indifferent condition, reintroduce the later form of inscription with **ΧΙΩΝ**, first noticed under type No. 76 *β*. The former of the two recalls the coins of type No. 70 of similar size. In fact, the resemblance between them and the evidently late character of the present types made me hesitate in attributing type No. 70 to the beginning of this period. But, on the whole, I think that the points of difference which they show are sufficiently marked. Apart from the dissimilar inscriptions, there is no bunch of grapes on these coins, and the weight of the large one is very much below that of the apparently carefully regulated flans of type No. 70.

The **Ω** of the inscription in No. 87 *a* is a very late form, and not at all in keeping with the lettering mostly employed on coins of this period. A still earlier and isolated instance of this **Ω** has already been noted on type No. 62 *β*.

Nos. 88-9. These interesting coins have already been pretty fully discussed, but a few more remarks with regard to their style seem to be called for. The wreath on the reverse of No. 88, tied to left, is quite a new feature among the Chian issues and does not appear again. The form of amphora used, besides being precisely the same as that on the bronze types Nos. 90-2, and very similar to that on the drachms

with **ΣΕΒΑΣΤΟΥ**, will also be found on one of the earliest three-assaria pieces, which is in support of the date suggested for the type.

With regard to No. 89, the Sphinx, apart from its wing, is very similar to that found on one of the earliest Homereia, and the latter coin must be placed among the first so-called imperial issues because of the word **ΧΙΟC** on its reverse. The amphora is of a different type from that on No. 88, but one which may be seen to have alternated with the latter throughout this period [Pl. IX. 1, 2, 6, &c.]. Finally, the bunch of grapes countermarked upon the amphora, if correctly described, offers a curious parallel with one of the earliest pieces of one assarion also distinguished by the word **ΧΙΟC**, and undoubtedly of the Augustan period so far as one can judge. The magistrates' names are inscribed in the most unusual manner on the obverse. The former, **ΦΗΣΙ[ΝΟC]**,¹²⁴ is a known Chian name which it is interesting to meet

¹²⁴ The occurrence of this name on a local inscription has been referred to above, note 106. There appears to be some doubt as to its proper accentuation. Pape gives *Φησίως*, probably influenced by the alternative form *Φησιεύς* which is found on early imperial coins of Lebedus (Kl. M. 74) and Teos (B. M. 76-8), Boeckh suggests *Φήσιως* or *Φησιεύς*, and Dr. A. M. Vlasto, a local authority (*Χιακά*, p. 67), prefers the last. In type No. 50 I followed Pape, and consequently preserve his accentuation in this period, but I feel that *Φησιεύς* is more in keeping with the Ionic accent as exemplified by *Ἀθηναίων*, *Ἀρτεμῆς*, and *Φαινομένης*. The pet names of Modern Greek, which are almost as numerous and varied as those of the ancient language, include many forms peculiar to Chios. It is a curious fact that these forms, unlike the corresponding ones in other dialects, invariably bear their stress accent on the last syllable in the same way as the ancient names just cited bore their unusual tonic accent. For instance, *Ἰωάννης* = usually *Γιάννης*, but in Chios, *Ζανῆς*. *Κωνσταντῖνος* = *Κώστας* or *Κώστος*, but in Chios, *Κωστής*, &c.

at this late period in the island's history. It was first recorded on the coins of Period VII, 412-334 B.C. If the restoration suggested for the latter name, **MINY**[**KIOC**], be correct it would add to the list of Roman names already indicated.

The lettering presents a curious mixture of forms, and is of an altogether later type on No. 89 than on No. 88. The uncial **€** now makes its first appearance, **C** takes the place of **Σ**, but **Ω** has the form **∪** as above, where **ω** might have been expected. But this does not imply that the coin bearing the latter forms must necessarily be of later date than the one with the earlier letters. Attention need only be called once more to the bronze types Nos. 90-2, where the same inconsistency will be found. It was characteristic of this transitional period. The weights seem to represent the same standard as the coins of types Nos. 80 and 82.

The present is a convenient opportunity for tabulating the average weights of all the Attic drachms described since that system was introduced, as suggested, in the late third century B.C.

Period VIII. Type No. 57 (7 specimens, of which 1 pierced). 62.5 grains (4.047 grammes).

Period IX. Type No. 61 (4 specimens). 64.4 grains (4.17 grammes).

Period IX. Types Nos. 63 and 66 (65 specimens, of which 2 pierced). 56.2 grains (3.64 grammes).

Period X. Types Nos. 69, 74, and 76 (23 specimens, of which 1 pierced). 51.9 grains (3.36 grammes).

Period X. Type No. 80 (5 specimens). 46.0 grains (2.98 grammes).

Period X. Type No. 81 (1 specimen). 58.3 grains (3.78 grammes).

Period X. Type No. 82 (6 specimens). 41.1 grains (2.66 grammes).

Period X. Types Nos. 88-9 (5 specimens). 42.4 grains (2.75 grammes).

Nos. 90-2. The style of these coins has already been referred to more than once. It supports their attribution, as suggested in the introduction to this section, to a later portion of this period than any of the preceding bronze types. They show the same peculiarity of fabric as types Nos. 83-5 in the concave field or incuse circle of their reverses.

The lettering of Nos. 90-91 β is also more careless than that of any contemporary issue except No. 89, with which it has already been compared. In addition to ϵ and C , it provides the somewhat uncommon form A for M . The similarly formed A is typical of the first century A.D. and may well have come into use as early as this.

The two small sub-types No. 91 α and β are very rare, and interesting as showing a revival of the old liking for two sizes of bronze coins. This has especial force in the present case as the magistrate's name also recalls an earlier period of the Chian mint.

No. 92 provides another instance of a patronymic being used in the rendering of a magistrate's name. The name itself has already been discussed, and the magistrate is the one whose genealogy I have attempted to trace from the early portion of Period IX (type No. 63 α). This evidence is of interest in view of the theory that is lately gaining ground to the effect that there was a tendency in ancient times to preserve the office of moneyer or mint magistrate in certain families, possibly on account of their wealth (Dr. G. Macdonald's *Evolution of Coinage*, p. 13). The lettering in this case is very carefully done, and the words are separated by stops. Two forms of *sigma* are to be seen on these coins, but their concurrence is not an uncommon

feature at this period, although it only appears on one other Chian issue (type No. 96 *a*, the first three-assaria piece to be described below).

No. 93. I am placing this unique little coin after the foregoing because of the **C** in the inscription. This is not an infallible test as a rule, but the form in question is so little used at Chios down to this time that it may be taken as a guide where other signs are lacking. The style of the coin, so far as can be seen [Pl. IX. 18], is better than that of its companions here, but the thyrsus seems to establish a link with them.

It is quite the lightest piece that I have come across.

No. 94 is another fairly uniform group in which the thyrsus in an ivy-wreath appears on the reverse as in type No. 79. The style of the Sphinx comes very near to that on some of the early bronze issues with named denominations, especially in the case of the issue with **ΑΘΗ** - -.

The names are unfortunately not so easily restored as those of type No. 83, though they all three suggest well-known Chian magistrates, but **ΕCΤΙ**[**ΑΙΟC**], at least, seems certain. The British Museum Catalogue reading **ΗΓΙΓ** - must be corrected to **ΗΓΗ** - - [Pl. IX. 19].

J. MAVROGORDATO.

(To be concluded.)

APPENDIX.—*List of magistrates' names belonging to coins of Period X, showing the varieties on which they occur.*

	drachm.	large bronze.	med. bronze.	small bronze.
'Αγ[?]ε	—	70 α	—	—
'Αθη	—	—	—	94
'Αθηναγ[όρας]	—	—	83	—
'Αθηναίος	76 α	—	—	78
'Αματος	—	—	78	—
'Απολλων[ίδης]	—	—	71	—
'Αργήος	—	—	72	—
'Αρίσταρχμος	—	—	84	—
'Αριστοκλῆς	—	—	75	—
'Αριστόμ[αχος?]	—	—	83	—
'Αρτεμίδωρος	69	—	—	—
'ΑΣμενος	—	90	—	91 α and β
'Ασπασίος	—	—	71	—
'Ασφαλης	69 (?)	—	—	—
Γλαύκος	76 β	—	—	—
Γοργίας	—	—	71	—
Δέκμος	69	—	73	—
Διογένης	81 and 82	—	—	—
Διόδωρος	—	—	72	—
Διογ	—	70 α	—	—
'Εστ[αίος?]	—	—	—	94
Ευδῆμος	81 and 82	—	—	—
'Ηγη	—	—	—	94
'Ηγῆμ[αν]	—	—	75 and 78	—
'Ηροκράτ[ης]	—	—	83	—
Θεόδωρος	—	—	71	—
'Ιεράννμος 'Απολλωνίου	—	85	—	—
Λεωνίδης	69	—	—	—
Μενεκράτης	69	—	—	—
Μένιππος	—	—	72	—
Μηνόδαρος	—	—	71	—
Μητροδωρος	—	70 α	—	—
Μιντ[αίος?]	89	—	—	—
Μοσχίαν	69	—	—	—
[Π]ατακίαν	76 α	—	—	—
Πανσανίας	74	—	—	—
Πτολεμαῖος	—	—	72	—
Πύθιος	—	—	71	—
'Ραβίριος	80	—	—	—
Σίλλης	74	—	—	—
Σκύμνος	69	—	—	—
Σωσίβιος	—	—	71	—
Σωσίππος	—	—	75	—
Σώστρατες	—	—	72 and 75	—
Τι-Κλαύ-Γοργιά-Δωροθέου	—	92	—	—
Φαινομ[ετός]	—	—	83	—
Φάτης	76 α	—	—	—
Φαῦστος	—	86	—	—
Φησί[τος]	88	—	—	—
- - ὄντιος	—	—	78	—
Γυθ[ί]αν	—	—	71	—
ΑΙΔΗΜΟ - - -	—	—	(?)	—

The figures, 69, &c., indicate the types under which the coins are described above.

IX.

DIVUS AUGUSTUS.

[SEE PLATE XL.]

[THE substance of the following notes was written before I had read Sig. Laffranchi's article "Gli assi ed i dupondii commemorativi di Augusto e di Agrippa", which appeared in the *Rivista italiana*, 1910. Laffranchi's conclusions as to the dating of the coins agreed in almost every case with my own; hence, in this respect, these notes cannot claim to be an entirely fresh contribution to the science of numismatics, although they may possibly serve a purpose in bringing to the notice of collectors and others, unacquainted with Laffranchi's work, a more exact classification of a very interesting series of coins. Moreover, by including several examples, omitted by Sig. Laffranchi, I have endeavoured to present as complete a view of the series as possible.]

The aim of this article is twofold: (1) to draw up a chronological arrangement of the memorial coins of Augustus, and (2) to consider in what respect they throw light on the theory of the imperial cultus.

The coins struck in memory of the divine Augustus comprise a number of different types of varying significance; but, as regards their main characteristics, they may be grouped naturally into three classes.

CLASS I. *Asses* and *dupondii* with the radiate head of Augustus, accompanied by the legend **DIVVS**.

AVGVSTVS.PATER or **DIVVS.AVGUSTVS**; but without any specific reference to the reign or period in which they were struck.

CLASS II. Gold, silver, or bronze coins with the head or full-length figure of Augustus, and legends similar to the preceding, but in conjunction with the portrait or titles of the reigning emperor.¹

CLASS III. "Restitution" coins, i. e. revivals, or reproductions, of earlier types, accompanied with the titles of the emperor under whom they were struck, and bearing the word **RESTITVIT**, usually in the abbreviated form, **REST**.

The coins of Classes II and III obviously present no difficulty with regard to date; the following notes, therefore, are concerned mainly with the classification of the *asses* and *dupondii* of Class I.

It may be safely assumed that no coins of the *Divus Augustus* type were struck during the actual reign of Augustus, although some of the earlier numismatists have not hesitated to adopt this hypothesis.² The oft-quoted passage of Suetonius (*Aug.* 52), from which there seems no reason to dissent, that Augustus permitted no worship of himself apart from the goddess Roma in the provinces, and entirely prohibited any such honour in the capital itself, would seem to constitute sufficient evidence on the point;³ especially as the *Divus Augustus* coins we are about to consider are entirely of Roman mintage.

¹ Many coins of this class are of non-Roman mintage, a large proportion having been struck in Spain.

² Hobler, *Roman Coins*, vol. i, p. 40.

³ Cf. Mrs. A. Strong, *Apotheosis and Afterlife*, p. 70; Stuart Jones, *Roman Empire*, p. 28; Ramsay and Lanciani, *Roman Antiquities*, p. 244 f.; also Tacitus, *Ann.*, i. 10, 78; iv. 37, 55.

There are, however, two further points to be considered: (1) *Style*, that is to say, the mode of execution and relief of the types, particularly of the portraits, and also the formation of the letters; (2) *parallelism* in the design or motive of the types, occurring, as it frequently does, between dated and undated coins.

From these two considerations it will be seen, in the first place, that the coins do not belong to the age of Augustus; and secondly, that although belonging mainly to the reign of Tiberius, they are not confined to this period, as Cohen maintains, but extend down to the time of Claudius.

In point of style the senatorial bronze coinage of Tiberius falls into three distinct periods, which can be fixed by means of the dated *sestertii*, *dupondii*, and *asses*.

(a) A.D. 14-21. The portraits are flatly executed and are similar in many respects to those found on the late *asses* of Augustus. After about the year A.D. 16 there follows a period of transition.

(b) A.D. 22-33. The portraits are executed in fine style and high relief. The letters are large and carefully formed.

(c) A.D. 34-7. Two styles are clearly discernible. The *sestertii* continue the fine style, and, in many cases, the types of the preceding period, while the dated *asses* frequently exhibit a flatness of portraiture and irregularity in the lettering. I have elsewhere suggested that the *asses* of this period belong, in all probability, to the senatorial mint of Lugdunum.⁴ But

⁴ "The mint of Lugdunum," *Num. Chron.*, 1917.

since no *Divus Augustus* coins of Class I appear to have been issued during the last period of Tiberius's reign, this divergence of style in the senatorial coins does not concern our present subject.

Before describing the *Divus Augustus* coins in detail it is necessary to call attention to a difficulty, or rather ambiguity, found in connexion with the Tribunician dating of the senatorial coins of Tiberius.

In the first period of the reign there are two Tribunician dates, **XVII** and **XXIII**, which would naturally correspond with the years A.D. 15 and 21; during the last five years of the reign (A.D. 32-7) the Tribunician dates follow in regular sequence from **XXXVIII** to **XXXVIII**. But for some reason, which it seems at present impossible to explain, the middle period of the reign (A.D. 22-31) is indicated by the solitary date **XXIII**. That **TR·POT·XXIII** must be taken as indicating not merely the year A.D. 22 but any year falling in the decade from A.D. 22 to 31 seems clear from the following considerations. (a) Both numerically and in point of variety the coins dated **TR·POT·XXIII** vastly exceed those issued at any other period of the reign. Thus it is practically impossible to relegate so large an issue to one year, and, consequently, to suppose that, during the next nine years, the senatorial mint was practically inactive. (b) Certain coins dated **TR·POT·XXIII** cannot conceivably have been struck in the year A.D. 22, but must belong to a later date. For example, the well-known *sestertii* of Livia (Coh., *Liv.* 6), with the obverse type of a carpentum drawn by mules, are clearly of a funereal, or commemorative, character, and therefore cannot have been struck

until after her death, which did not occur until A.D. 29.⁵

To the early period of Tiberius may be assigned the following, struck in all probability in the year A.D. 14-15:

1. *Obv.*—**DIVVS AVGVSTVS PATER.** Radiate head of Augustus l. [Pl. XI. 1.]

Rev.—Winged thunderbolt between large **S-C.**
Æ² As (Coh. 249).

The general style of this coin corresponds with that of the *asses* bearing portraits of Augustus and Tiberius, struck in A.D. 11, while the lettering is of the improved style which seems to have been introduced in A.D. 14. The disproportionately large **S C**, which certainly detracts from the artistic composition of the reverse type on this and the following coin, is characteristic of the earlier part of the reign of Tiberius, and appears to be a relic of the vogue adopted on the bronze coinage of Augustus.

The following belongs to the year A.D. 15:

2. *Obv.*—**DIVVS AVGVSTVS PATER.** Radiate head of Augustus l.; in front, thunderbolt.

Rev.—Livia (?) seated r., holding sceptre, between large **S-C.**

Æ² As (Coh. 244). [Pl. XI. 2.]

⁵ The suggestion that these *sestertii* were not struck in honour of Livia but of Julia, the divorced wife of Tiberius, is quite untenable. Julia's utter disgrace would have rendered such a commemoration on the coinage highly improbable; and since she died in exile in the year A.D. 14, at least eight years before the Tribunician date **XXIIII**, her unpleasing memory would in all probability have faded into oblivion. The *carpentum* coins are dated **XXIIII**, **XXXV**, and **XXXVI**, from which it may be inferred that they were issued between the years A.D. 30 and 34.

This coin can be assigned almost certainly to its year of issue on account of its parallelism in style and design with the *asses* of Tiberius, which bear the same reverse type and are dated **TRIBVN.POTEST.XVII** (= A.D. 15), see Coh. 17. [Pl. XI. 3.]

During the transitional period, A.D. 16-22, it seems probable that the three following types (Nos. 3, 4, and 5) were issued :

3. *Obv.*—**DIVVS AVGVSTVS PATER.** Radiate head of Augustus I. [Pl. XI. 4.]

Rev.—Eagle on globe between **S-C.**

Æ² *As* (Coh. 247).

Sig. Laffranchi places this coin in the year A.D. 14-15, contemporaneously with the *as* of the *winged thunderbolt* type (Coh. 249). While there is no doubt that the latter corresponds with the late Augustan style, this coin with the *eagle on globe* approaches more nearly to the finer style of the middle period of Tiberius and appears to be of a transitional character. It seems more reasonable, therefore, to place its issue between A.D. 16 and 22.

4. *Obv.*—**DIVVS AVGVSTVS PATER.** Radiate head of Augustus I.

Rev.—**S-C.** Circular domed temple, showing four columns in front, with door and steps in centre; the roof is surmounted with a figure holding a spear; on either side is a pedestal surmounted with a sacrificial animal.

Æ² *D* (Coh. 251). Av. wt. 210 grains.* [Pl. XI. 5.]

This and the *dupondius* with *Victory* (No. 5) are by far the rarest of the *Divus Augustus* series, and offer no parallelism with any contemporary coin-types of

* Cohen mentions a larger denomination of this coin, presumably a *sestertius*, the genuineness of which appears questionable.

Tiberius. Their date, therefore, can only be decided from evidences of style.

Some variety of opinion has been expressed as to what particular edifice is portrayed on the reverse. Eckhel⁷ considers it to be the temple of *Divus Augustus*, built by Tiberius, and represented later on coins of Caligula and Antoninus Pius. However, apart from the fact that the temple of *Divus Augustus* was not completed during the reign of Tiberius, an examination of its plan shows conclusively that it was not circular, but a rectangular octostyle building of somewhat unusual proportions.⁸

Hobler rejects the view that it is the shrine of Mars Ultor on account of certain dissimilarities in the ornamental detail shown on the *denarii* with reverse, **MAR-VLT** (Coh. 190). In spite of this discrepancy I believe the circular shrine of Mars Ultor, situated near the temple of Jupiter Feretrius on the Capitol, which was built by Augustus in 19 B.C., is quite the most probable suggestion.

The temple shown on this *dupondius* corresponds, in its general structure if not in certain details, with that on the *denarii* just mentioned, and moreover, if it is compared with the representation of the temple of Mars Ultor on the Asiatic "medallions", with the reverse legend **MART-VLTO** (Coh. 201), the resemblance is even more striking. It is true that the two side pedestals do not appear on the earlier coins (19 B.C.). But that, amongst his numerous building enterprises, Tiberius should have renovated the shrine that had

⁷ Vol. vi, p. 127.

⁸ Lanciani, *Ruins and Excavations*, p. 123.

been standing for nearly forty years, and at the same time added the pedestals, seems by no means improbable. Of this, however, we have no record. It may seem rather a straining of detail to attempt to identify the statue on the summit of the dome, which has been variously described as Mars, Augustus, or a female. If, however, this little temple was restored by Tiberius, it would seem natural that he should have added a statue of Augustus to its adornment. This would, moreover, furnish some clue as to the reason for placing a representation of this particular building on the *Divus Augustus* series.

There is, further, some uncertainty as to the identification of the two animals on the side pedestals. On some specimens they are unmistakably a bull and a ram, while on others they appear to be animals of the antelope tribe.

5. *Obv.*—DIVVS AVGVSTVS PATER. Radiate head of Augustus l.

Rev.—S-C. Victory flying l., and holding in her r. hand an oval shield inscribed SPQR.

Æ² D (Coh. 242). Wt. 210 and 250 grains.

Some difficulty arises with respect to the date and allusion of this *dupondius*. Examples of it occur in two weights (viz. approximately 210 and 250 grains) and in two distinct styles. The lighter coins correspond with the transitional style of Nos. 3 and 4, while the heavier are usually more boldly executed with the head in higher relief, suggestive of the period following the year A.D. 22.

The curious variation in the weight of the *dupondius* during the reigns of Tiberius, Caligula, and Claudius has apparently never been satisfactorily explained. It

seems clear, however, that two standards of weight were in use, which may be estimated at normally 210.5 and 252.6 grains, or respectively $\frac{1}{24}$ and $\frac{1}{26}$ of a Roman pound. Of these the lighter probably represents the earlier standard which appears to have been fixed by Augustus about the year 15 B.C. It was not, however, superseded by the heavier, which apparently came into existence about A.D. 22, but continued to be issued along with it. For example, we find *dupondii* of Antonia (*temp.* Claudii) of both weights. It may be mentioned incidentally that the heavier *dupondius* disappears after the reign of Nero.

If we are right in supposing that the heavy *dupondius* was introduced about A.D. 22, which was in many respects a notable year in the history of the Roman coinage, we may conclude that there were two separate issues of these memorial *dupondii* of the *Victory* type; that is to say, the lighter coins of transitional style would have been issued shortly before A.D. 22, and the heavier coins of fine style shortly afterwards.

The reverse type, as we have already stated, presents no analogy to any other that occurs on the coins of Tiberius. It corresponds more or less closely with Nero's well-known *asses* of the *Victory* type, but the general style of the coins and the form of the lettering on the obverse are certainly not of Nero's period.

A representation of Victory, seated, forms the standard reverse type on the series of gold *quinarii* struck continuously throughout the reign of Tiberius, apparently without reference to any specific military triumphs. It is just possible, therefore, that the reference of these *dupondii* may be of a purely general character.

Since, however, this particular portrayal of Victory inaugurates a new reverse type on the bronze coinage, it is reasonable to suppose that some definite occasion gave rise to its introduction.

This being so, the most appropriate seems to be the triumph of Germanicus in A.D. 17, when the defeat of Varus—a calamity that had cast a gloom over the last years of Augustus—was avenged and Roman honour restored.⁹ This date, moreover, exactly suits the transitional style of the lighter *dupondii* with this type.

Rather curiously Cohen values this coin at only 2 francs., whereas it is of considerable rarity; hence the difficulty in obtaining a sufficient number of specimens from which to make deductions.

There apparently exist coins with the same type as these *dupondii*, but of larger module, weighing about 350 grains, which may possibly be *sestertii*. However, I venture to think that their authenticity is not above suspicion.

During the middle period of Tiberius's reign (A.D. 22–33) a marked improvement is observed in the style of the coins, particularly in the bolder treatment of the portraits, combined with a more pronounced element of idealism.¹⁰

Illustrations of this may be found in the *asses* of Tiberius (Coh. 25) [Pl. XI. 7], in the *dupondii* struck

⁹ I am indebted to Mr. F. A. Walters for this suggestion.

¹⁰ It may be noted that the activity of the senatorial mint of Rome from A.D. 22 onwards was in a large measure due to the fact that the imperial mint of Lugdunum had ceased to issue brass and copper in A.D. 21. It is in the year A.D. 22 that the imperial portrait appears for the first time on senatorial *dupondii*.

probably in honour of Livia, dated **TR·POT·XXIII**, whereon she is represented as *Pietas*, *Justitia*, and *Salus* (Coh., *Liv.* 1, 4, 5), and in the *asses* of Drusus Junior, &c.

Precisely the same boldness of treatment is seen in the following examples of the *Divus Augustus* series, which may consequently be assigned to the period following the year A.D. 22.

6. *Obv.*—[Similar to preceding.] [Pl. XI. 8.]

Rev.—**PROVIDENT**. Square altar between **S·C**.

Æ² *As* (Coh. 228). Av. wt. 170 grains.

7. *Rev.*—**S·C**. Within a wreath of oak.

Æ² *D* (Coh. 252). Av. wt. 210 grains.

Amongst the memorial coins of Class I should be included the *as* with the heads of *Divus Augustus* and *Agrippa*, although on account of its unusual character it stands rather apart from the coins already described.

8. *Obv.*—**DIVVS·AVGVSTVS·PATER**. Radiate head of Augustus I.

Rev.—**M·AGRIPPA·L·F·COS·III**. Head of Agrippa I., with rostral crown.

Æ² *As* (Coh., *Aug. and Ag.* 4).

Cohen regards this remarkable coin as a "hybrid". But I venture to suggest that the term hybrid is only applicable to coins that are struck from two dies obviously unrelated to each other; thus involving either an anachronism of type or a discrepancy in the legends. Such as may be seen, for example, in the small bronze bearing on the obverse the portrait and titles of Tiberius, but on the reverse the distinctively Neronian type **CER·QVINQ·ROM·CON**. *Certamen quinquennale Romae conditum* (Coh., *Tib.* 1).

The conjunction of memorial portraits of Augustus and Agrippa involves no anachronism, and, since both personages were extensively commemorated on coins struck under Tiberius, there is nothing improbable in finding the double commemoration on a coin of this period.

The portrait of Agrippa is similar to that shown on his well-known *asses* with the reverse type of Neptune (Coh., *Ag.* 3), which are assigned by Cohen to the period 27-12 B.C., but by Laffranchi to the reign of Caligula.

It seems rather a digression from the subject of this paper to enter into the question of the date of Agrippa's *asses* at any length; but, since the memorial coin we are considering is obviously connected with the other coins of Agrippa, the main points for fixing their date may be outlined briefly as follows:

(1) The style of the *asses* (*Neptune* type), notably with respect to the bold treatment of the portrait and square form of lettering, is clearly not that of the Augustan period, but exactly corresponds with that of the coins struck between A.D. 22 and 41. At the outset, therefore, we must abandon Cohen's date, and the choice lies between the reign of Caligula and the latter part of that of Tiberius.

(2) The reign of Caligula seems too short a period for so vast an issue of coins, since these *asses* are, as every collector knows, amongst the commonest coins of the first century.

(3) Cohen enumerates three varieties of Agrippa's *asses* which bear the Tribunician dates of Tiberius, viz. **XXIII** (=A.D. 21), **XXIIII** (=A.D. 22-31), and **XXXVIII** (=A.D. 36). This being so, it seems reasonable to

suppose that the undated coins of the *Neptune* type belong to the same period of fifteen years.

(4) Laffranchi, in maintaining the Caligula date, points out that the features of Agrippa wear an expression similar to that of Caligula, and urges the inherent reasonableness of Caligula's honouring the memory of his grandfather on the coinage. On the other hand, it is equally natural that Tiberius should have commemorated the father of Vipsania, the only one of his wives for whom he had any real affection.

(5) The "restitution" coins (Class III) apparently include none of Caligula's types, but only those of Tiberius. Thus it is a significant fact that the *Neptune asses* of Agrippa were restored by both Titus and Domitian.

It may be concluded, therefore, that, although some force lies in Laffranchi's theory, the weight of numismatic evidence points unmistakably to the period of Tiberius (A.D. 22-37) as the date of Agrippa's *asses*, amongst which we must include the example described above with the head of Divus Augustus.

Under Caligula there is a further improvement in the style of the bronze coinage. The rendering of the emperor's portrait is bold and impressive, executed in a manner that has been described as "semi-Greek".

9. *Obv.*—**CONSENSV·SENAT·ET·EQ·ORDIN·P·Q·R.**

Augustus seated l., and holding in r. an olive-branch, and in l. an orb.

Rev.—**DIVVS AVGVSTVS.** Radiate head of Augustus l., between S-C.

Æ² D (Coh. 87). Av. wt. 250 grains.

[Pl. XI. 9, 10.]

Sig. Laffranchi is probably right in assigning this *dupondius* to the period of Caligula. Its general style accords with that of the coinage of the reign, and the treatment of the seated figure of Augustus corresponds with that of Pietas on the *sestertii* (Coh. 9, 10) and Vesta on the *asses* (Coh. 27, 29).

The seated statue of Augustus, apparently referred to in the legend **CONSENSV SENAT**, &c., as having been erected jointly by the senate, knights, and people, differs from that portrayed on the *sestertii* of Tiberius (Coh. 309). The sceptre and radiate crown are omitted, and Augustus holds in his hand a globe or orb. This, it may be mentioned incidentally, seems to be the first appearance on the coinage of the orb held in the hand.

The somewhat unusual position of **SC**, on either side of the head, suggests that the head of Augustus should be regarded as the reverse type, as in the case of the *aurei* and *denarii* of Caligula and Augustus, and that the seated figure occupies the obverse.

Sig. Laffranchi suggests that the omission of the word **PATER** after **DIVVS AVGVSTVS** proves that the coin does not belong to the reign of Tiberius. I think, however, that on the coins of Tiberius the designation *Pater* is not used with reference to the emperor's personal, or adoptive, relationship to Augustus, but in the more general sense of *Pater Patriae*. It may be pointed out, too, that the legend **DIVVS AVGVSTVS PATER** reappears on the "restitution" coins (Class III) of Titus, where no personal relationship could possibly be implied. Quite apart from any such consideration, the style of these *dupondii*

is sufficiently marked to prove that they belong to the reign of Caligula rather than to that of Tiberius.

The coinage of Claudius differs considerably in point of style from that of his predecessor. Here the "semi-Greek" element is entirely absent. The portraits of Claudius are executed in low relief, although their flatness is not of the ugly inartistic quality that characterizes the later copper coins of Augustus.

No **DIVVS AVGVSTVS** coins of Class II were struck during the reign of Claudius, but we find a series of memorial coins bearing portraits of Nero Drusus (*Sestertius*, Coh. 8), Antonia (*Dupondius*, Coh. 6), and Germanicus (*As*, Coh. 9).

Whether or not these portraits are accurate likenesses may be open to question, since it is evident that their treatment is *modal*, that is to say, the features of Drusus, Antonia, and Germanicus show a strong resemblance to one another, and also to those of Claudius. Precisely the same modal treatment is observed in the following *dupondius*, which consequently may be assigned without question to the Claudian period :

10. *Obv.*—**DIVA AVGVSTA**. Livia, as Ceres, seated.

Rev.—**DIVVS AVGVSTVS**. Radiate head of Augustus
l., between **S-C**.

\mathcal{A}^2 *D* (Coh. 93). Av. wt. 250 grains.

In its more general features this coin corresponds with the preceding example of Caligula. That is to say, it is of the same denomination and weight, the word **PATER** is omitted, and the **S C** appears in the same position. On the other hand, the head of *Divus Augustus* has lost the traditional features shown on the coins issued by Tiberius and Caligula, and

unmistakably resembles the heads of Claudius, Drusus, and Germanicus [see **PL. XI. 13**].

The legend **DIVA AVGVSTA** leaves practically no doubt that the personage here represented is Livia. A seated figure, generally described as that of Livia, without descriptive legend, occurs frequently on coins of Augustus and Tiberius (cf. *supra*). But since the deification of Livia was decreed, according to Suetonius (*Claud.* 11) at the beginning of the reign of Claudius, we naturally do not find the appellation **DIVA** on any coins issued before that date. Thus we have a conclusive reason for assigning this type, found in conjunction with the legend **DIVA AVGVSTA**, to the period of Claudius.

Cohen describes two coins of the *Divus Augustus* series in second brass with the reverses **IOVI DEO S.C.**, temple of four columns (Coh. 181), and **SIGNIS RECEPTIS S.P.Q.R.**, buckler, inscribed **CL.V**, between aquila and signum (Coh. 268). These I have omitted from the present consideration since their authenticity seems open to question.

After the reign of Claudius the memorial *dupondii* and *asses* of Class I cease. There are, however, certain *aurci* and *denarii*, struck during the period immediately following the death of Nero, and generally described as "autonomous" coins, of which the following may be noted.

11. *Obv.*—**DIVVS AVGVSTVS**. Radiate head of Augustus r.

Rev.—**HISPANIA**. Spain standing l., in military dress and holding olive-branch, a round buckler and two poppies.

Aureus (Coh. 109).

12. *Obv.*—**DIVVS AVGVSTVS.** Laureate head l.
Rev.—**DIVVS
IVLIVS.** Comet.
Denarius (Coh. 101).
 [This coin is assigned by Cohen to the time of Claudius.]
13. *Obv.*—**DIVVS AVGVSTVS.** Radiate head r.
Rev.—**PAX P R.** Peace with caduceus and ears of corn.
Aureus (Brit. Mus.).
14. *Obv.*—[Similar to preceding.]
Rev.—**SENATVS P Q ROMANVS.** Victory walking l., holding buckler inscribed **VI AV**. [Period of Vitellius.]
Denarius (Brit. Mus.).
15. *Obv.*—**DIVVS AVG PP.** Laureate head r.
Rev.—**PAX.** Two hands joined holding caduceus between two cornuacopiae.
Denarius (Coh. 220).

It scarcely falls within the limits of our subject to include the debased silver coins of the third century, commonly termed "antoniniani", whereon occurs the last allusion to Divus Augustus.

Obv.—**DIVO AVGVSTO.** Radiate head of Augustus.
Rev.—**CONSECRATIO.** An altar or an eagle.

These coins form part of a commemorative series, assigned by some writers to the period of Gallienus, although it appears far more probable that they were issued by the Philips on the occasion of the thousandth anniversary of the founding of Rome.

The *Dicus Augustus* coins of Class III, generally termed "restitutions", make their first appearance in

the reign of Titus, and were continued by Domitian and Nerva. The memorial coins of this class may be regarded as forming part of the larger series of restitutions, or revivals, of certain coin-types originally issued under the Republic and earlier Empire. The reverse types of Class III are reproductions of those issued during the reign of Tiberius. Thus, Titus revived the *eagle on globe* (No. 3), Coh. 550, **PROVIDENT** altar (No. 6), Coh. 559, and *Victory with buckler* (No. 5), Coh. 557; Domitian, the *eagle on globe* (No. 3), Coh. 562; and Nerva, the *winged thunderbolt* (No. 1), Coh. 567, and the *globe and rudder* (Coh. 568). The last mentioned is not known on the original *Divus Augustus* coins, but is found on *asses* of Tiberius struck in A. D. 35.

The reason for the issue of "restitution" coins is not very obvious, nor is it easy to discover what principle guided the masters of the mint in their choice of types to be restored. But in connexion with this series it may be noticed that, whereas the "restitution" coins struck by Titus preserve the traditional portrait of Augustus as found on the **DIVVS. AVGVSTVS-PATER** series of Tiberius, those issued by Domitian and Nerva give to the features of Divus Augustus an unmistakable resemblance to those of the reigning emperor. This modal treatment, which is particularly marked in the case of Nerva's coins, may be either the result of incompetence on the part of the engraver or, possibly, an intentional device to suggest that the divine character of Augustus belonged also to his successors in the principate.

Having so far drawn up a classification of the memorial coins of Augustus, it remains to consider

how far they throw light on the growth of the imperial cult.¹¹ The conception of the divinity of the emperor was an important factor in the development of the imperial theory. After the Actian triumph temples to Roma and Augustus were erected in the east; less than twenty years later the famous *ara Romae et Augusto* was dedicated in the Gallic capital, and a similar dedication made at Tarraco. Here then was the symbol of imperial patriotism, a religious element capable of being incorporated into the diverse religions of the subject peoples, thereby creating a principle of unity throughout the Empire. Augustus was keen to perceive the value of the theory, and astute enough to foster its development. His very refusal to accept divine honours from the citizens of Rome and the people of Italy was in itself eminently politic. His ostensible motive appears to have been to emphasize the distinction of the ruling race, rather than to discourage a cult that might prove distasteful to the Roman susceptibilities. As a matter of fact the citizens of many Campanian cities of their own free will proclaimed the divinity of Augustus, and the Romans appear to have been ready enough to acquiesce in it. Clearly, therefore, the cult was materially strengthened by allowing it to emanate from the will of the people rather than from an imperial mandate.

To dedicate temples or decree ceremonial in recognition of the divine character of the emperor was both feasible and politic. To state the fact boldly on the Roman coinage was essentially different. The *Moneta*

¹¹ Cf. an interesting and suggestive article on the subject of the emperor's deification by Mrs. A. Strong in *Journ. Rom. Stud.*, 1917.

of Rome was in itself sacred; and Augustus was wise enough to see the inadvisability of making innovations on the traditions of the *Sacra moneta*, nor in later days did the vanity of even Domitian or Commodus inveigle them into making the attempt. Augustus had, however, propagated the idea by issuing coins to the memory of Divus Julius. Tiberius carried it on by means of the *Divus Augustus* series. The logical conclusion from this posthumous deification was that the emperor during his life was divine, or, at any rate, of a divine nature. But the coins of Caligula make no mention of any apotheosis of Tiberius, nor do the coins of Claudius record that of Caligula. It is evident, therefore, that this logical conclusion had not yet found definite expression, doubtless on account of the disregard evinced by Caligula and Claudius for their predecessors; so that, instead of the deification of each emperor in turn, we find during this period the only assertion of the theory lies in the repeated issue of coins in honour of Divus Augustus.

This series, as we have seen, continues down to the time of Claudius. No references to the divine Augustus occur on the coins of Nero, but distinct evidence of a development in the theory of the emperor's divinity may be discovered in the two small symbols which frequently occur as adjuncts of Nero's portrait—the *aegis*, an emblem of Jupiter, and the *globe*, a symbol of universal dominion. Thus Nero not only arrogated to himself the attributes of divinity, as Caligula appears to have done, but went a step farther by publicly expressing the idea on the coinage. It is, moreover, not without significance that on many of his *dupondii* and brass *asses* Nero is represented wear-

ing the radiate crown, which had hitherto been the peculiar adornment of the head of Divus Augustus.

Under the Flavians the imperial cult finds regular expression in the **DIVO VESPASIANO** coins of Titus and the **DIVO TITO** coins of Domitian. Domitian's contemptible vanity and extravagance in proclaiming himself *Dominus et Deus*¹² seems rather to have had a reactionary effect. His apotheosis is not recorded on the coins, and Nerva returned to the practice adopted by Tiberius, Caligula, and Claudius of issuing coins in honour of Divus Augustus.

E. A. SYDENHAM.

¹² Some evidence of Domitian's aspiration to divinity may be observed on the *Sestertii* with reverse type of Victory crowning the emperor, who holds a fulmen (Coh. 113).

X.

THE PENNIES OF EDWARD I, II, AND III.

(SEE PLATE X.)

THE object of this paper is simply to enable the student to recognize, and place in their proper order, the heavy pennies of the first three Edwards, issued between 1279 (in which year the "long-cross" type with the inscription *hENRICVS REX III* was abandoned) and 1350. The groats of Edward I, and the half-pennies and farthings of the three reigns, are therefore not included in it. Limitation of description to essential distinctions has entailed the omission of many interesting details given in the "Numismatic History of the Reigns of Edward I, II, and III" (*Brit. Num. Journ.*, vols. vi-x), but it is hoped that enough has been retained to render identification of the various types not too difficult. The classification and numbering used in the articles in question have been strictly followed, but, as it was most desirable to present the whole series on a single plate, it has been necessary to omit one or two sub-types from the illustrations; such omissions are duly noted in the text. Obverse dies only are figured, as, in practically every case, they show the typical points. It must not be forgotten that almost every variety is to be found muled with that which preceded and that which followed it.

A brief reference must be made to the fraudulent

issues which were so abundant in the thirteenth and fourteenth centuries. These were of two kinds: downright forgeries and "colourable imitations". Many of the former class are semi-barbarous; others are of excellent workmanship, often better than that of the genuine coins, though blunders in the inscription, not purely mechanical, but due to misreading of the original from which they were copied, often betray their origin—usually continental. In the later groups they often retain the abbreviation EDW for the king's name, and the form of the crown with three-lobed fleurs-de-lis at the sides, which had been abandoned in England before the issue of the types which they were intended to copy. The "colourable imitations" are of two distinct classes. The earlier (pollards and crokards), though reproducing the general type of the penny, bore their own proper inscriptions, and the head of the potentate who issued them was wreathed with roses instead of crowned. When their circulation was forbidden by Edward I, at Easter, 1300, a crown was substituted for the wreath, and in many cases an attempt was made to give the legend a superficial resemblance to that of the English coin. Practically all these issues are of more or less base metal and of light weight.

EDWARD I.

Of the ten groups attributable to Edward I, the first nine are characterized by the form of the royal crown, the outer limbs of which are of trifoliate formation, whereas from 1302 onwards these ornaments have but two fleurs (Fig. A). With the trifoliate crown goes invariably (except on the coins of Group I) the legend EDW R' ANGL' DNS hYB. The following descriptions

are not intended to be exhaustive, but merely to emphasize distinctive points.

I a [PL. X. 1]. Reads REX; R of Lombardic form. No hair on the king's forehead, a feature peculiar to this type. On all coins of Group I the crown has a flatter band across the forehead than is found in subsequent groups. Mints: London only.

I b [PL. X. 2]. Reads ED REX ANGLIE DNS HIBN. Small, neat lettering. N or H indifferently. No drapery on the king's breast, a peculiarity which does not occur again. Mints: London only.

I c [PL. X. 3]. Reads REX; N or H indifferently; small, neat lettering; variations in number and positions of stops. Two slightly different faces are found. Mints: London only.

I d [PL. X. 4]. Reads R instead of REX; N or H indifferently; larger lettering and larger bust. Mints: London only. A rare variety, which has an annulet on the king's breast, may have been struck for the Abbot of Reading, or for the king as receiver of the temporalities of the abbey, in the year 1280.¹

II a [PL. X. 5]. Tall bust, with long neck; letter N invariably of the form H, which does not reappear subsequently until the reign of Edward III. Mints: London, Canterbury, Durham, York.

III a [PL. X. 6]. Shorter neck and broader face; curved drapery, with returning ends. Round pearls instead of spear-heads between the fleurs-de-lis of the crown. Mints: London only.

¹ There are rare coins of the Canterbury and York mints, of Group II, which were struck from obverse dies of *I d*. The explanation is doubtless that William de Turnemire, when he took over the mint in 1280 and opened the provincial branches, sent out some obverse dies of the old stock.

III *b* [Pl. X. 7]. Very similar to the last, but the drapery lacks the returning ends; crown as on III *a*. Mints: London, Bristol, Canterbury, Durham, York.

III *c* [Pl. X. 8]. Much like III *b*, but the pearls in the crown are replaced by spear-heads, which are found on all subsequent types, and the drapery, though still made in one piece, is narrowed in the centre, while one end is often broader than the other. Mints: London, Bristol, Canterbury, Durham, Lincoln, York.²

III *d* [Pl. X. 9]. Broad face; drapery formed of two triangular pieces. Mints: London, Bristol, Lincoln, St. Edmunds (Robert de Hadeleie). No Canterbury coins of this type have yet come to light, though they probably exist.

III *e* [Pl. X. 10]. A sub-type peculiar to the mints in the North of England, and contemporaneous with III *d*. The bust has a long, narrow face, which is easily recognized. Mints: Durham, Newcastle, York (king's mint), York (archbishop's mint). The archiepiscopal coins have an open quatrefoil in the centre of the cross on the reverse, and frequently, but not always, a small quatrefoil on the king's breast. In this class the letter *N* often has a dot punched in on the crossbar, a mark which may be connected with Peter de Turnemire, then master moneyer at York, where the dies were probably made.

III *f* [Pl. X. 11]. Broad bust, of rougher work, with a very large nose. A new form of the letter *S*, thickened in the waist, appears for the first time.

² A remarkable penny, struck at St. Edmund's Abbey by the moneyer Robert de Hadeleie, is contemporary with this class. It is of local work, has the Lombardic form *N* and reads *hIB*. See *Brit. Num. Journ.*, vol. vii, p. 116 f.

Mints: London, Bristol, Canterbury, Lincoln, York (king's mint only). The York coins have a Lombardic R.

III *g* [Pl. X. 12]. Small, neat bust, with rather narrow face. Mints: London, Bristol, Canterbury, Chester, Durham, Lincoln, St. Edmunds (Robert de Hadeleie).³

These three groups bring the coinage down from its inception in the summer of 1279, when Edward I abandoned the use of his father's name on his money and began to strike in his own, to the closing of the minor mints at Michaelmas 1281, or thereabouts. Henceforward, until the great recoinage of 1300, but four mints were at work, those of the king, at London and Canterbury, of the Bishop of Durham, and of the Abbot of St. Edmunds.

IV *a* [Pl. X. 13]. Broader face, neck less well defined; large comma-shaped contraction marks. Letter S always thick-waisted, C and E always of open form, except on one peculiar die used at Durham. Mints: London, Canterbury, Durham, St. Edmunds (Robert de Hadeleie).

IV *b* [Pl. X. 14]. General style not unlike that of IV *a*, but the king's face and the curls of the hair are shorter. On this type first appears the cross moline of Bishop Antony Bek, of Durham, who received the temporalities of his See in September 1283. He first placed this distinguishing mark (taken from his arms) in the first quarter of the reverse, but it subse-

³ What purports to be a coin of the archbishop's mint, of York, of this class, is figured in *Brit. Num. Journ.*, vol. vii, Pl. iv, No. 17. No other specimen appears to be known, and the workmanship is suspiciously suggestive of continental origin.

quently took the place of the initial cross, in which position, at any rate on his earlier issues, it appears on both sides of the coin. Mints: London, Canterbury, Durham, St. Edmunds (Robert de Hadeleie).

IV c (not figured). Larger face and more copious hair. Mints: London, Canterbury, Durham, St. Edmunds (Robert de Hadeleie).

IV d [Pl. X. 15]. Differs from *IV c* only by the presence of a pellet at the beginning of the legend on either side. Mints: London, Canterbury, Durham. No specimen of St. Edmunds has yet been found, but such probably exists.

IV e [Pl. X. 16]. Bust very similar to that of *IV d*, but the hair is from new irons. Three pellets, representing the clasp of the royal mantle, on the king's breast. No pellet at the beginning of the obverse legend, but a pellet before LON or TOR. Mints: London, Canterbury. No specimen has been found of the Durham mint. Coins of St. Edmunds, corresponding with those of London and Canterbury in all other particulars, omit the pellets on the king's breast and that in the reverse legend. For the first time they bear the name of the mint—VILLÆ SCI EDMUNDI—instead of that of the moneyer, and may therefore be attributed to the year 1287, when Robert de Hadeleie's successor was sworn in.

V a [Pl. X. 17]. Well-spread coins with large lettering; style closely resembling that of the preceding class. Single pellet on the king's breast, but none in legend; large contraction marks. Letter T usually without bar. Mints: London, Canterbury.

V b [Pl. X. 18]. Coins yet more spread; very tall lettering and initial cross. Long, narrow face; pellet

on the king's breast. The pennies of this class differ markedly in style from any of their predecessors. Mints: London, Canterbury, Durham, St. Edmunds.

VI *a* [Pl. X. 19]. Coins rather smaller and more compact. Initial cross practically plain. Large and very oval face; large crown, with widespread fleurs-de-lis. Lettering of good form, but rough execution. Mints: London only.

VI *b* [Pl. X. 20]. An improved rendering of VI *a*. Initial cross well patée; lettering of good form, but often put in with damaged punches. ϵ of true closed form, as is the case on all subsequent issues. Mints: London, Canterbury, Durham, St. Edmunds.⁴

VII *a* [Pl. X. 21]. Smaller and very neat coins, with large, well-fleured crown; rose on the king's breast; thick drapery. Almond-shaped eyes; very short hair. Π always double-barred, S of two forms, thick-waisted, or made up of two crescents and two bars. Mints: London, Canterbury. A St. Edmunds coin, made with the irons of this class, omits the rose on the breast and has the Π single-barred.

VII *b* [Pl. X. 22]. Rose on breast, but narrow face, longer hair, and a crown much resembling that of the next class. Lettering unchanged. Mints: London only.

A Durham penny figured in *Brit. Num. Journ.*, vol. viii, Pl. vii, No. 23, must be mentioned here, as the king's crown and hair are from the irons used for VII *b*. The large lettering is, however, more like that of V *a*, and the ϵ is open. No corresponding coins are found of other mints.

⁴ A London specimen of this type, figured in *Brit. Num. Journ.*, vol. viii, pl. vii, No. 14, has the unusual reading $\epsilon D W T \epsilon$, &c.

VIII *a* [Pl. X. 23]. Face and drapery of VII *a*, but with a new and smaller crown. Some changes in the lettering; the *S* of four pieces and the double-barred *N* are no longer found. Mints: London, St. Edmunds.

VIII *b* (not figured). Type approximating to IX *a*, but the face, especially as regards the rendering of the eyes, is better executed than in that group. Mints: London, Durham, St. Edmunds.

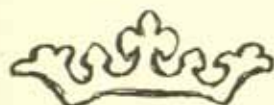
The accounts preserved show that the amount of bullion coined in London had fallen off greatly since the end of the year 1290, and at Canterbury only insignificant quantities were struck; in fact, the total output of that mint from Michaelmas 1293 to Michaelmas 1299 was but 106 pounds Tower, of which 90 pounds were minted in the first twelve months. The scarcity of coin was beginning to be severely felt, and towards the end of 1299 measures were taken to remedy the evil. Large amounts were coined at the four great mints, and, for a few months, other establishments were revived in the provinces. Hence the coins of Group IX are among the most plentiful of the reign.

IX *a* [Pl. X. 24]. Narrow face, pupils of the eyes very prominent; flatter crown than on previous issues. A star is usually placed on the king's breast, but is sometimes omitted at Durham. A few coins of this class have the crown made with the iron of Group VIII. Mints: London, Canterbury, Durham, St. Edmunds.

IX *b* [Pl. X. 25]. Very small, neat coins, closely resembling those of IX *a*. The star on the king's breast is sometimes replaced by a pellet, or omitted. Lettering small and neat; letter *N* of Roman form, sometimes without a bar, or formed of two "pot-hooks" (see

Fig. C. 1). Mints: London, Bristol, Canterbury, Chester, Durham (Bishop Bek's), Durham (king's receiver's), Exeter, Kingston-on-Hull, Newcastle-on-Tyne, St. Edmunds, York (royal), York (archiepiscopal, distinguished by a sunken quatrefoil in the centre on the cross on the reverse).

These (with the exception of certain issues of Edward III, to be noticed hereafter) are the last coins which read EDW. The remaining types of Edward I give the king's name at greater length, and have a new form of the royal crown, with but two, instead of three,



1.



2.

Fig. A.

The two crowns figured above show the difference between those in use before 1302 and those of subsequent issues. No. 1 has the outside ornament composed of three members and No. 2 of two only. With the exception of a few very rare survivals on the earliest coins of Group X, No. 1 is never found after 1302.

leaflets in the outer fleurs-de-lis (Fig. A. 2).⁵ It is not possible, in this article, to repeat the detailed proofs of the dating of the various types. Suffice it to say that the principal evidence is furnished by the coins of Durham. Bishop Antony Bek, from the year 1300 onward, was constantly at feud with his sovereign, who in consequence seized the temporalities of the See, which included the privilege of minting money,

⁵ Continental imitations, combining the bifoliate crown with the abbreviated form EDW, are not uncommon; they are usually of more or less debased metal.

and caused to be struck, by the king's receiver, pennies which did not bear the prelate's personal mark. A brief reconciliation and pardon bring back the cross moline, but were followed by a second seizure, which lasted until the accession of Edward II. Some further points are given by the issues of Newcastle-on-Tyne. To describe accurately the differences which distinguish the late coins of Edward I from those of his son and successor is difficult. Perhaps the simplest course is to state at once that the pennies of Edward II can be attributed, with certainty, by the forms used for the king's crown. Fig. B. 1-5 show the five varieties which appeared successively during his

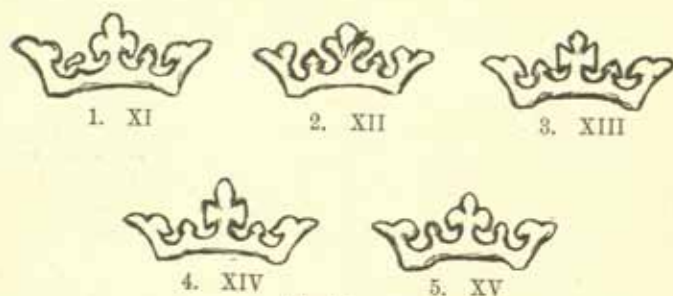


Fig. B.

NOTES ON THE FIVE CROWNS OF EDWARD II.

No. 1. This can be recognized by a constant malformation of the spear-head ornament on the dexter side.

No. 2. The central ornament of this crown is of very peculiar form, more like a broad arrow than a fleur-de-lis.

No. 3. The side members of the central ornament are straight-edged, giving it somewhat the form of a double-headed axe.

No. 4. The upper member of the central ornament is exaggeratedly tall.

No. 5. Smaller and flatter but well-formed central fleur-de-lis. The smaller ornaments are less definitely spear-heads, are taller, and are bent somewhat toward the dexter side.

reign, and any coin not showing one of these forms (always excepting certain issues of Edward III, to which reference has already been made) must belong to the last years of Edward I.

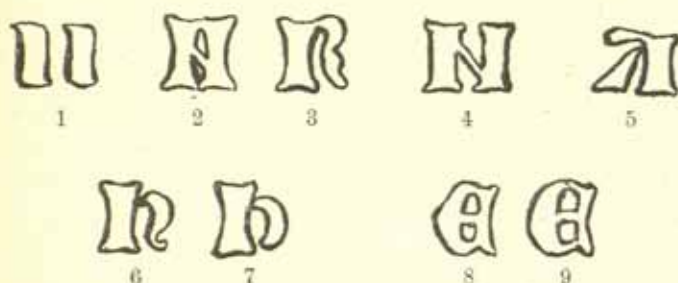


Fig. C.

NOTES ON THE LETTERS FIGURED ABOVE.

No. 1. The so-called "pot-hook" H, found on many coins of Group IX (1300).

No. 2. The characteristic H which is found on all the earlier issues of Group X. It is formed of very concave uprights usually placed rather close together. It is found on the halfpennies and farthings of similar date, which it serves to identify.

No. 3. A typical R which was introduced at the same period as the H last described. It is also found on the smaller coins. It does not occur on the later coins of Group X.

No. 4. A broad, well-formed H with straight uprights and a marked characteristic of XI a.

No. 5. The peculiar A by which coins of XI c may be recognized.

No. 6. The h with turned-out foot which is found on practically all pennies of Edward II up to and including XV b.

No. 7. Occurs on all coins of XV c and d. Note the turned-in foot.

No. 8. This sharp-backed G was the only form in use from XI to XV b.

No. 9. The large round-backed G which, together with the in-turned footed h just described (No. 7), enables coins of XV c and d to be recognized at once.

X a [Pl. X. 26]. Coins of neat workmanship, with a long, narrow face. Inscription: $\Theta D W T R D R T N G L$ DNS hYB. Mints: London, Canterbury, Durham (king's receiver's), Newcastle, St. Edmunds.

X b [Pl. X. 27]. Similar, but the king's name reduced to $\Theta D W T R$. A Durham specimen has the open form of ϵ , which is most unusual at this period. Mints: London, Canterbury, Durham (king's receiver's and Bishop Bek's), Newcastle, St. Edmunds.

X c (not figured). The king's name further reduced to $\Theta D W T$. Mints: London, Canterbury, Durham (Bishop Bek's), St. Edmunds.

X d [Pl. X. 28]. Broader face, larger crown, and wider, more ornamental lettering. The king's name usually $\Theta D W T$, but sometimes $\Theta D W T R$. Mints: London, Canterbury, Durham (Bishop Bek's), St. Edmunds.

X e [Pl. X. 29]. Bust with rather square face and but little neck; slender initial cross; fat lettering. Mints: London, Canterbury, Durham (Bishop Bek's and king's receiver's), St. Edmunds.

X f [Pl. X. 30]. Squatter and thicker initial cross; coins otherwise much like those of *X e*. Mints: London, Canterbury, Durham (king's receiver's), St. Edmunds.

EDWARD II.

The pennies of Edward II are divisible into five main groups, which can be distinguished by the form of the king's crown. The mints in operation throughout the reign were London, Canterbury, Durham, and

St. Edmunds.⁶ As the series of coins is practically complete—one variety is missing at London, and one at Durham, but these probably exist, although they have not yet been recorded—it is unnecessary to repeat the names of the mints after each class. XV *d*, though differing from its immediate predecessors in small details only, was struck after the accession of Edward III, as were also certain Durham specimens of XV *c*.

GROUP XI: *first crown*, easily recognizable by a constant malformation of the spear-head on the dexter side, which is bent toward the dexter like a hook.

XI *a* [Pl. X. 31]. Long, narrow face, with very pointed chin; neat, squarely formed initial cross; letter N with absolutely straight-edged down-posts (Fig. C. 4). Coins of this type were struck at Berwick, as well as at the four regular mints.

XI *b* [Pl. X. 32]. The king's face made with a new and smaller iron; lettering slightly smaller; N has well-marked serifs, and Θ a more angular back.

XI *c* (not figured). Distinguished from XI *b* by the use of a peculiar form of the letter A (Fig. C. 5). No London specimen has yet been found.

GROUP XII: *second crown*, the central ornament of which is composed of three wedges, broad ends uppermost, and much resembles the conventional "broad arrow".

⁶ Coins were also struck at Berwick-on-Tweed during the later years of Edward I and the early years of his son, but with one exception, which will be referred to under XI *a*, they are of local and almost barbarous workmanship, and their classification, which has nothing in common with that of the issues of the regular mints, has yet to be worked out.

XII *a* [Pl. X. 33] at first differs from XI *b* only in the form of the crown, but later specimens have a new form of initial cross, made up of four triangular pieces. No Durham specimen is known.

GROUP XIII: *third crown*, which has the side members of the central ornament straight-edged, giving the fleur-de-lis a form much like that of a Greek double-headed axe.

XIII *a* [Pl. X. 34]. Initial cross as on the later coins of XII; face usually from the iron used in Groups XI *b* and *c*, and XII. The letter Θ is frequently made with a broken punch. A few dies have the face put in with the iron of the next group, to which they should be given on strict chronological grounds, but for practical purposes it is more convenient to stick to the crown iron as the test.

GROUP XIV: *fourth crown*, with well-shaped central fleur-de-lis, the central limb of which is exaggeratedly tall.

XIV *a* [Pl. X. 35]. Large face, with a curious smile and leering eyes. The broken Θ punch of the preceding class is frequently found in the earlier dies.

GROUP XV: *fifth crown*, with smaller and flatter but well-formed fleur-de-lis; the smaller ornaments are less definitely spear-headed than in the previous class, and on most specimens are somewhat bent toward the dexter side.

XV *a* [Pl. X. 36]. King's face and lettering as in the preceding class.

XV *b* [Pl. X. 37]. King's face much smaller, though very similar in character.

XV *c* [Pl. X. 38]. King's face large, but without the

smile of XIV *a*; eyes full and round. This class can be distinguished with certainty by the use of a disproportionately large letter *Θ*, with a rounded back (in all the classes previously described the back of the *Θ* is more or less angular, Fig. C. 8), and by a letter *h* which has its foot turned inward, toward the down-post, instead of outward: see Fig. C. 7. This is the last type of Edward II.

Before passing on to the coins of Edward III, reference must be made to the issues of the Bishops of Durham. Lack of space made it impossible to figure these if we were to give all the distinctive types of Edward I and Edward II on a single plate, but it is hoped that the following descriptions will make things clear.

Bishop Bek, who was restored to favour soon after the king's accession, first used dies of Edward I (of X *e* and X *f*), which had been altered by punching a cross moline over the original cross patée. Most of his coins, however, are of XI *a*, to which also belong those struck *sede vacante* by the king's receiver, before the grant of the temporalities of the See to his successor. These *sede vacante* coins are distinguished by the absence of any special mark, and, but for the mint name, are exactly like coins of London or Canterbury.

Bishop Kellawe, whose issues are distinguished by the conversion of the first limb of the main cross on the reverse into a crosier, which is turned toward the dexter, struck XI *a*, *b*, and *c*; probably XII *a* (though no specimen has yet been found) and XIII *a*. A rare mule, with the obverse of Bishop Bek and the reverse of Bishop Kellawe, exists.

Bishop Beaumont, who substituted a lion rampant, taken from his arms, accompanied by one or more fleurs-de-lis, for the initial cross, and dropped the crosier used by his predecessor on the reverse, struck XIII *a*, XIV *a*, and XV *a*, *b*, and *c*. A coin of XIV *a*, with an initial cross patée and without any episcopal marks, must be attributed to Robert de Sapy, the king's receiver of the temporalities during the vacancy between Bishops Kellawe and Beaumont.⁷

EDWARD III.

Proof that the coinage of Edward III began with XV *d* is furnished by the archiepiscopal coins of York. The writ by which dies were ordered to be delivered to Archbishop Melton on April 10, 1331, definitely refers to the last delivery of dies to the archbishop in the twenty-ninth year of Edward I,⁸ and a protest by the Exchequer authorities, on the ground that, when dies were last delivered, the king also had a mint in the city, which was not the case now, was overruled by the king himself. The archbishop accordingly duly received his dies, which are distinguished, among other peculiarities, by the use of the Lombardic form of the letter *Ų*, and the coins struck from them can only belong to Edward III. Corroborative evidence is forthcoming in the case of the London, Canterbury, and Durham mints. Unlike those of the preceding

⁷ See *Brit. Num. Journ.*, vol. x, pp. 104-5.

⁸ This is a slip on the part of the scribe, for the dies were delivered in the twenty-eighth year.

classes, the coins of XV *d* show differences, other than the mere change of the mint name, at the various mints, and the coins of each of these must therefore be described separately.

XV *d*: dies made, for the most part, from the irons used for XV *c*, but the letters \mathfrak{M} and \mathfrak{N} , when they occur, are of Lombardic form, and there are other differences peculiar to the several mints:

London: typical coins, distinguishable from XV *c* only by the use of the Lombardic \mathfrak{M} and \mathfrak{N} .

Canterbury: initial cross made up of four triangles, with a pellet in the centre; three dots between the pellets in one quarter of the reverse.

Durham: obverse as London coins; the distinguishing mark of Bishop Bury, a crown, taken from the arms of St. Edmunds Bury, of which he was a native, is placed in a lozenge in the centre of the cross on the reverse. Letters M and N of roman form are used on the reverse. No coins of Bishop Beaumont with the Lombardic \mathfrak{M} and \mathfrak{N} are known, although it is practically certain that he struck some pennies after the accession of Edward III. A rare penny of XV *c*, without any episcopal mark, can only have been struck by the receiver of the temporalities during the vacancy of the See following Bishop Beaumont's death, and therefore really belongs to Edward III.

St. Edmunds: differs from London coins only in the name of the mint.

York: coins identical, but for the mint name, with those of Canterbury. Some specimens have a pellet in each angle of the initial cross, a distinction taken from the sign manual of Richard de Snoweshulle, who was appointed warden of the mint, by Archbishop

Melton, on August 8, 1331.⁹ A rare variety has the roman N on the obverse.

XVI [Pl. X. 40]. The king's crown has very large fleurs-de-lis, those on the outside showing two members only, with well-formed pyramids, without pearls, between them; large and well-spread curls of hair; drapery much more elaborate than on preceding coins. The royal name appears as GDW or GDWTK (on certain Durham specimens as GDWTKR), and some varieties have annulets between the words of the legend. The lettering is very florid and ornamental, and the form of the letter G, with its inward curl, cannot be confused with that of any earlier issue. N is found of roman, reversed roman, or Lombardic form. A slight reduction in weight took place during the issue of this group, which began in 1344. Mints: London, Canterbury, Durham, Reading, York.

Group XVI had not yet been dealt with in the *Brit. Num. Journ.* when the writers were compelled to suspend their work, and still remains to be treated in detail. There are at least three, if not more, subdivisions of the group, but all of them will be recognizable under the above description.

J. SHIRLEY-FOX.

H. B. EARLE FOX.

⁹ For a reproduction of Snoweshulle's sign manual, see *Brit. Num. Journ.*, vol. x, p. 106.

DESCRIPTION OF PLATE.¹⁰

<i>Number on Plate.</i>	<i>Group Number.</i>	<i>Remarks.</i>	<i>Approximate Date.</i>	
EDWARD I.				
1-4	I	1, 2, and 3 read REX	1279	
5	II	Always reversed H	early 1280	
6-12	III	Provincial mints working	1280-Autumn 1281	
13-16	IV	14 is first type of Bek	1282-1290	
17, 18	V	Pellet on breast	1290-1294	
19, 20	VI	Rose on breast		
21, 22	VII			
23	VIII	Thick shoulder drapery		1295-1299
24, 25	IX	Last three-leaf crown	1299-1302	
26-30	X	First two-leaf crown	1302-1307	
EDWARD II.				
31-32	XI	First crown. 31 is last type of Bek. First Kellawe	1308-1313	
33	XII	Second crown.	1317	
34	XIII	Third crown. Last Kellawe. First Beaumont		
35	XIV	Fourth crown		
36-38	XV	Fifth crown	1329-1343	
EDWARD III.				
39	XV	Archbishop of York's mint re-opened. Lombardic R		
40	XVI	Much later and more florid style	1344	

¹⁰ The Editors are indebted to the Council of the British Numismatic Society for the casts from which Plate X has been executed.

XI

THE MEDALS OF MATTEO DE' PASTI.

THE object of the present list of the medals of Matteo de' Pasti is to test the method which I propose to adopt in the work on Italian medals of the fifteenth and sixteenth centuries which I have had in preparation for many years. For this purpose I have chosen one of the groups of medals which are most complicated by small variations, produced by slight alterations in the moulds from which they are cast.

The principle of arrangement adopted is this: First comes a brief bibliography; then a brief sketch of the fixed points in the medallist's career, and, when he is of importance as an artist, a brief attempt at a critical estimate. A statement follows of the dates and signatures which are found on the medals, and of any other details likely to be of interest. Biographical information about the persons represented on the medals is reserved for the index.

In the arrangement of the medals themselves, the signed pieces are placed first, the unsigned next; where there are various degrees of probability in the attribution of the latter, an attempt is made to group them accordingly (but in Pasti's case this feature is hardly apparent). Within the groups the order is, as far as possible, chronological. After each medal (the description of which is according to ordinary numis-

matic methods¹) is given first the reference to Armand's *Médailleurs Italiens*, the foundation of all modern work on the subject; this is followed by references to other literature in which the medal in question is mentioned, but not in such a way as to enable us to identify the particular specimen of which the writer was thinking. In this place references will, for instance, sometimes be found to the *Museum Mazzuchellianum* (see No. 21); but usually this work is referred to lower down, in connexion with some particular specimen at Brescia. The reason is that it cannot be presumed that the Brescia specimen of No. 21, which formed part of the Martinengo bequest, is Mazzuchelli's specimen; whereas when a Brescia specimen from the Brozzoni bequest corresponds to the description in the *Museum Mazzuchellianum*, we may assume identity, since Brozzoni acquired the great majority of Mazzuchelli's medals. The various specimens of the medals which have been described are distinguished by the letters of the Greek alphabet.² It is of course possible that the same

¹ I have thought it worth while to indicate by an arrow the relative positions of obverse and reverse, wherever I find a note of this relation in my schedules. This detail may perhaps occasionally help in deciding a question of attribution. It is noticeable that the only specimens in which I have observed any departure from Pasti's rule of keeping the reverse upright are some (10 b) on which his signature has been removed. Where not otherwise stated the metal is bronze, or one of the various alloys of copper which numismatists designate by the monogram Æ; lead or pewter is represented by P.

² "London" alone means British Museum; "Paris" alone means the Cabinet des Médailles in the Bibliothèque Nationale; "Berlin" the Kaiser Friedrich-Museum, and so on. The public collections come first, then the private. Certain details concerning the Vienna specimens are taken from a MS. list of the collection of which, in happier times, I was permitted to take a copy.

specimen appears more than once in the list, having passed from one collection to another. So far as it lay in my power I have endeavoured to check such duplications. Last of all come remarks on date, &c.

It will perhaps seem that the enumeration of all recorded specimens is an unnecessary encumbrance. It certainly adds considerably to the weight of the material; but it is of interest as showing the comparative popularity (and, more or less inversely, the rarity) of the medals, and indicating the collections in which specimens can be seen. If any one can suggest a simpler method of doing this, I shall be grateful to him. I need hardly say that the enumeration makes not the least pretence of being complete; most of the collections outside this country are only laid under contribution in so far as their contents have been published, or their curators have kindly provided me with casts; and sale-catalogues have, for the most part, only been drawn upon when the descriptions are accompanied by illustrations.

MATTEO DE' PASTI.

Friedländer, *Ital. Schaumünzen* (1882), pp. 43 ff. Armand, *Méd. Ital.*, i (1883), pp. 17 ff.; iii (1887), p. 4. A. Heiss, *Méd. de la Ren.* (1883), *Alberti*, &c., pp. 16-47. C. v. Fabriczy, *Ital. Medals* (1904), pp. 42-6. G. F. Hill, *Pisanello* (1905), pp. 225 ff. P. Schubring in *Kunstwiss. Beitr. A. Schmarzow gewidm.* (1907), pp. 103 ff. (his sculpture). *Madonna Verona*, v. 3 (1911), pp. 197 ff. (with references to recent discoveries).

Matteo di Maestro Andrea de' Pasti or de Bastia of Verona is first heard of in 1441 at Venice, where he was working for Piero di Cosimo de' Medici on illustrations to the *Triumphs* of Petrarch. He was at Verona in 1446, doing illuminations for Leonello d'Este. He settled at Rimini in 1446, and superintended archi-

tectural and other work on S. Francesco for Alberti, especially after the latter left Rimini in 1450. He married Lisa Baldegara (1449 or earlier) and rose to honour in the court of Sigismondo Malatesta (he is described as *aulico* and *nobile*). His numerous medals of Sigismondo are mentioned in a letter of Timoteo Maffei in 1453. In 1461 he left for Turkey to paint the Sultan's portrait, but was arrested by the Venetian authorities at Candia on suspicion of taking a map of the Adriatic to the enemy; released and back at Rimini in January, 1462. Still living May 15, 1467, but died in that year or early in 1468. He was the most accomplished among the immediate followers of Pisanello. His portrait of Guarino is his most powerful work; his rendering of the Rocca of Rimini is perhaps the finest architectural design to be found on a medal; his portrait of Isotta is shrewd and penetrating. His versatility was considerable, and he had a reputation as architect, sculptor, painter, and illuminator as well as medallist.

His signature has been deliberately removed from the models from which certain medals of Sigismondo Malatesta and Isotta are cast; of this unusual proceeding the only explanation seems to be that the master was not responsible for the actual production of these specimens, but authorized their production if his signature was removed. The suggestion that the signatures were deleted because of some spite against him, or because he had fallen into disgrace at Rimini (of which there is no record), seems very improbable. The number of modifications of these Rimini medals, due to slight alterations in the legends, is remarkable. As a rule, the medals with the readings **SIGISMONDVS**,

SISMONDVM seem to be subsequent to those with **-VNDVS, -VNDVM**.

Dated medals: 1446 (Nos. 7-10, 12, 14-20, 24), 1447 (Nos. 13, 21), 1450 (No. 22).

Signatures: **MATTHEVS·DE·PASTIS·F·** (Nos. 1, 3).

MATTHAEI·PASTII·VERONENSIS·OPVS (Nos. 2, 4, 5).

MATHEVS·PASTVS·V·FECIT (No. 6).

MATHEVS·PASTVS·V·F· (No. 7).


O·M·D·P·V· (No. 8 a).

OPVS·MATHEI·DE·PASTIS·V· (Nos. 9 a, 10 a).

P (No. 9 c).

Lettering: **E E** (once, No. 1), **GG, MM** (the last two are not distinguished in descriptions).

Occasional ligatures (Nos. 10 a, 11).

Stops: **♦ ♦ ▼** (in various positions) and, on the Malatesta and Atti medals, also the conventional four-leaved rose (): see Hill, *Pisanello*, p. 163.

All medals by Pasti are cast.

1-10. *Signed Medals.*

Guarino da Verona.

1. *Obv.*—**GVARINVS VERONENSIS** Bust l., aged, cloak fastened on l. shoulder.

Rev.—**MATTHEVS·DE PASTIS·** and, below, **F**
Within laurel-wreath, a fountain surmounted by nude male figure with mace and shield; all in a flowery meadow.

Arm. i. 18. 2 (95 mm.); ii. p. 85. Maffei, *Ver. Ill.* (1793), iii, Tav. i. 1.

(a) Berlin, 93 mm.: Friedl., p. 47, No. 10. (β) Brescia (Brozzoni), 91 mm.: Mazz., I. xvii. 2; Rizzini, No. 30. (γ) London, ↑ 95 mm.: *Sel. Ital. Med.*, Pl. 10. 1. (δ) Do., ↑ 93 mm.: Keary, No. 25; Fabr., Pl. xi; Hill, *Pisanello*, Pl. 68. (ε) Vienna, 92 mm.: *Trés. Num.*, II. ii. 3; Heiss, *Alberti*, &c., p. 24, No. 2, Pl. iii. 2. Old after-cast, somewhat chased. (ζ) G. Dreyfus: *La Coll. Dreyfus (Les Arts, 1908)*, p. 74, No. x. (η) J. C. Robinson, 93 mm.: *Catal.*, No. 12, Pl. ii. 1. (θ) M. Rosenheim, ↑ 90 mm.

Probably made in or shortly before 1446, when Pasti was working for the Ferrarese Court.

Maffei (Timoteo).

2. *Obv.*—**TIMOTHEO·VERONENSI·CANONICO·REGVL·DEI·PRAECONI·INSIGNI·** Bust l., elderly, wearing habit, hood raised.

Rev.—**MATTHAEI·PASTII·VERONENSIS·OPVS**
The Dove of the Holy Spirit r. on a lightning cloud.

Arm. i. 18. 4 (92 mm.). Maffei, *Ver. Ill.*, iii, Tav. iii. 1.

(a) Berlin, 89 mm.: *Katal. Simon*, No. 109. (β) Brescia (Brozzoni), 88 mm.: Mazz., I. xviii. 2; Rizzini, No. 31. (γ) Florence, 88 mm.: Supino, No. 27. (δ) London, ↑ 91 mm.: Keary, No. 26. (ε) Do., 87 mm., much tooled. (ζ) Paris, 92 mm.: *Trés. Num.*, I. viii. 1; Heiss, *Alberti*, &c., p. 29, No. 4, Pl. iv. 1. (η) Vienna, 88 mm.: good, old cast; pierced. (θ) M. Rosenheim, ↑ 89 mm., after-cast.

Probably earlier than 1446.

Pasti (Benedetto de').

3. *Obv.*—**BENEDICTVS·DEPASTIS** and, below, **C V**
Bust l., clothed, wearing high cap.

Rev.—**♦MATTHEVS♦DE PASTIS♦** and, below, **F**
around a laurel-wreath, within which is a young male figure, clad in a short tunic, standing to front and shooting arrows to r., which break against a rock.

Arm. i. 23. 27 (91 mm.). Maffei, *Ver. Ill.*, iii, Tav. ii. 1.

(a) Berlin, 90 mm.: Friedl., p. 47, No. 11. (β) Brescia (Brozzoni), 91 mm.: Mazz., I. xx. 1; Rizzini, No. 51. (γ) London, Br. Mus., ↑ 90 mm., after-cast. (δ) Do., Vict. and Alb. Mus., 7908-1863, ↑ 90 mm. (ε) Vienna, 90 mm.: *Trés. Num.*, II. ii. 4; Heiss, *Alberti*, &c., p. 31, No. 6, Pl. iv. 3. (ζ) M. Rosenheim, ↑ 90 mm.

Probably earlier than 1446. **C V** = civis Veronensis.

Alberti (Leone Battista).

4. *Obv.*—**▼LEO BAPTISTA▼ ▲ALBERTVS▲** Bust l., wearing close-fitting dress.

Rev.—**MATTHAEI ▼ PASTII ▼ VERONENSIS ▼ OPVS▼** around a wreath of laurel, within which a winged human eye and the motto
◀QVID▶TVM▶

Arm. i. 17. 1 (93 mm.).

(a) Berlin, 93 mm.: Friedl., p. 46, No. 9. (β) Brescia (Brozzoni), 87 mm.: Mazz., I. xxvii. 1; Rizzini, No. 29. (γ) London, Brit. Mus., ↑ 92.5 mm.: Hill, *Portr. Med. of Ital. Artists*, p. 29, 4, Pl. xviii. (δ) Do., Vict. and Alb. Mus. (Salting), ↑ 93 mm. (ε) Paris, R,

93 mm.: Heiss, *Alberti*, &c., p. 21, No. 1, Pl. iii. 1. (ζ) Paris: *Trés. Num.*, I. viii. 2. (η) Vienna, 90 mm., after-cast. (θ) G. Dreyfus: *La Coll. Dreyfus (Les Arts)*, 1908, p. 74, No. ix. (ι) J. C. Robinson, 93 mm.: *Catal.*, No. 11, Pl. i. 3, ex His de la Salle.

Also occurs in an oval form (reproduction in Viet. and Alb. Mus.). As Alberti did not return to Rimini after 1450, this medal dates from the period 1446-50. It is said to be reproduced in a medallion above the tomb of Sigismondo Malatesta at Rimini. The device of the winged eye possibly refers to Alberti's inventions in optical science.

Jesus Christ.

5. *Obv.*—**IESVS•CHRISTVS•DEVS•DEI•FILIVS•
HVMANI•GENERIS•SALVATOR** Bust l., with plain circular nimbus seen edgewise; vest and cloak; long hair, moustache, and trim beard.

Rev.—**MATTHAEI•PASTII•VERONENSIS•OPVS**
The dead Christ seen in half-figure to front in tomb, his head supported by a winged putto; on l., another putto weeping, with hands uplifted; behind, the cross.

Arm. i. 18. 3 (93 mm.).

(α) Berlin, 93 mm.: Friedl., p. 47, No. 12. (β) Florence, 92 mm. (modern?): Supino, No. 24. (γ) G. Dreyfus, 93 mm.: Arm., *loc. cit.*; Heiss, *Alberti*, &c., p. 26, No. 3, Pl. iii. 3; Hill, *Reliquary*, 1904, p. 174. (δ) H. Oppenheimer, 94 mm., *obr.* only: Burlington Fine Arts Club, *Ital. Plastic Art*, 1912, p. 91, No. 7, Pl. lxii.

Probably contemporary with the Alberti medal and some of the Isotta medals, which have the same stops. A drawing closely resembling this *obr.*, but with bust r. and no nimbus, and inser. **+IESVS•+CHRISTVS•+FILIVS•+DEI•+** is in the Vallardi Codex in the Louvre, and is presumably by Pasti himself (Heiss, *loc. cit.*, p. 28; *Reliquary*, *loc. cit.*, p. 175).

Malatesta (Sigismondo Pandolfo).

6. *Obv.*—**SIGISMVNDVS•PANDVLVVS•DE•MA
LATESTIS•S•RO•ECLESIE•CAPITANE
VS•G** Bust l., wearing cuirass and surcoat.

Rev.—**CASTELLVM•SISMVNDVM•ARIMINEN
SE•MATHEVS•PASTVS•FECIT** The Castle of Rimini, with many square towers, curtain-wall, and gateway.

Arm. i. 19. 6 (85 mm.); ii. p. 286.

(a) Paris, 83 mm.: *Trés. Num.*, I. vii. 1; Heiss, *Alberti*, &c., p. 31, No. 8, Pl. v. 1.

The Rocca Malatestiana, begun in 1438, was finished in 1446. This *rev.* is copied in Piero dei Franceschi's fresco of Sigismondo kneeling before his patron saint in San Francesco, Rimini.

7. *Obv.*—Same as No. 6, but **SIGISMONDVS** for **SIGIS MVNDVS**

Rev.—Same as No. 6, but **SISMONDVM** for **SISMVN DVM**, and the word **FECIT** replaced by **F.1446**

(a) Glasgow, Hunterian Mus., 84 mm.: *Num. Chron.*, 1889, p. 375, No. 1. (β) London, Br. Mus., ↑ 84 mm.; the signature **MATHEVS·PASTVS·V·F·** taken out altogether, leaving the date 1446; Keary, note on No. 22.

8 a. *Obv.*—**SIGISMONDVS·P·D·MALATESTIS·S·R·ECL·C·GENERALIS·** Bust l., wearing mail and surcoat.

Rev.—**·O·M·D·P·V·** (above), **·M CCCC XLVI·** (below). Achievement consisting of tilting shield [the monogram of **SI** and a bordure indented], casque with coronet, crest [an elephant's head (sa.) defended (arg.)]; the trunk raised, the neck adorned with a crest engrailed (or) and mantling.

Arm. i. 20. 15 (43 mm.).

(a) Berlin, 43 mm.: Friedl., p. 45, No. 2. (β) Brescia (Brozzoni), 43.5 mm.: Mazz., I. xiv. 2; Rizzini, No. 38. (γ) Florence, 43 mm.: Litta, *Malatesta*, 9; Supino, No. 32. (δ) Frankfurt a. M., 43 mm.: *Katal. Metzler*, No. 7, Taf. ii. (e) Paris (Armand), 43 mm.: Heiss, *Alberti*, &c., p. 32, No. 13, Pl. vi. 3. (ζ, η) Vienna, 43 mm., and a ruined after-cast, *R.*, 41 mm. (θ) T. W. Greene, 42 mm. (ι) H. Oppenheimer, ↑ 43 mm. (κ) M. Rosenheim, ↑ 42 mm., ex Dupriez, Oct., 1909, No. 542.

8 b. On the following specimens the signature **O·M·D·P·V·** is absent from the *rev.* (Arm. i. 21. 16).

(a) Berlin: Friedl., p. 45, note on No. 2. (β) Brescia (Brozzoni), 43 mm.: Rizzini, No. 39. (γ) London, ↑ 43 mm. (δ) Venice, Correr, 42 mm.: Litta, *Malatesta*, note on No. 9. (e) Lanna, 43 mm.: *Katal.*, No. 20, Taf. 2. (ζ) Marchese Malatesta: *Trés. Num.*, II. iii. 2; Heiss, *Alberti*, &c., p. 32, No. 13 *bis* and p. 34 (fig.). (η) Morbio, 40 mm.: *Katal.*, No. 3523. (θ) Do., 42 mm., *Katal.*, No. 4321. (ι) H. Oppenheimer, ↑ 42 mm. (κ) J. C. Robinson, 43 mm.: *Catal.*, No. 16. (λ) M. Rosenheim, ↑ 42.5 mm.

Atti (Isotta degli).

9 a. *Obv.*—☼ ISOTE ARIMINENSI ☼ FORMA ☼ ET ☼
VIRTUTE ITALIE DECORI ☼ Bust r.,
clothed; hair over high frame, wearing veil
fastened with jewel on top of forehead and
over back of head.

Rev.—OPVS MATHEI DE PASTIS. ♁ Elephant
r., in flowery meadow; on each side, heraldic
rose-tree; below, ☼ MCCCC XLVI ☼


Arm. i. 21. 20 (84 mm.). Mazz., I. xvi. 1.

(a) Berlin, 83 mm.: Friedl., p. 45, No. 4, Taf. viii. (β, γ) Brescia, 85 and 84 mm.: Rizzini, Nos. 44, 45. (δ) Florence, 83 mm.: Litta, *Malatesta*, 14; Supino, No. 36. (ε) London, ↑ 84.5 mm.: Keary, No. 23; Fabr., Pl. x; Hill, *Pisanello*, Pl. 67; *Sel. Ital. Med.*, Pl. 11. 3. (ε') Do., Vict. and Alb. Mus. 4504-58, ↑ 85 mm. (ε'') Do., do. (Salt-
ing), ↑ 84.5 mm. (ζ) Paris, 84 mm.: *Trés. Num.*, I. vii. 2; Heiss, *Alberti*, &c., p. 44, No. 17, Pl. vii. 1. (η) Vienna, 84 mm. (θ) T. W. Greene, ↑ 84 mm. (i) Lanna, 83 mm.: *Katal.*, No. 28. (κ) Lübbecke, 85 mm.: *Katal.*, No. 6. (λ) Morbio, 83 mm.: *Katal.*, No. 3521. (μ) M. Rosenheim, ↑ 82.5 mm.

The elephant, as a symbol of magnanimity (with the motto *Elephas Indus culices non timet*), is a Malatesta device.

Specimens from altered models:—

9 b. Berlin: Friedl., p. 45, No. 5; Arm. i. 21. 21; Heiss, p. 44, No. 18, Pl. vii. 2. On *rev.* the inscr. (all but the date) has been taken out and a radiant sun placed at the top of the field.

9 c. Milan, Taverna, 85 mm.: Arm. i. 22. 22; Heiss, No. 23, Pl. viii. 4. On *obv.* the date 1447 has been incised; the *rev.* is replaced by an engraving of a heraldic four-petalled rose, with stalk and two leaves, together with the monogram 

10 a. *Obv.*—ISOTE ARIMINENSI FORMA E VIRTUTE
ITALIE DECORI Bust r., veiled as on 9 a.

Rev.—MCCCC XLVI OPVS MATHEI DE PAS
TIS. ♁ An angel, in floating drapery,
emerging from a cloud, flying l., holding
wreath in both hands.

Arm. i. 22. 25 (45 mm.). Heiss, p. 44, No. 20, Pl. viii. 1 (this specimen is not in the Vict. and Alb. Mus.).

(a) Berlin, 41 mm.: Friedl., p. 46, No. 6. (β) Florence, 41 mm.: Litta, *Malatesta*, 13; Supino, No. 39. (γ) Vienna, 41 mm.: *Trés. Num.*, II. iii. 7, after-cast. (δ-ζ) Morbio, 40 mm.: *Katal.*, Nos. 3522, 4322, and (E) 4323. (η) H. Oppenheimer, 42 mm.

- 10 b. On the following specimens the model has been altered by taking out the signature and engraving grassy ground in its place.

Arm. i. 22. 26 (43 mm.).

(a, β) Brescia, 41 mm.: Mazz., I. vi. 5; Rizzini, Nos. 49 (Brozzoni), 50. (γ) Florence: Litta, *Malatesta*, 12 (no trace of ground in Litta's engraving); not given by Supino. (δ) London, Br. Mus., ♂ 42 mm. (ε) Do., Vict. and Alb. Mus., 7910-1863, ♂ 41 mm.: Heiss, No. 20 bis.

- 11-26. *Medals unsigned, but attributed to Matteo de' Pasti on the ground of identity of models or style with signed specimens.*

Maffei (Timoteo).

11. *Obv.*—TIMOTHEO·VERONEN·CANONICO·R· Bust l., as on No. 2.

Without reverse.

Arm. i. 18. 5 (28 mm.). Mazz., I. xviii. 3. Maffei, *Ver. Ill.* (1793), iii, Tav. iii. Friedl., p. 46, No. 8.

(a) Brescia, 28 mm.: Rizzini, No. 32. (β) Turin, 29 mm.: Heiss, *Alberti, &c.*, p. 29, No. 5, Pl. iv. 2.

Malatesta (Sigismondo Pandolfo).

12. *Obv.*—▲SIGISMVNDVSPANDVLFVS▼MALATES
TA▼PAN▼F▼ Bust l., in plate-armour over
mail, without surcoat.

Rev.—CASTELLVM▼SISMVNDVM▼ARIMINENSE
▼M▼CCCC▼XLVI▼ The Castle of Rimini,
from same model as No. 6.

Arm. i. 20. 12 (83 mm.).

(a) Berlin, 84 mm.: *Katal. Simon*, No. 104. (β) Do., 83 mm.: Friedl., p. 48, No. 14, Taf. viii. (γ) Brescia (Brozzoni), 82 mm.: Mazz., I. xiv. 5; Rizzini, No. 37. (δ) Florence, 80 mm.: Litta, *Malatesta*, 4; Supino, No. 31. (ε) Glasgow, Hunterian Mus., 80 mm. (ζ) The Hague: *Chaufepié et Kerkwijk, Choix*, No. 186, Pl. viii. (η) London, Br. Mus., ♂ 79.5 mm. (θ) Do., Vict. and Alb. Mus. (Salting), ♂ 80 mm. (i) Paris, 83 mm.: *Trés. Num.*, I. iv. 2; Heiss, *Alberti, &c.*, p. 31, No. 9, Pl. v. 2. (κ) Morbio, 82 mm.: *Katal.*, No. 3519. (λ) F. von Parpart, 82 mm.: *Katal.* (1913), No. 283, Taf. ii. (μ) Piot, 80 mm.: *Catal.*, No. 636. (ν) Bennett-Poë, 81 mm. (ξ, o) J. C. Robinson, 80, 81 mm.: *Catal.*, Nos. 13, 14. (π) M. Rosenheim, ♂ 82 mm. (ρ) Spitzer, 78 mm.: *Catal.*, iv, Pl. ii. 92. (σ) Fuldauer, 80 mm.: *Catal.*, Apr. 1910, Pl. v. 717. (τ) W. H. Woodward, ♂ 80 mm.

13. *Obv.*—Same as No. 6, but **SIGISMONDVS** for **SIGIS MVNDVS**

Rev.—Bust of Isotta, and inscription (same as obverse of 9 a) with 1447 incised over top of head.

(a) Vienna, 83 mm. (β) H. Oppenheimer, 84.5 mm.: *Katal. Lanna*, No. 18, Taf. 3; Burlington Fine Arts Club, *Ital. Plastic Art*, 1912, p. 92, No. 8, Pl. lxii.

14. *Obv.*—**SIGISMONDVS·PANDVLFVS·DE·MALA TESTIS·S·RO·ECLESIE·C·GENERALIS**
Bust l., wearing cuirass and surcoat. All from same model as No. 6, save for differences in first and last two words.

Rev.—**CASTELLVM·SISMONDVM·ARIMINENSE·M·CCCC·XLVI** The Castle of Rimini; from same model as No. 12.

(a) Brescia, 84 mm.: Rizzini, No. 36. (β) Florence, 85 mm.: Supino, No. 28. (γ) London, Br. Mus., ↑ 83.5 mm.: Keary, No. 22; Fabr., Pl. ix; Hill, *Pisanello*, Pl. 66; *Sel. Ital. Med.*, Pl. 11. 1. (δ) Do., Vict. and Alb. Mus., 6010-1857, ↑ 82.5 mm. (e) Do., Wallace Coll., ↑ 83.5 mm.: *Catal.*, 344. (ζ) Paris, 83 mm.: Heiss, *Alberti*, &c., p. 31, No. 10, Pl. v. 3. (η) Vienna, 83 mm. (θ) Lössbecke, 83.5 mm.: *Katal.*, No. 4, Taf. i. (i) J. C. Robinson, 82 mm.: *Catal.*, No. 15. (κ) L. Belli, 83 mm.: *Katal.* (1905), Taf. i. 6235.

The *Museum Mazzuchellianum* (l. xiv. 3) and, following it, Friedländer, p. 48, No. 15, and Armand, i. 19. 8, give **SIGIS MVNDVS** on the obverse (see no. 17).

15. *Obv.*—Same as No. 7 (**SIGISMONDVS**).

Rev.—**CASTELLVM·SISMONDVM·ARIMINENSE·M·CCCC·XLVI** The Castle of Rimini (probably from same model as on Nos. 6 and 12).

Arm. i. 19. 7.

(a) Berlin, 84 mm.: Friedl., p. 48, No. 13. Arm., *loc. cit.*
(β) Vienna, 82 mm., AR after-cast.

16. *Obv.*—Same as No. 15.

Rev.—Same as No. 14 (**SISMONDVM**).

(a) Brescia (Brozzoni), 82 mm.: Rizzini, No. 33. (β) London, Vict. and Alb. Mus., 668-1865, ↑ 84 mm., Agilt. (γ) T. W. Greene, 84.5 mm. (δ) O. Hainauer: Bode, *Stg. O. H.*, 1897, p. 103, No. 261. (e) Lanna, 83 mm., *Katal.*, No. 17, Taf. 3.

17. *Obv.*—Same as No. 14, but **SIGISMVNDVS** for **SIGISMONDVS**.

Rev.—Female figure (Fortitude) wearing crown, cuirass, and long tunic, seated to front in a meadow on a seat, sides of which are formed by foreparts of elephants; holds in both hands a broken column; below, **M•CCCC•XLVI**.

Arm. i. 20. 9 (83 mm.); iii. 4 a (where this is wrongly equated to Heiss, Pl. vi. 1).

(a) Berlin, 83 mm.: Friedl., p. 48, No. 16. (β) Brescia (Brozzoni), 79 mm.: Mazz., I. xiv. 4; Rizzini, No. 34. (γ) Florence, 80 mm.: Supino, No. 29. (δ) F. von Parpart, 82 mm.: *Katal.* (1913), No. 282, Taf. ii.

18. *Obv.*—Same as No. 14 (same model).

Rev.—Same as No. 17.

Arm. i. 20. 10 (83 mm.).

(a) Berlin, 82 mm.: *Katal. Simon*, No. 103. (β) Brescia (Brozzoni), 82 mm.: Rizzini, No. 35. (γ) Frankfurt a. M., 83 mm.: *Katal. Metzler*, No. 6, Taf. iii. (δ) London, Br. Mus., ↑ 81.5 mm. (e) Do., Vict. and Alb. Mus., 671-1865, ↑ 81 mm. (f) G. Dreyfus, 83 mm.: Heiss, *Alberti*, &c., p. 31, No. 11, Pl. vi. 1. (η) H. G. Gutekunst, 82 mm.: *Katal.* (1910), No. 6, Taf. iii. (θ) March. Malatesta: *Trés. Num.*, II. iii. 1. (i) Morbio, 83 mm.: *Katal.*, No. 3524, Taf. iv. (κ) M. Rosenheim, ↑ 81 mm. (λ) L. Belli, 81 mm.: *Katal.* (1905), Taf. i. 6236.

19. *Obv.*—**SIGISMVNDVS PANDVLVVS • MALA TESTA • PAN • F • PONTIFICII • EXER • IMP**
Bust l., wearing surecoat over cuirass.

Rev.—Same as No. 17.

Arm. i. 20. 11 (83 mm.) "**EX • IMP**"

(a) Florence, 81 mm.: Litta, *Malatesta*, No. 5 ("**EX • IMP**"); Heiss, *Alberti*, &c., p. 31, No. 11 bis, fig., p. 33 (*rev.* wrongly stated to be of the Castle type); Supino, No. 30.

20. *Obv.*—Same model as No. 8 a.

Rev.—**MCCCC XLVI** Fortitude, crowned, seated l. on throne, holding a broken column on her knee with r., and her garment with l.

Arm. i. 20. 14 (43 mm.).

(a) Berlin, 43 mm.: Friedl., p. 45, No. 3. (β) Do., 42.5 mm.: *Katal. Simon*, No. 105. (γ) Florence (?): Litta, *Malatesta*, 6. (δ) London, Br. Mus., ↑ 41 mm. (after-cast). (e) Do., Vict. and Alb.

Mus., 1435-1855, ↑ 43 mm. (ζ) Paris, Armand, 43 mm., *Trés. Num.*, II. iii. 3; Heiss, *Alberti*, &c., p. 32, No. 12, Pl. vi. 2. (η) H. Oppenheimer, ↑ 43 mm. (θ) M. Rosenheim, ↑ 43 mm.

21. *Obv.*—**SIGISMVNDVS PANDVLFVS·MALATES TA·** Bust l., wearing mail and surcoat.

Rev.—**PONTIFICII·EXERCITVS·IMP·M·CCCC XLVII·** An arm, clothed, issuing from a cloud and holding a palm-branch.

Arm. i. 21. 18 (32 mm.). Mazz., I. xiv. 6.

(a) Berlin, 32 mm.: Friedl., p. 48, No. 17. (β) Brescia (Martinengo), 32 mm.: Rizzini, No. 42. (γ) Florence, 31 mm.: Litta, *Malatesta*, 7; Supino, No. 34. (δ) The Hague: Chauffepié et Kerkwijk, *Choix*, No. 187, Pl. viii. (ε, ε bis) London, ↑ 31.5 mm.: *Sel. Ital. Med.*, Pl. 10. 2. (ζ) Paris, 32 mm.: *Trés. Num.*, II. iii. 5; Heiss, *Alberti*, &c., p. 32, No. 14, Pl. vi. 4 (date misread). (η) Vienna, 32 mm. (θ) Borghesi: *Catal.*, Drouot, 1908, No. 756, Pl. viii. 5. (i) Lanna, 31 mm.: *Katal.*, No. 25. (κ) Löbbecke, 32 mm.: *Katal.*, No. 5. (λ) Morbio, 32 mm.: *Katal.*, No. 3526. (μ) H. Oppenheimer, ↑ 32 mm., ex Jos. Hamburger, June, 1912. (ν) Do., ↑ 31 mm. (ξ) F. von Parpart, 32 mm.: *Katal.*, (1913), No. 284. (ο) J. C. Robinson, 32 mm.: *Catal.*, No. 18. (π) M. Rosenheim, ↑ 31 mm.

22. *Obv.*—**SIGISMVNDVSPANDVLFVS·MALATES TA·PAN·F·** Bust l., laureate, wearing plate-armour over shirt of mail.

Rev.—**PRAECL·ARIMINI·TEMPLVM·AN·GRATIAE·V·F·M·CCCC·L·** Front view of San Francesco at Rimini, according to Alberti's proposed reconstruction.

Arm. i. 21. 17 (40 mm.). Köhler, *Münz-Belustigung*, i. (1729), p. 9.

(a) Berlin, 40 mm.: Friedl., p. 49, No. 18, Taf. viii. (β) Do., 41 mm.: *Katal. Simon*, No. 102. (γ, δ) Brescia (Brozzoni), 40 mm.: Mazz., I. xiv. 1; Rizzini, Nos. 40, 41. (ε) Florence, 40 mm.: Supino, No. 33. (ζ) Frankfurt a. M., 41 mm.: *Katal. Metzler*, Nachtr., No. 7a, Taf. xxvii. (η) Glasgow, Hunterian Mus., 41 mm. (θ) London. Br. Mus., ↑ 40 mm.: *Sel. Ital. Med.*, Pl. x. 3. (i) Do., Vict. and Alb. Mus., Soulages, 745-1865, ↑ 39 mm. (κ) Paris, Luynes: Litta, *Malatesta*, No. 8; Heiss, *Alberti*, &c., p. 32, No. 15, Pl. vi. 5. (λ) Vienna, 40 mm., after-cast. (μ) Lanna, 40 mm.: *Katal.*, No. 22. (ν) March. *Malatesta*: *Trés. Num.*, II. iii. 4. (ξ) Morbio, 40 mm.: *Katal.*, No. 3525. (ο) Piot, 39 mm.: *Catal.*, No. 637. (π) J. C. Robinson, 40 mm.: *Catal.*, No. 17. (ρ, σ) Rosenheim, ↑ 41, 40 mm. (τ) A. Sambon, 40 mm.: *Katal.* (1914), No. 3, Taf. i.

The church of San Francesco, though unfinished, was dedicated in 1450 (V.F. = Votum fecit). The attribution of this medal to Pasti has, I believe, never been doubted. In character, however, the portrait differs somewhat from those on his other medals, resembling more the relief in a square frame in San Francesco. (The portrait in a wreath, on a pillar in the Chapel of the Madonna dell' Acqua, is a much finer work.) The date 1450 is also late and isolated in the series of medals; but this in itself may account for the slight change in style, if Pasti had done no medals for three or four years.

23. *Obv.*—SIGISMVNDVSPANDVLVVS • MALATES
TA • PAN • F • POLIORCITES • ET • IMP •
SEMPER • INVICT • Bust l., laureate, wearing
plate-armour over mail.

Without reverse.

Arm. i. 20. 13 (90 mm.).

(a) Berlin, 90 mm.: Friedl., p. 49, No. 19, Pl. viii; Arm., *loc. cit.*; Heiss, *Alberti*, &c., p. 32, No. 16, Pl. vi. 6; Fabriczy, Pl. xi. 2. (β) G. Dreyfus: *La Coll. Dreyfus (Les Arts*, 1908), p. 74, No. 6. (γ) M. Faure, 90 mm.: *Catal.* (1913), No. 480, after-cast (?). "Poliorcites" may refer to the capture of Vada in 1453 (see Friedländer).

Atti (Isotta degli).

24. *Obv.*—◀D◀ISOTTAE◀ ▼ARIMINENSIA◀ Bust r., hair
over high frame, confined by crossing band,
fastened with jewel on top, and falling in two
pointed masses behind.

Rev.—Same model as No. 9 a, but signature and two
rose-trees taken out.

Arm. i. 21. 19 (84 mm.). Köhler, *Münz-Belustigung*, i. (1729),
p. 417.

(a) Berlin, 83 mm.: Friedl., p. 49, No. 20. (β) Berlin, 83 mm.:
Katal. Simon, No. 106. (γ) Brescia (Brozzoni), 83.5 mm.: Mazz.,
I. xvi. 3; Rizzini, No. 43. (δ) Florence, 84 mm.: Litta, *Malatesta*, 15;
Supino, No. 35, Tav. xi. (ε) Frankfurt a. M., 83 mm.: *Katal.*
Metzler, No. 8, Taf. iii. (ζ) The Hague: *Chaufepié et Kerkwijk*,
Choix, No. 185, Pl. viii. (η) London, Br. Mus., †84 mm.: Keary,
No. 24. (θ) Do., Vict. and Alb. Mus., Soulages, 670-1865, †84 mm.
(i) Do., do. (Salting), †83 mm. (κ) Vienna, 83 mm.: Heiss, *Alberti*, &c.,
p. 44, No. 19, Pl. vii. 3. (λ) Fau, 83 mm.: *Catal.*, No. 425 (fig.).
(μ) T. W. Greene, 82.5 mm. (ν) H. G. Gutekunst, 82.5 mm.:
Katal. (1910), No. 9, Taf. i. (ξ) Lanna, 84 mm.: *Katal.*, No. 26,
Taf. 3. (ο) J. C. Robinson, 84 mm.: *Catal.*, No. 20. (π) M. Rosen-
heim, †83 mm. (ρ) Spitzer, 83 mm.: *Catal.*, iv, Pl. ii. 78. (σ) Trau,
82 mm.: *Katal.*, No. 1240, Taf. vii, viii. (τ) L. Belli, 83 mm.: *Katal.*
(1905), Taf. i. 6238.

25. *Obv.*—**▷D▷ISOTTAE◀▷ARIMINENSI▷** Bust r., head-dress as on No. 24.

Rev.—**ELEGIAE** A closed book.

Arm. i. 22, 23 (43 mm.).

(a) Berlin, 41 mm.: Friedl., p. 50, No. 21. (β) Do., 40 mm.: *Katal. Simon*, No. 108. (γ) Brescia (Brozzoni), 42.5 mm.: Mazz., I. xvi. 2; Rizzini, No. 46. (δ) Florence, 41 mm.: Litta, *Malatesta*, 11; Supino, No. 37. (ε) Glasgow, Hunterian Mus.; thrice counter-marked on *obv.* with a cross. (ζ) London, Br. Mus., 42 mm.: *Sel. Ital. Med.*, Pl. 10. 4. (η) Paris, 41 mm.: *Trés. Num.*, II. iii. 6; Heiss, *Alberti, &c.*, p. 44, No. 22, Pl. viii. 3. (θ) Vienna, 42 mm., after-cast. (ι) T. W. Greene, 42 mm. (κ) H. G. Gutekunst, 41.5 mm.: *Katal.* (1910), Taf. i. 10. (λ) Lanna, 42 mm.: *Katal.*, No. 29. (μ) Morbio P., 41 mm.: *Katal.*, No. 3527. (ν) Do., 40 mm.: *Katal.*, No. 4324. (ξ, ο) M. Rosenheim, 42, 41 mm. (π) A. Sambon, 42 mm.: *Katal.* (1914), No. 4, Taf. i.

26. *Obv.*—**D•ISOTTAE•ARIMINEN•M•CCCCXLVI•** Bust r., veiled, as on No. 9 a.

Rev.—Same model as No. 25, the letters reworked and increased in size.

Arm. i. 22, 24 (43 mm.).

(a) Berlin, 41 mm.: Friedl., p. 50, No. 22. (β, γ) Brescia, 42, 41.5 mm.: Mazz., I. xvi. 4; Rizzini, Nos. 47 (Brozzoni), 48. (δ) Florence, 41 mm.: Litta, *Malatesta*, 10; Supino, No. 38. (ε) Frankfurt a. M., 41 mm.: *Katal. Metzler*, No. 9, Taf. ii. (ζ) London, Br. Mus., 42.5 mm.: *Sel. Ital. Med.*, Pl. 11. 3. (η) Do., Vict. and Alb. Mus., 6804-1860, 41 mm. (θ) Do., Wallace Coll., 41 mm.: *Catal.*, No. 336. (ι) Paris, 41 mm.: Heiss, *Alberti, &c.*, p. 44, No. 21, Pl. viii. 2. (κ) Vienna, 41 mm. (λ) Lanna, 42 mm.: *Katal.*, No. 30, Taf. 1. (μ) H. Oppenheimer, 42 mm. (ν) M. Rosenheim, 41.5 mm.

A large medallion (115 mm.) in high relief of Sigismondo Malatesta is placed by Heiss (*Alberti, &c.*, p. 31, No. 7, Pl. iv. 4) among the works of Pasti, but is not in his style.

There is a well-known forgery, made by attaching an after-cast of the portrait of Isotta to an after-cast of Pisanello's Sigismondo, with a forged signature of Pisanello added under the bust of Isotta (Arm. i. 13 A): Hill, *Pisanello*, p. 164.

G. F. HILL.

MISCELLANEA.

SOME RARE ROMAN COLONIAL COINS.

4



2

1. EPIRUS. BUTHROTUM.

Augustus.

Obv.—AVGVST within wreath : BVTHR below.

Rev.—L·ATEIVS FVSCVS M·PVLLIENVS Circular object (buckler?) in small temple.

Æ 25 mm. ↑. (Fig. 1.)

The obverse is unfortunately double-struck on the upper part, and the full inscription may possibly have been **CAESAR AVGVST** (see *B. M. Catalogue*, Buthrotum 3, reading **CAESAR AVGVSTVS** within wreath of oak).

The reverse (also double-struck) seems to be hitherto unknown, but Imhoof-Blumer (*Monnaies Grecques*, p. 139, No. 31) publishes a piece of different type with **M·PVLLIENVS L·ATTEIVS**—the same magistrates. Both spellings, **ATEIVS** and **ATTEIVS**, are found in the records, but the former is supposed to be the more correct.

2. HISPANIA TARRACONENSIS. SAGUNTUM.

Sempronius Vettonianus and Lucius Fabius Postumus.

Obv.—**SEMPR·VETTO·M·SAG** Head of Pallas or Roma, in winged helmet, r.

Rev.—**L FABI POST.** Prow of galley, r.: Victory, with wreath, flying above.

Æ 28.5 mm. →. (Fig. 2, obverse.)

This specimen completes the obverse legend of Heiss 19 (Pl. xxviii) and Delgado 29 (Pl. clxv) on which the mint-name at the top is not shown, being apparently off the flan. Here the letters **M·S** are clear, and the tops of **AC** are also visible. Heiss tells us that few specimens of the early Latin coins of Saguntum have been met with excepting those now in the Spanish and French national cabinets.

3. CASTULO.

Augustus?

Obv.—**M·VAL** Beardless male head (Augustus?), with hair in band, r.

Rev.—**C·COR** Bull standing r.: crescent above.

Æ 24.5 mm. ↓.

A specimen of a coin not known to Heiss, but given by Delgado (No. 41, Pl. cxvi).

4. CORINTH.

Caligula.

Obv.—[**C·CAESAR AVGVS.**?] Bare head of Caligula, r.

Rev.—**P·VIPSANIO·AGRIPPA II·VIR COR** Pegasus flying l.

Æ 20 mm. →. (Fig. 4, reverse.)

—All published varieties of this magistrate's coinage give Pegasus flying r. (H. B. Earle Fox in *Journal Internat.*, ii. (1899), pp. 106-7).

5. SYRTICA. LEPTIS MAGNA.

Augustus (*temp.* Tiberius?).

Obv.—DIVOS AVGVSTVS. Laureate head of Augustus, surmounted by star, r.

Rev.—The Indian Bacchus, crowned with vine-leaves and grapes, walking half l., holding a wine-jug and the thyrsus; a panther, looking upwards, walking at his side: four Punic letters in the field.

Æ "medallion", 43 mm. (Fig. 5.)

This fine medallion (type of Müller, *Num. de l'anc. Afr.*, vol. ii, p. 6, No. 21) is notable for its large size. The normal diameter is given by Müller as size 10 in Mionnet's scale (35 mm.).

LEOPOLD A. D. MONTAGUE.

A NOTE ON DIE-POSITIONS.

THE following note may be of interest in connexion with the question of arrangement of Greek and Roman dies.

There are in the Athens cabinet a number of specimens from a hoard of coins of Smyrna, which appears to have been formed in the magistracy of Claudius Rufinus, as there are many examples of the issues of his period in mint condition, and none of later times. He was in office some time between A. D. 198 and 209, as coins with his name were struck for Severus, Julia Domna, Caracalla as Augustus, and Geta as Caesar.

Amongst these coins there occur two sets where specimens from the same obverse and reverse dies show the dies in different positions. Two examples of the type of B. M. C. 379 (Julia Domna) are struck with the dies respectively $\uparrow\uparrow$ and $\uparrow\downarrow$: and of five examples of the type of B. M. C. 424 (Geta), all from the same pair of dies, four have the die-position $\uparrow\downarrow$ and one has $\uparrow\uparrow$. It would appear therefore that these dies cannot be described as fixed: they were adjusted indifferently to one of two positions, and it may be suggested that the upper die was shaped or marked so as to show the vertical axis of the type, but not to distinguish the top or bottom.

It may be added that among the coins at Athens struck under Rufinus there are altogether eight of Julia Domna,

with the reverse type of Herakles, from the same obverse die, but from four different reverse dies; of these six have the die-position $\uparrow\downarrow$ and two $\uparrow\uparrow$: there are two from another obverse die, and from distinct reverses, both of which have $\uparrow\downarrow$. Of Caracalla there are nine coins, five with the reverse type of Zeus Akraios, from four different reverse dies, and four with that of the emperor crowned by Nike, from two dies: six of the nine are struck from one obverse die and three (all with Zeus Akraios reverse) from another: in every case the die-position is $\uparrow\downarrow$. Of Geta there are nineteen, two of which have the reverse type of temple of Tyche, both from the same die, and the rest that of the twin Nemeses, from thirteen different dies: eleven are from one obverse die, of which six have the die-position $\uparrow\uparrow$, and five $\uparrow\downarrow$; the other eight are from another obverse die, and of these two have $\uparrow\uparrow$ and six $\uparrow\downarrow$. On the whole these figures suggest that $\uparrow\downarrow$ was intended to be the normal position, and that some dies were more liable than others to be reversed.

J. G. MILNE.

A NOTE ON THE COMPOSITION OF SOME BRITISH COINS.

DR. S. W. SMITH, of the Royal Mint, has kindly analysed certain specimens of British coinage which I submitted to him. He gives his results under three heads, as follows:

A.

Coins corresponding to the description given by Evans in his *Ancient British Coins*, Chap. VII, "Tin Coinage".

The statement on p. 123 that these coins are made of an alloy in which tin "preponderates" is probably based on the appearance of the fracture of the metal, which is greyish-white.

The composition of one selected for analysis is in round figures:

Copper	.	.	73 per cent.
Tin	.	.	27 per cent.

The alloys of copper and tin attain a maximum hardness near this composition, at which they are brittle and of course unsuitable for the purposes of rolling or "striking".

The alloy of which these coins are made resists the action of the usual corroding agents, which probably accounts for the fact that they are merely tarnished superficially.

B.

Coins corresponding to those described in the *Numismatic Chronicle*, Vol. XI (1911), pp. 42-56 (A Hoard of Roman and British Coins from Southants), and figured on Plate iv.

These coins have suffered considerable corrosion. In the one selected for analysis only the internal portions remain as a metallic core. The external portions are completely oxidized.

The coin probably occupied less volume originally, i. e. it was denser than at present. From the analysis in its present condition the original composition which is indicated is (in round figures):

Copper	.	.	79 per cent.
Tin	.	.	11.5 per cent.
Lead	.	.	9.5 per cent.

C.

These coins appear to be of the same general character as those marked "B", but they cannot be positively identified with either of the illustrations.

They show certain marked distinctions from those of "B":

(1) In the coin selected for analysis no metal core remains—it is completely oxidized throughout.

(2) The composition differs by the absence of lead, and the original proportions of copper and tin were (in round figures):

Copper	.	.	93 per cent.
Tin	.	.	7 per cent.

(3) The coins probably occupied considerably less volume than at present.

So far Dr. Smith's report. His results are of considerable interest. The following observations may be made on them.

The specimen of A was one from the Brentford find (Sotheby's Catalogue, 8, xii, 1915, lot 280), kindly presented for the purpose by Mr. A. H. Baldwin.

As regards the other pieces, the coins described under B

belong to the cast series of the now well-known Hengistbury type.¹

It will be observed that Dr. Smith's analysis agrees fairly well with that of two (*a* and *d*) of the similar coins analysed by Prof. Gowland, whose table of four analyses I reproduce from p. 75 of the *Hengistbury Report*.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>
Copper	73.06	71.66	85.00	76.0
Tin	11.02	17.41	2.26	11.7
Lead	7.78	0.37		9.6
Oxygen and adherent earthy matter }	8.14	10.56	11.43	2.7
Silver			1.31	
	100.00	100.00	100.00	100.00

Prof. Gowland remarks that "the coins, with the exception of *a* and *d*, are extremely variable in the proportions of copper, tin, and lead they contain. A coin of Augustus and Agrippa . . . has the following composition :

Copper	78.45
Tin	12.96
Lead	8.62

It hence resembles *a* and *d*, but I do not think they have been obtained by melting these Roman coins." But he does not give his reason for doubting this otherwise very probable view of their origin.

The coins described by Dr. Smith under C belonged to a class usually regarded as struck coins, of the usual South-Western type. It will be observed that the specimen analysed contained no lead. It would be interesting to know whether analyses of other specimens confirm this; naturally one would expect the earlier coins to be purer than the later. A reference to J. Hammer's tables² seems to show that some of the Roman struck coins contain tin in large proportions, although it was usually helped out by a slight admixture of lead. In the present condition of the coins from Hengistbury, it is impossible to say that some of them may not have been made by casting, although the original British coins of the type were always struck.

G. F. H.

¹ Society of Antiquaries of London, *Reports of the Research Committee*, No. III, pp. 64 ff.

EUA IN ARCADIA.

RECENT excavations at the Arcadian Orchomenos have, among other results, produced a bronze coin of the ordinary types of the Achaean League with the inscription [ΑΧΑΙΩ]Ν ΕΥΑΕΩΝ,¹ which is accordingly supposed to introduce to numismatic literature for the first time the city of Eua. The little place lay among the heights of Parnon in the Thyreatis, near the border of Arcadia, in which it is placed by Stephanus of Byzantium.² This bronze coin is, however, not the first or the only coin of the place to be published, though it is the first to be recognized for what it really is. Professor Oman calls my attention to the fact that a silver half-drachm, of the usual Achaean types, with the letters ΕΥ flanking the monogram, has long been known.³ The absence of any symbol, such as the caduceus which occurs in combination with the same letters ΕΥ on a coin doubtless rightly attributed to Pheneus (Clerk, 221), shows that ΕΥ on this coin must be the mint-name. Accordingly Eua is now provided with both the denominations of coinage usually employed by members of the Achaean League.

G. F. H.

OBITUARY.

CHARLES FRANCIS KEARY.

CHARLES FRANCIS KEARY, who died on Oct. 26 last, aged 69, had long ceased to write on numismatic subjects. His appointment to the staff of the Medal Room of the British Museum dated from March 6, 1872. Between that time and May 1887, when he retired, he contributed frequently to the *Numismatic Chronicle*. Even after that date he continued to collaborate in the Catalogue of Anglo-Saxon coins, the second volume of which, the joint production of Mr. Grueber and himself, appeared in 1893. And only last year, when the members of the staff of the Medal Room were removed to spheres more directly connected with the war, he gallantly returned to the scene of

¹ *Bull. de Corr. Hellénique*, 1915, p. 118.

² See Philippson in Pauly-Wissowa, *Real-Encyclopädie*, vi. 817.

³ M. G. Clerk, *Catalogue of the Coins of the Achaean League*, No. 222, Pl. ix. 2.

his former labours, and lent voluntary assistance in carrying on the work of the Department, until his rapidly deteriorating health compelled him to withdraw a second time.

Even before his first retirement he had made a name as a writer on historical subjects. The *Mariage de Convenance*, published in 1889, was the first of a series of remarkable novels which gained him a great reputation among those who care for thoughtful fiction. In poetry also (his last volume was one of verse, entitled *Religious Hours*) and in philosophy Keary's name on a title-page always meant refined, scholarly work.

In a sense it may be said that he had no passion for numismatics; his sympathies lay rather in the direction of a broader treatment than is usually possible with a subject filled with such minute detail as coins. It is just this broader view which gives value to his two most original monographs, on the Coinages of Western Europe, from the Fall of the Western Empire till the Accession of Charlemagne, and on the Morphology of Coins. It is worthy of record that he was one of the first, if not the first, in this country to take more than a mere collector's interest in Italian Medals, his little Guide to the exhibition of these medals in the British Museum being, I believe, the first serious attempt to deal with the subject in the English language. Much has been changed in matters of attribution since that Guide was published, but the broad lines remain the same, and Keary's notes on the historical interest of the Renaissance Medals are still very useful to the student.

Those who knew Keary personally will not soon cease to miss him. He was a discriminating and sensitive critic, a hater of stupidity, pretentiousness, or intellectual unconscientiousness in all forms; and his conversation was always a delight, however much one might disagree with him, because of his evident sincerity and desire to get below the surface of things.

A list of his numismatic publications (excluding anonymous reviews, &c.) follows (unless otherwise stated they appeared in the *Numismatic Chronicle* of the year mentioned).

- 1874. On the Coins of Ethelred, King of Northumbria.
- 1875. Note on the Ashantee and Best-Shot Medals.
- 1875. Art on the Coins of Offa.
- 1877. Notes on Finds of Coins.
- 1877. Discovery of Coins of William I and II at Tamworth.

- 1878-9. The Coinages of Western Europe, from the Fall of the Western Empire till the Accession of Charlemagne.
1878. Note on the Bisham Treasure-Trove.
1879. Italian Medals of the Fifteenth and Sixteenth Centuries.
1881. British Museum: Guide to the Italian Medals exhibited in the King's Library. Second edition, 1893.
1882. Inquiry about Anglo-Saxon Sceattas.
1882. Notes on Recent Works upon Italian Medals.
1882. Notes on a Find at Letchmore Heath.
1884. A Hoard of Anglo-Saxon Coins found in Rome.
1884. (With W. Wroth.) Seventeenth-Century Tokens in the British Museum not in Boyne.
- 1885-6. The Morphology of Coins.
1885. Find of Coins at Long Crendon.
1885. New Edition of Henfrey's Guide to the Study of English Coins (London: Bell).
1885. "The Coinage of Christian Europe" and "English Coins" in S. Lane-Poole's Coins and Medals (London: Elliot Stock). Second edition, 1892; Third edition, 1894.
1885. (With W. Wroth.) Addenda to the Seventeenth-Century Tokens in the British Museum.
1885. (With R. S. Ferguson.) Find of Coins at Beaumont, near Carlisle.
1887. British Museum: Catalogue of Anglo-Saxon Coins, Vol. I.
1887. Dr. Hildebrand on the Earliest Scandinavian Coinage.
1893. (With H. A. Grueber.) British Museum: Catalogue of Anglo-Saxon Coins, Vol. II.

G. F. H.

NOTICES OF RECENT PUBLICATIONS.

Medallas de la Casa de Borbón, de D. Amadeo I, del Gobierno Provisional y de la República Española. Por D. Antonio Vives de la R. Academia de la Historia. Colección de la Real Biblioteca. Pp. xxiv + 535, with lxxiv plates. Madrid, 1916. 35 pesetas.

THIS is the fourth volume of the Catalogue of the Royal Library at Madrid, and is in nearly all respects a model of

all that such catalogues should be. A brief introduction, relating to the history of the collection and its contents, is followed by a detailed catalogue. In this we are pleased to note the fullness and accuracy of the descriptions; not only are metal, size, and weight recorded, but we are also told whether the piece is struck or cast. All important varieties are illustrated in the collotype plates. The catalogue is followed by a commentary and a biographical index of medallists. The only detail we miss is an index of inscriptions. The medals begin with the year 1700, so that artistically the collection is not of the highest mark; indeed those of Charles III, owing to the monstrous profile of the king, have the distinction of being among the ugliest productions of the medallist art. But in other respects there is much of historical interest; and, in any case, we have here a book which covers very fully a subject for which a work of reference was sadly lacking. The learned author, to whom students of Spanish numismatics of all periods owe so much, has laid them under a fresh debt of gratitude.

G. F. H.

Le Monete del Reame delle Due Sicilie da Carlo d'Angiò a Vittorio Emanuele II. Da Memmo Cagiati. Atlante-Prezzario. Parte I (Zecca di Napoli). 40 Tavole. Napoli, Tip. Melfi & Joele. Price 50 lire.

THE indefatigable author, to whom all students of the coinage of Naples and Sicily are under so heavy an obligation, has now produced a work which will be of the utmost service to all collectors, as well as to dealers. The volume consists of a collection of the illustrations which the author has used for his well-known work on the same subject, arranged on plates, with the approximate market prices appended. Our only criticism of so eminently practical and useful a compilation is that, being printed only on one side of the paper, it is twice as bulky as, and presumably a good deal more expensive than, it need have been.

G. F. H.

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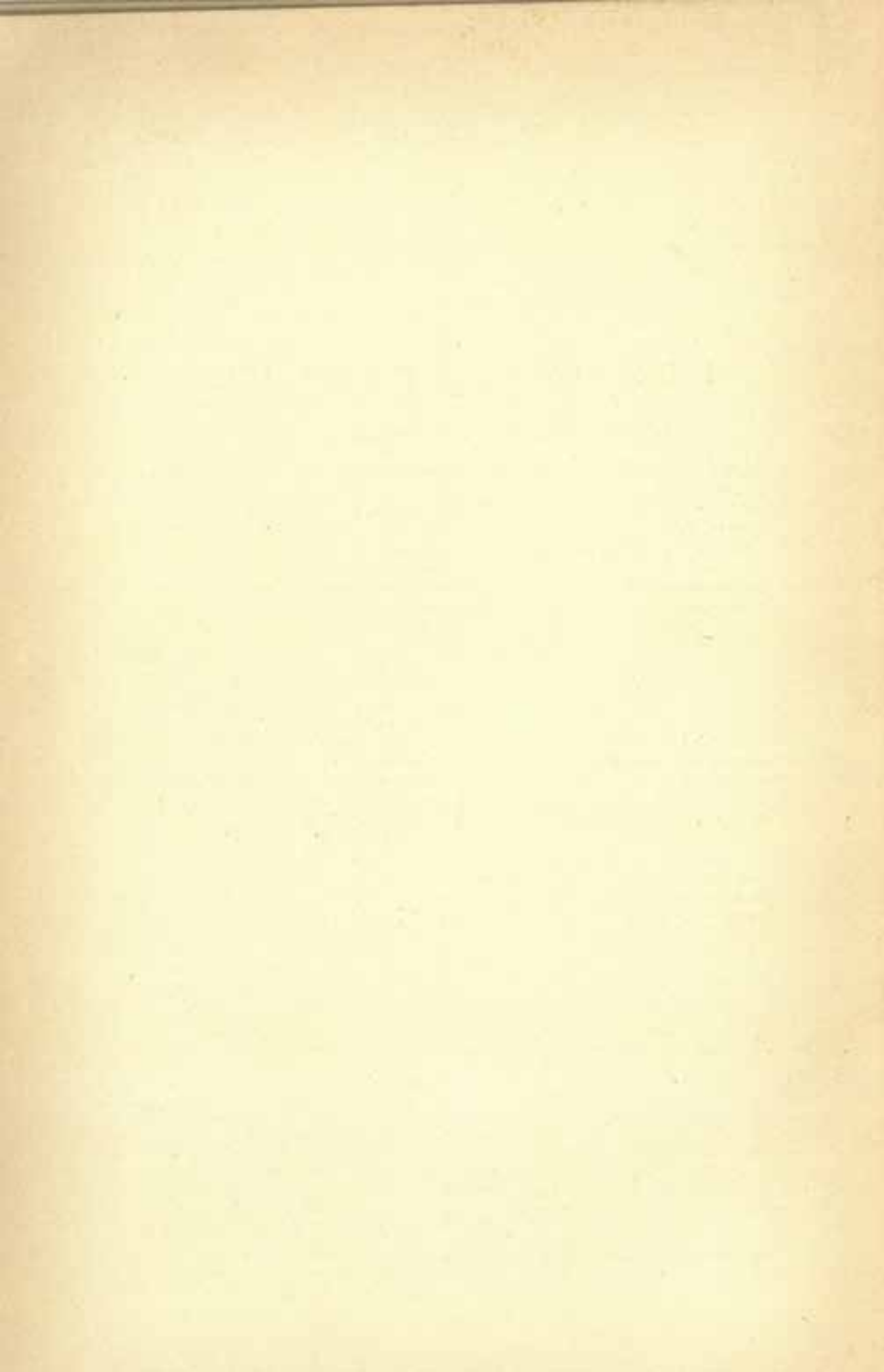
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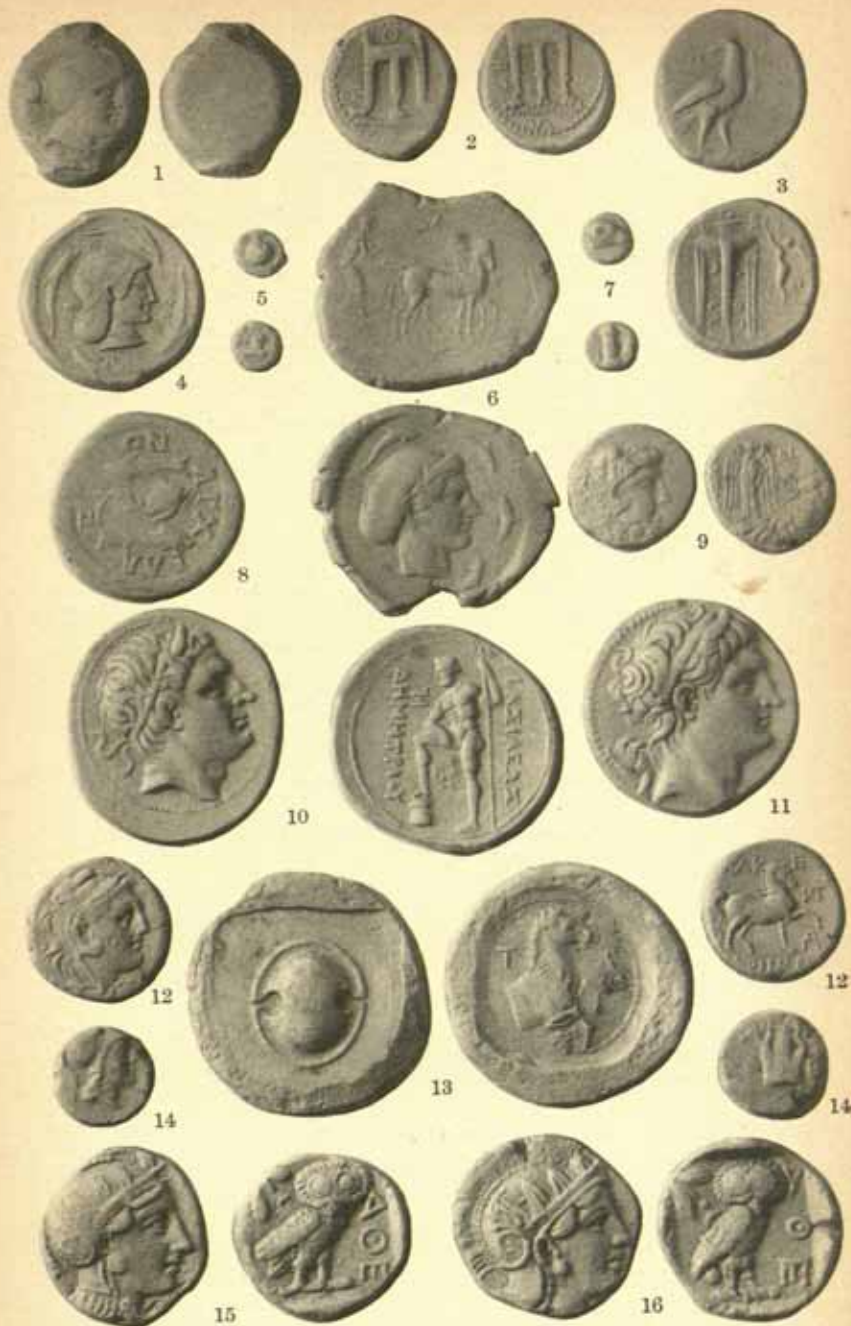
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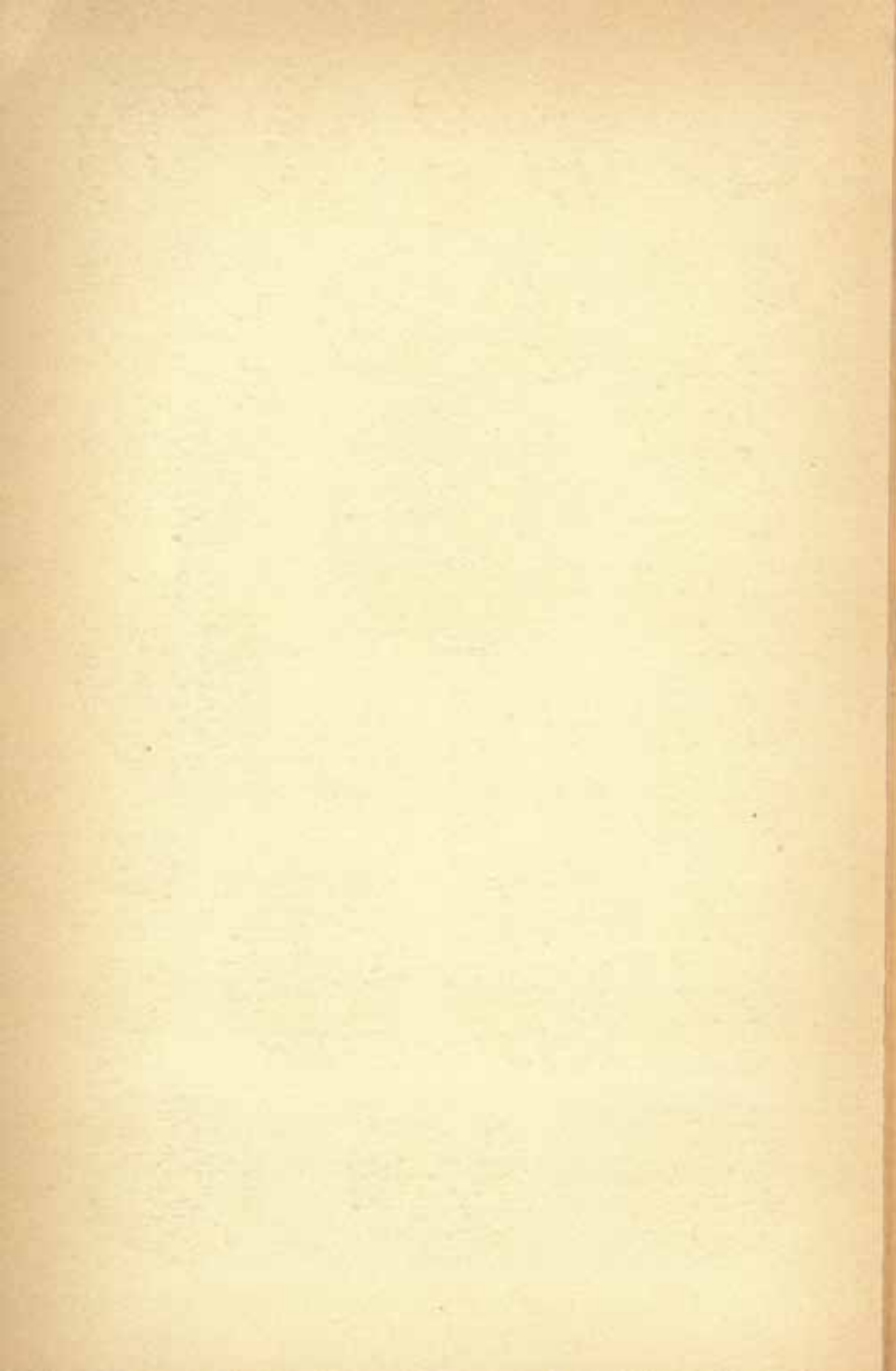
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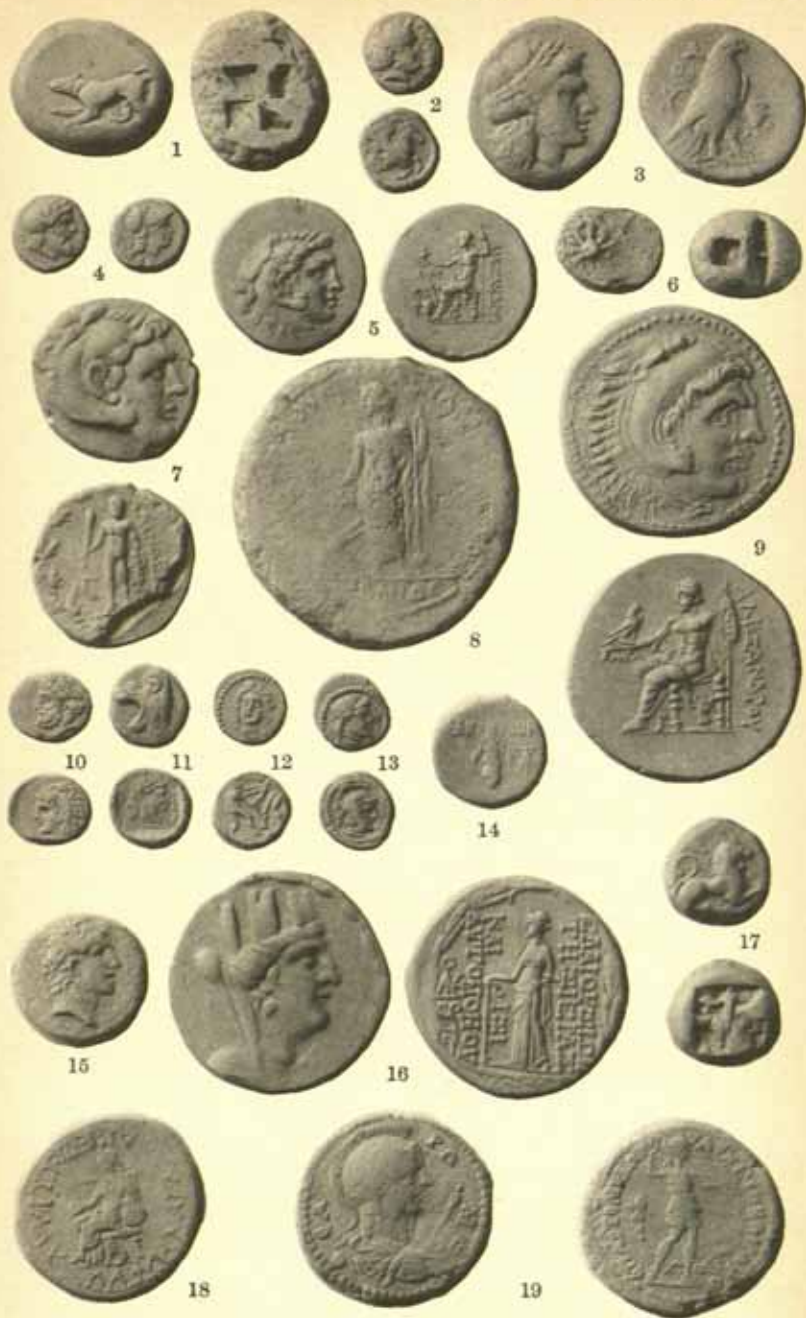
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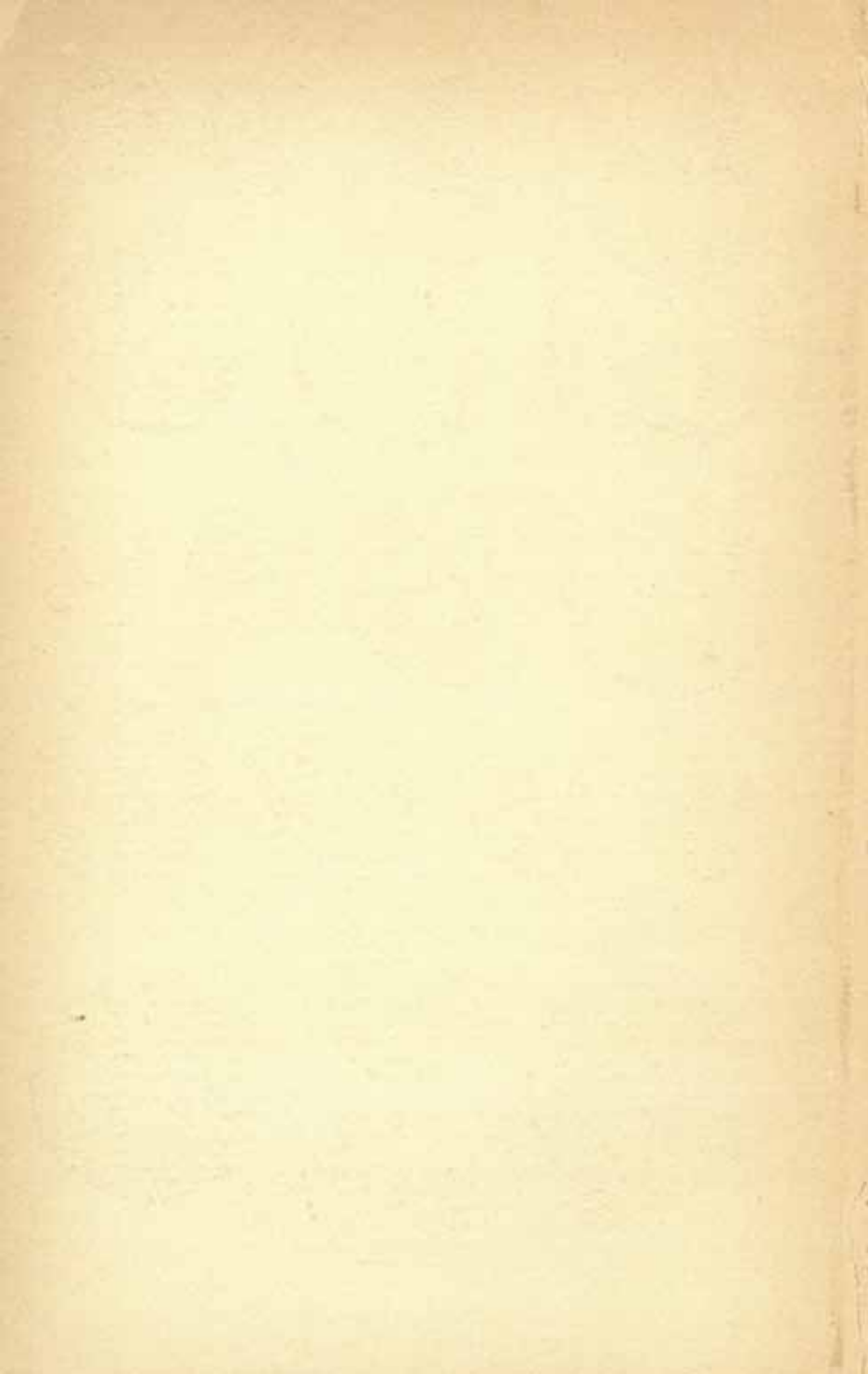
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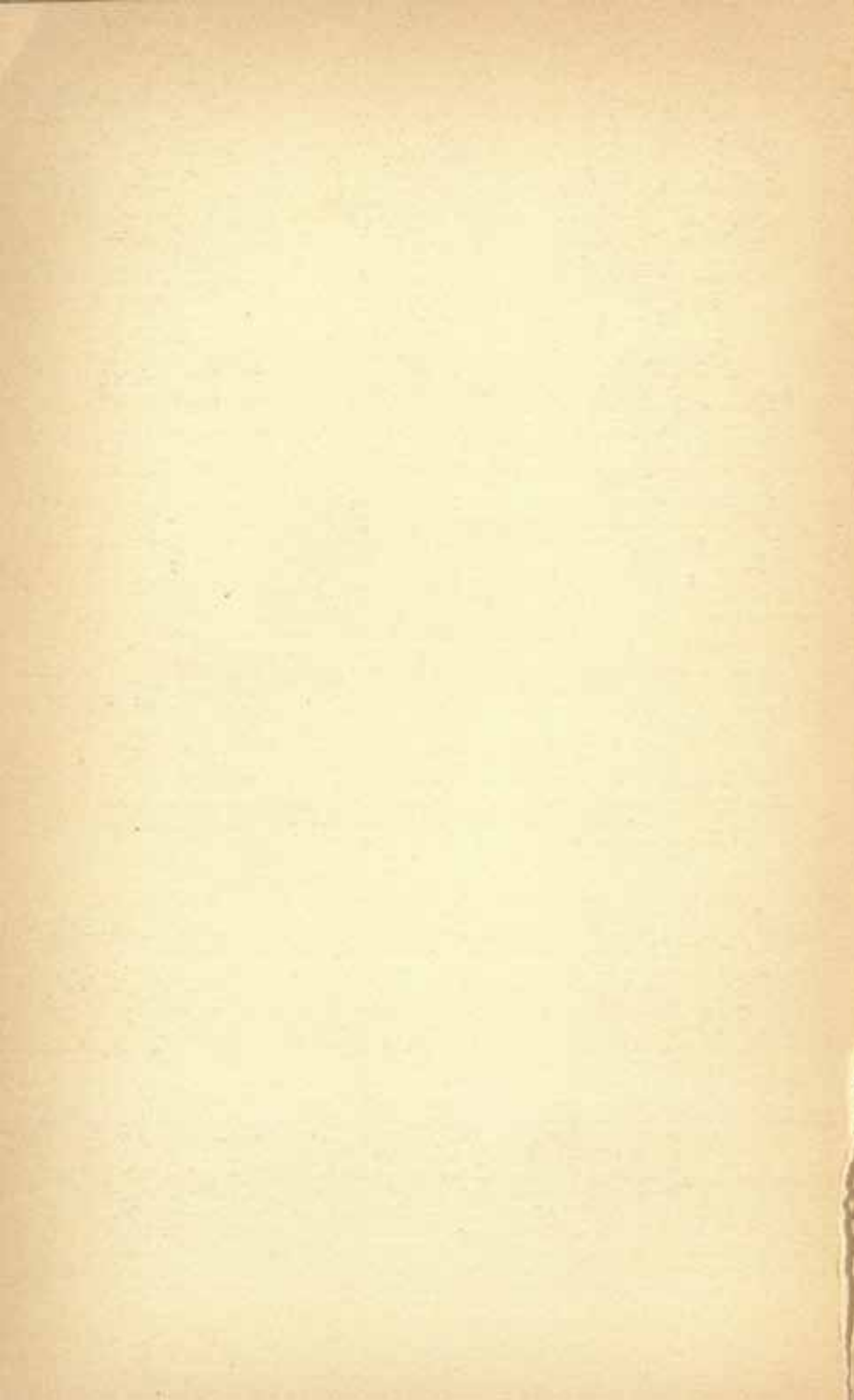
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COINAGE OF ANTIOCHUS GRYPUS.





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- 1888 MONTAGUE, LIEUT.-COL. L. A. D., Penton, near Crediton, Devon.
- 1905 MOORE, WILLIAM HENRY, Esq. (address not known).
- 1879 MORRIESON, LIEUT.-COL. H. WALTERS, R.A., F.S.A., 42 Beaufort Gardens, S.W. 3, *Hon. Secretary*.
- 1904 MOULD, RICHARD W., Esq., Newington Public Library, Walworth Road, S.E. 17.
- 1916 MYLNE, EVERARD, Esq., Colet House, Rhyll, N. Wales.
- 1900 *MYLNE, REV. ROBERT SCOTT, M.A., B.C.L., F.S.A., F.R.S.E., Great Amwell, Herts.
- 1909 NAGG, STEPHEN K., Esq., 1621 Master Street, Philadelphia, U.S.A.
- 1893 †NAPIER, PROF. A. S., M.A., D.Litt., Ph.D., F.B.A., Headington Hill, Oxford.
- 1905 NATHAN, SIDNEY, Esq., M.D., 11 Bolton Gardens, S.W. 10.
- 1910 NESMITH, THOMAS, Esq., c/o J. Munro & Co., 7 Rue Scribe, Paris.
- 1905 NEWALL, HUGH FRANK, Esq., M.A., D.Sc., F.R.S., Madingley Rise, Cambridge.
- 1906 NEWBERRY LIBRARY, Chicago, U.S.A.
- 1915 NEWCASTLE, THE LITERARY AND PHILOSOPHICAL SOCIETY OF, Newcastle-on-Tyne.
- 1905 *NEWELL, E. T., Esq., Box 321, Madison Square, New York, U.S.A.
- 1904 NORTHUMBERLAND, DUKE OF, K.G., P.C., LL.D., D.C.L., F.R.S., 2 Grosvenor Place, S.W. 1.
- 1898 OGDEN, W. SHARP, Esq., F.S.A., Naseby, East End Road, Finchley, N. 3.
- 1916 OGLE, CHRISTOPHER, Esq., The Beeches, Burgh Heath, Surrey.
- 1897 *O'HAGAN, HENRY OSBORNE, Esq., Riverhome, Hampton Court.

ELECTED

- 1882 OMAN, PROF. C. W. C., M.A., LL.D., F.S.A., F.B.A., All Souls College, Oxford.
- 1911 OPPENHEIMER, HENRY, Esq., 9 Kensington Palace Gardens, W. 8.
- 1903 PARSONS, H. ALEXANDER, Esq., "Shaftesbury," Devonshire Road, Honor Oak Park, S.E. 23.
- 1882 *PECKOVER OF WISBECH, LORD, LL.D., F.S.A., F.L.S., F.R.G.S., J.P., Bank House, Wisbech.
- 1915 PEARS, CAPTAIN G. B., c/o Cox & Co., Charing Cross, S.W. 1.
- 1896 PEERS, C. R., Esq., M.A., F.S.A., 14 Lansdowne Road, Wimbledon.
- 1894 PERRY, HENRY, Esq., Middleton, Plaistow Lane, Bromley, Kent.
- 1862 *PERRY, MARTEN, Esq., M.D., Spalding, Lincolnshire.
- 1909 PETERSON, F. W. VOYSEY, Esq., B.C.S. (retd.), 38 Bussett Road, W. 10.
- 1917 PHIPPS, LIEUT.-COL. P. RAMSAY, F.R.G.S., 17 St. James's Court, S.W. 1.
- 1888 PINCHES, JOHN HARVEY, Esq., Whitehill Cottage, Meopham, Kent.
- 1910 PORTER, PROFESSOR HARVEY, 39 Court Street, Westfield, Mass., U.S.A.
- 1915 POYSER, A. W., Esq., M.A., Grammar School, Wisbech.
- 1903 PRICE, HARRY, Esq., Arun Bank, Pulborough, Sussex.
- 1911 PRICHARD, A. H. COOPER, Esq., British School, Palazzo Odescalchi, Rome.
- 1906 RADFORD, A. J. VOOGHT, Esq., F.S.A., Vacye, College Road, Malvern.
- 1913 RAO, K. ANANTASAMI, Curator of the Government Museum, Bangalore, India.
- 1890 RAPSON, PROF. E. J., M.A., M.R.A.S., 8 Mortimer Road, Cambridge.
- 1905 RASHLEIGH, EVELYN W., Esq., Stoketon, Saltash, Cornwall.
- 1915 RASQUIN, M. GEORGES, Tanglewood, Bushey Park, Herts.
- 1909 RAYMOND, WAYTE, Esq., South Norwalk, Connecticut, U.S.A.
- 1903 REGAN, W. H., Esq., 124 Queen's Road, Bayswater, W. 2.
- 1876 *ROBERTSON, J. DRUMMOND, Esq., M.A., 17 St. George's Court, Gloucester Road, S.W. 7.
- 1911 ROBINSON, E. S. G., Esq., B.A., British Museum, W.C. 1.
- 1910 ROGERS, REV. EDGAR, M.A., 18 Colville Square, W. 11.
- 1911 ROSENHEIM, MAURICE, Esq., 18 Belsize Park Gardens, N.W. 3.

ELECTED

- 1903 RUBEN, PAUL, Esq., Ph.D., Alte Rabenstrasse, 8, Hamburg, Germany.
- 1904 RUSTAFFJAELL, ROBERT DE, Esq., The Union Trust Co., Fifth Avenue, Sixtieth Street, New York, U.S.A.
- 1872 *SALAS, MIGUEL T., Esq., 247 Florida Street, Buenos Ayres.
- 1916 SALISBURY, F. S., Esq., Hulme Grammar School, Manchester.
- 1877 *SANDEMAN, LIEUT.-COL. JOHN GLAS, M.V.O., F.S.A., Whin-Hurst, Hayling Island, Havant, Hants.
- 1917 SEABY, LIEUT. V. A., R.F.C., Roedean, Imperial Crescent, Doncaster.
- 1907 *SELTMAN, CHARLES T., Esq., Kinghoe, Berkhamsted, Herts.
- 1890 SELTMAN, E. J., Esq., Kinghoe, Berkhamsted, Herts.
- 1900 SHACKLES, GEORGE L., Esq., Wickersley, Brough, E. Yorks.
- 1908 SHEPHERD, EDWARD, Esq., 2 Cornwall Road, W. 11.
- 1913 SHIRLEY-FOX, J. S., Esq., R.B.A., 5 Rossetti Studios, Flood Street, Chelsea, S.W.
- 1896 SIMPSON, C. E., Esq. (address not known).
- 1893 *SIMS, R. F. MANLEY, Esq. (address not known).
- 1896 SINHA, KUMVAR KUSHAL PAL, RAIS OF KOTLA, Kotla, Agra, India.
- 1912 SMITH, G. HAMILTON, Esq., Northside, Leigh Woods, Bristol.
- 1890 SMITH, W. BERESFORD, Esq., Kenmore, Vanbrugh Park Road West, Blackheath, S.E. 3.
- 1905 SNELLING, EDWARD, Esq., 26 Silver Street, E.C. 2.
- 1909 SOUTZO, M. MICHEL, 8 Strada Romana, Bucharest.
- 1894 SPINK, SAMUEL M., Esq., 17 Piccadilly, W. 1.
- 1902 STAINER, CHARLES LEWIS, Esq., 10 South Parks Road, Oxford.
- 1878 †STRACHAN-DAVIDSON, J. L., Esq., M.A., LL.D., Master of Balliol College, Oxford.
- 1869 *STREATFEILD, REV. GEORGE SYDNEY, Camden Lodge, Russell Avenue, St. Albans.
- 1914 *STREATFEILD, MRS. SYDNEY, 22 Park Street, Mayfair, W. 1.
- 1910 SUTCLIFFE, ROBERT, Esq., 21 Market Street, Burnley, Lanca.
- 1914 SYDENHAM, REV. EDWARD A., The Vicarage, Wolvercote, Oxon.
- 1885 SYMONDS, H., Esq., F.S.A., Roundham, Bridport, Dorset.

ELECTED

- 1896 *TAFPS, H. W., Esq., 35 Greenholm Road, Eltham, S.E. 9.
- 1879 TALBOT, LIEUT.-COL. THE HON. MILO GEORGE, Hartham, Corsham, Wilts.
- 1892 *TAYLOR, R. WRIGHT, Esq., M.A., LL.B., F.S.A., 8 Stone Buildings, Lincoln's Inn, W.C. 2.
- 1917 TAYLOR, GLENA, Esq., Middleton House, Briton Ferry, Glam.
- 1887 THAIRLWALL, F. J., Esq., 12 Upper Park Road, N.W. 3.
- 1890 THOMAS-STANFORD, CHARLES, Esq., M.P., M.A., F.S.A., Preston Manor, Brighton.
- 1896 THOMPSON, SIR HERBERT, BART., 9 Kensington Park Gardens, W. 11.
- 1896 THORBURN, HENRY W., Esq., Cradock Villa, Bishop Auckland.
- 1903 THORPE, GODFREY F., Esq., 21 Esplanade Mansions, Esplanade, Calcutta.
- 1894 TRIGGS, A. B., Esq., Bank of New South Wales, Yass, New South Wales.
- 1887 TROTTER, LIEUT.-COL. SIR HENRY, K.C.M.G., C.B., 18 Eaton Place, S.W. 1.
- 1912 VAN BUREN, DR. A. W., American Academy, Porta San Pancrazio, Rome.
- 1916 VANES, REV. J. A., 1 Trinity Road, Bangalore, India.
- 1899 VLASTO, MICHEL P., Esq., 12 Allée des Capucines, Marseilles, France.
- 1892 VOST, LIEUT.-COL. W., I.M.S., Muttra, United Provinces, India.
- 1905 WACE, A. J. B., Esq., M.A., Leslie Lodge, Hall Place, St. Albans.
- 1883 WALKER, R. K., Esq., M.A., J.P., Watergate, Meath Road, Bray, Ireland.
- 1897 WALTERS, FRED. A., Esq., F.S.A., 3 Adam Street, Adelphi, W.C. 2, and Temple Ewell, Dover, *Vice-President*.
- 1911 WARRE, FELIX W., Esq., 231A St. James's Court, Buckingham Gate, S.W. 1.
- 1901 *WATTERS, CHARLES A., Esq., 152 Princes Road, Liverpool.
- 1917 WATTS, GERALD A., Esq., Drumlerry, Londonderry.
- 1901 WEBB, PERCY H., Esq., 4 and 5 West Smithfield, E.C. 1, *Hon. Treasurer*.

ELECTED

- 1885 *WEBER, F. PARKES, Esq., M.D., F.S.A., 13 Harley Street, W. 1.
- 1883 *WEBER, SIR HERMANN, M.D., 10 Grosvenor Street, Grosvenor Square, W. 1.
- 1884 WEBSTER, W. J., Esq., 76 Melford Road, Thornton Heath.
- 1904 WEIGHT, WILLIAM CHARLES, Esq., Erica, The Broadway, Letchworth.
- 1905 WEIGHTMAN, FLEET-SURGEON A. E., F.S.A., Junior United Service Club, Charles Street, St. James's, S.W. 1.
- 1899 WELCH, FRANCIS BERTRAM, Esq., M.A., Wadham House, Arthog Road, Hale, Cheshire.
- 1915 WHITEHEAD, R. B., Esq., I.C.S., M.R.A.S., Amballa, Panjab, India.
- 1869 *WIGRAM, MRS. LEWIS, The Rookery, Frensham, Surrey.
- 1908 WILLIAMS, T. HENRY, Esq., 85 Clarendon Road, S.W. 15.
- 1910 WILLIAMS, W. I., Esq., Beech Villa, Nelson, Cardiff.
- 1881 WILLIAMSON, GEO. C., Esq., F.R.S.L., Burgh House, Well Walk, Hampstead, N.W. 3.
- 1906 WILLIAMSON, CAPT. W. H. (address not known).
- 1904 WINTER, CHARLES, Esq., Oldfield, Thetford Road, New Malden, Surrey.
- 1906 WOOD, HOWLAND, Esq., Curator of the American Numismatic Society, 156th Street, W. of Broadway, New York, U.S.A.
- 1903 WRIGHT, H. NELSON, Esq., I.C.S., M.R.A.S., Firwood, Clevedon, Somerset.
- 1889 YEATES, F. WILLSON, Esq., 7 Leinster Gardens, W. 2.
- 1880 YOUNG, ARTHUR W., Esq., 12 Hyde Park Terrace, W. 2.
- 1898 YOUNG, JAMES SHELTON, Esq., 19 Addison Gardens, W. 14.
- 1900 ZIMMERMANN, REV. JEREMIAH, M.A., D.D., LL.D., 107 South Avenue, Syracuse, New York, U.S.A.
-

HONORARY FELLOWS

ELECTED

- 1898 HIS MAJESTY VICTOR EMMANUEL III, KING OF ITALY,
Palazzo Quirinale, Rome.
- 1891 BABELON, M. ERNEST, Membre de l'Institut, Bibliothèque
Nationale, Paris.
- 1903 BAHRFELDT, GENERAL-MAJOR M. VON, D.Phil., 9 Hum-
boldtstr., Hildesheim, Germany.
- 1898 BLANCHET, M. J. ADRIEN, 10 Bd. Émile Augier, Paris.
- 1898 DRESSEL, DR. H., Münzkabinett, Kaiser-Friedrich-Museum,
Berlin.
- 1899 GABRICI, PROF. DR. ETTORE, S. Giuseppe dei Nudi 75, Naples.
- 1893 GNECCHI, COMM. FRANCESCO, Via Filodrammatici 10, Milan.
- 1873 IMHOOF-BLUMER, DR. F., Winterthur, Switzerland.
- 1893 JONGHE, M. LE VICOMTE B. DE, Rue du Trône, 60, Brussels.
- 1878 KENNER, DR. F. VON, K. u. K. Museen, Vienna.
- 1904 KUBITSCHKE, PROF. J. W., Pichlergasse, 1, Vienna.
- 1893 LOEBBECKE, HERR A., Cellerstrasse, 1, Brunswick.
- 1904 MAURICE, M. JULES, 10 Rue Crevaux, Paris.
- 1899 PICK, DR. BEHRENDT, Münzkabinett, Gotha.
- 1895 REINACH, M. THÉODORE, 9 Rue Hamelin, Paris.
- 1891 SVORONOS, M. J. N., Conservateur du Cabinet des Médailles,
Athens.
-

MEDALLISTS

OF THE ROYAL NUMISMATIC SOCIETY

ELECTED

- 1883 CHARLES ROACH SMITH, Esq., F.S.A.
 1884 AQUILA SMITH, Esq., M.D., M.R.I.A.
 1885 EDWARD THOMAS, Esq., F.R.S.
 1886 MAJOR-GENERAL ALEXANDER CUNNINGHAM, C.S.I., C.I.E.
 1887 JOHN EVANS, Esq., D.C.L., LL.D., F.R.S., P.S.A.
 1888 DR. F. IMHOOF-BLUMER, Winterthur.
 1889 PROFESSOR PERCY GARDNER, Litt.D., F.S.A.
 1890 MONSIEUR J. P. SIX, Amsterdam.
 1891 DR. C. LUDWIG MÜLLER, Copenhagen.
 1892 PROFESSOR R. STUART POOLE, LL.D.
 1893 MONSIEUR W. H. WADDINGTON, Sénateur, Membre de l'Institut, Paris.
 1894 CHARLES FRANCIS KEARY, Esq., M.A., F.S.A.
 1895 PROFESSOR DR. THEODOR MOMMSEN, Berlin.
 1896 FREDERIC W. MADDEN, Esq., M.R.A.S.
 1897 DR. ALFRED VON SALLET, Berlin.
 1898 THE REV. CANON W. GREENWELL, M.A., F.R.S., F.S.A.
 1899 MONSIEUR ERNEST BABELON, Membre de l'Institut, Conservateur des Médailles, Paris.
 1900 PROFESSOR STANLEY LANE-POOLE, M.A., Litt.D.
 1901 S. E. BARON WLADIMIR VON TIESENHAUSEN, St. Petersburg.
 1902 ARTHUR J. EVANS, Esq., M.A., F.R.S., F.S.A.
 1903 MONSIEUR GUSTAVE SCHLUMBERGER, Membre de l'Institut, Paris.
 1904 HIS MAJESTY VICTOR EMMANUEL III, KING OF ITALY.
 1905 SIR HERMANN WEBER, M.D.
 1906 COMM. FRANCESCO GNECCHI, Milan.
 1907 BARCLAY VINCENT HEAD, Esq., D.Litt., D.C.L., Ph.D., Corr. de l'Inst.
 1908 PROFESSOR DR. HEINRICH DRESSSEL, Berlin.
 1909 H. A. GRUEBER, Esq., F.S.A.
 1910 DR. FRIEDRICH EDLER VON KENNER, Vienna.
 1911 OLIVER CODRINGTON, Esq., M.D., M.R.A.S., F.S.A.
 1912 GENERAL-LEUTNANT MAX VON BAHRFELDT, Hildesheim.
 1913 GEORGE MACDONALD, Esq., M.A., LL.D.
 1914 JEAN N. SVORONOS, Athens.
 1915 GEORGE FRANCIS HILL, Esq., M.A.
 1916 M. THÉODORE REINACH, Membre de l'Institut, Paris.
 1917 L. A. LAWRENCE, Esq., F.S.A.

PROCEEDINGS

OF THE

ROYAL NUMISMATIC SOCIETY.

PROCEEDINGS OF THE ROYAL NUMISMATIC SOCIETY.

SESSION 1916—1917.

OCTOBER 19, 1916.

SIR ARTHUR EVANS, P.S.A., F.R.S., M.A., LL.D., D.Litt., &c.,
President, in the Chair.

The Minutes of the last Meeting were read and approved.

Mr. Edward Hart and Rev. Canon Beanlands were proposed for election.

The following Presents to the Society were announced and laid upon the table, and thanks ordered to be sent to their donors.

Received since May, 1916.

1. H. L. Rabino. *Les Tribus du Louristan ; from the Author.*

2. J. A. Blanchet et A. Dieudonné. *Manuel de Numismatique Française. Tome 2^{me}.*

3. Suomen Museo. *Finskt Museum, 1915. Helsinki.*

4. Fornvännen Meddelanden från K. Vitterhets Historie och Antikvitets Akademien, 1915. *Stockholm.*

5. *Bulletins de la Société des Antiquaires de l'Ouest. 1^{er} et 3^{me} trimestre, 1915. 1^{er} trimestre, 1916.*

6. *American Journal of Archaeology. Vol. xx, No. 2.*

7. *Annual Report of the U. S. National Museum, 1915.*

8. *Journal of Hellenic Studies. Vol. xxxvi, Pt. 1.*

9. J. G. Milne. The Organization of the Alexandrian Mint in the reign of Diocletian; *from the Author*.

10. Proceedings of the Royal Irish Academy. Vol. xxxii, No. 21; Vol. xxxiii, Nos. 1-11.

11. Journal of the Royal Society of Antiquaries of Ireland. Vol. xlv, Pt. 1.

12. W. Gilbert. Token Coinage of Essex in the Seventeenth Century; *from the Author*.

13. E. T. Newell. Alexander Coinage of Sidon and Ake; *from the Author*.

Mr. F. A. Walters exhibited a denarius of Carausius found at Bath, *rev.* **EXPECTATE VENI:RSR**, Britain welcoming Carausius.

Mr. P. H. Webb showed a satirical Belgian Medal of Baron Surlet de Chokier, Regent of Belgium. *Obv.* The Good Shepherd with sheep **EGO SVM PASTOR BONVS**. In ex. **BON SVRLET DE CHOKIER RÉGENT DE LA BELGIQUE**. *Rev.* A shorn sheep under a dead tree of Liberty. **SIC VOS NON VOBIS VELLERA FERTIS OVES**. In ex. **VOTÉE AV RÉGENT AVEC Fcs 10000 DE PENSION PAR LA PATRIE RECONNAISSANTE**.

Prof. Oman showed a first brass of Caracalla with a fine portrait and *rev.* Caracalla bestowing citizenship on the Roman world.

Mr. Allan read a paper by Mr. Henry Symonds on "Some Light Coins of Charles I", in which an account was given of the reduction of the coinage by an order of August 14, 1626. (This paper was printed in Vol. xvi, pp. 271 ff.)

Mr. Allan also read a paper by Dr. E. Galster on "The Influence of English Coin-types on the Danish in the Thirteenth and Fourteenth Centuries", in which he showed that the Irish coinage of John had considerable influence abroad. (This paper was printed in Vol. xvi, pp. 260 ff.)

NOVEMBER 16, 1916.

SIR ARTHUR EVANS, P.S.A., F.R.S., &c., President, in the Chair.

The Minutes of the Ordinary Meeting of October 19 were read and approved.

Mr. Edward Hart and Rev. Canon Beanlands were elected Fellows of the Society, and Mr. F. S. Salisbury was proposed for election.

The following Presents to the Society were announced and laid upon the table, and thanks ordered to be sent to their donors.

1. Proceedings of the Numismatic Society of Philadelphia. Vol. xxvii.
2. American Journal of Archaeology. Vol. xx, No. 3.
3. Revue Numismatique, 1916. 1^{er} trimestre.
4. Archaeologia Aeliana. N. S., Vol. xiii.
5. Dr. Storer. Medallie Harvard; *from the Author*.

Mr. G. C. Haines exhibited a third brass of Constantine II, with m.m. **ASIS** ∪.

Mr. Garside showed an Australian bronze penny dated 1916, bearing the mint-mark I (India) on the reverse.

Mr. F. A. Walters exhibited a denarius of extreme rarity of Annia Faustina, third wife of Elagabalus (Cohen No. 1 from Museum of Spain), *rev.* **CONCORDIA**.

Colonel Morrieson read the following note on the Light Coinage of Charles I:

With reference to Mr. Symonds's paper on 'a Light Coinage of Charles I in August, 1626, I have, as promised, weighed my coins of this date with the exceptions of the half groats and pennies. They were all approximately of full weight, except one shilling of Hawkins type 1^a (which is exhibited) which weighs only 80.8 grains. The weight of

the light shilling, according to the indenture or rather commission of August 14, 1626, was $81\frac{3}{4}$ grains; so this must be one of them. Another peculiarity of this coin is the size of the mark of value, **XII**, which is very much smaller than on those in my collection of the usual weight, which was $92\frac{8}{11}$ grains.

Mr. S. W. Grose read a paper on Artists' Signatures on Coins of Magna Graecia, in which he discussed the view that certain inscriptions **ΦΙ**, **ΕΥ**, &c., &c., represent abbreviated artists' signatures, with special reference to Heraclea, and concluded that the theory broke down. The best Syracusan practice was for the artist to sign his name in an inconspicuous place in tiny letters. The fact that this is found once or twice at Tarentum and once at Terina proves nothing for the large letters. If anything, it may point to the fact that the large letters are not artists' signatures.

DECEMBER 28, 1916.

SIR ARTHUR EVANS, P.S.A., F.R.S., &c., President, in the Chair.

The Minutes of the last Meeting were read and approved.

Mr. F. S. Salisbury was elected Fellow of the Society.

The following Presents to the Society were announced and laid upon the table, and thanks ordered to be sent to their donors.

1. American Journal of Numismatics, 1915.
2. W. Longman. Eighteenth-century Tokens of Book-sellers; *from the Author*.
3. Papers of the British School at Rome. Vol. viii.

Mr. L. G. P. Messenger exhibited a didrachm of Tarentum, Period II, 420-380 B.C., a variety of Evans, L, No. 2, with naked ephebos galloping r. instead of l., and a drachm of

Clazomenae, *obv.* head of Apollo facing; *rev.* KAA, swan l. with closed wings.

Mr. P. H. Webb showed a Romano-Campanian uncia of fine style and a Russian 1-copek note.

Mr. E. Shepherd showed a Russian war medal of 1814.

Mr. J. Allan exhibited, on behalf of H.S.H. Prince Louis of Battenberg, a medal on the Battle of Jutland, designed by Prince Louis, and a medal of the Isle of Man Internment Camp, sold for the benefit of the interned Germans.

Mr. C. P. Hyman showed a series of paper money issued by various countries during the war.

Sir Arthur Evans exhibited and read notes on a large series of German war medals.

JANUARY 18, 1917.

L. A. LAWRENCE, Esq., F.S.A., Vice-President, in the Chair.

The Minutes of the Meeting of December 28 were read and approved.

The following Presents to the Society were announced and laid upon the table, and thanks ordered to be sent to their donors.

1. British Numismatic Journal. Vol. xi; *presented by Miss Helen Farquhar.*

2. George Macdonald. The Evolution of Coinage; *from the Author.*

3. H. H. E. Craster. Roman Silver Coins from Corstopitum; *from the Author.*

Mr. L. A. Lawrence showed a half-noble of Edward III of the "Treaty" period, with king's name ED only and abbreviation for ET of unusual form.

Mr. Webb showed a German medalet of Bismarck,

Feb. 6, 1888, "*Wir Deutsche fürchten Gott, aber sonst nichts in der Welt*".

Mr. F. A. Walters showed three pennies of William I (Hkns. 238) of the mints of Northampton, Stamford, and Dover, from a recent find; the Dover coin **MANPINE ON DOF** was previously unknown, and was one of two specimens in the find.

Mr. G. F. Hill described some of the Greek coins acquired by the British Museum during the last two years. Sir Arthur Evans had presented a rare Syracusan silver coin which is thought to allude to the peace congress which was held at Gela in 424 B. C. Fine portrait coins of Demetrius I, king of Macedon, of Antiochus I, king of Syria, and of Orodes III, king of Parthia (of whom the only other extant coin is in the Berlin Cabinet), were also described, as well as a coin of a king of some state in Asia Minor, calling himself Attalus the God Manifest; this ruler does not seem to be otherwise recorded. A valuable series of coins of Arabia and Ethiopia had been acquired from the collection of the late Col. W. F. Prideaux. (This paper is printed in Vol. xvii, pp. 1 ff.)

FEBRUARY 15, 1917.

PERCY H. WEBB, Esq., Treasurer, in the Chair.

The Minutes of the Meeting of January 18 were read and approved.

The following Presents to the Society were announced and laid upon the table, and thanks ordered to be sent to their donors.

1. *Rivista Italiana di Numismatica*. Fasc. iv, 1916.
2. Smithsonian Institution Report, 1915.
3. *Journal of Hellenic Studies*. Vol. xxxvi, Pt. 2.

4. *Revue Numismatique*. 2^e trimestre, 1916.
5. *American Journal of Archaeology*. Vol. xx, No. 4.

Mr. Walters showed a denarius of Postumus, *rev.* Hercules and wild bear (Cohen 120).

Mr. Symonds showed a fine collection of coins from Mr. Bearman's collection to illustrate the following paper.

A paper on the Irish coinages of Queen Elizabeth was read by Mr. Henry Symonds. The first coinage in 1558-9 followed that of Philip and Mary both in weight and fineness, the bullion being obtained by melting the base coins of England and adding more alloy. The second coinage of 1561 was a genuine attempt to restore the Irish moneys to a fineness approaching that of the English currency, but the issue was unfortunately very limited in amount. Although there was at this time an intention to set up a mint in Dublin, as is shown by the State Papers, the project failed, and the coins were still made in the Tower of London. Mr. Symonds proved that the supposed coinage of 1598 did not exist, and that a misreading of a contemporary document had been responsible for the belief. There was, in fact, no issue of Irish coins for forty years, until the third coinage was struck in 1601 and 1602. The attempted reformation was then abandoned, and the new coins were lighter in weight and more debased than the base money of the beginning of the reign; copper pieces were also made. Documentary evidence showed that two brothers named Hayes were informal advisers of the government in respect of the third coinage. Shortly afterwards a proclamation annulled all coins in Ireland except those of 1601-2, and exchanges were established to prevent the carrying of money to and from England. The scheme broke down entirely, and resulted in great distress among the Irish people. (This paper is printed in Vol. xvii, pp. 97 ff.)

MARCH 15, 1917.

SIR ARTHUR EVANS, P.S.A., F.R.S., &c., President, in the Chair.

The Minutes of the last Meeting were read and approved.

The President exhibited two aurei struck in Gaul, one of Octavius with head of M. Antony, B.C. 39, and another of Octavius with the head of Julius.

Professor Oman showed a restruck tetradrachm of Demetrius and Laodice, another of Ptolemy VIII with his own portrait, and a portrait drachm of Ptolemy VIII.

Rev. E. A. Sydenham read a paper on the Mint of Lugdunum, in which he gave an account of the mint of Lyons from its foundation to the middle of the first century A.D. The various issues at the mint were discussed, and reasons given for the attribution on historical and technical grounds. (This paper is printed in Vol. xvii, pp. 53 ff.)

APRIL 19, 1917.

L. A. LAWRENCE, Esq., F.S.A., Vice-President, in the Chair.

The Minutes of the last Meeting were read and approved.

Miss Winifred Lamb was proposed for election.

The following Presents to the Society were announced and laid upon the table, and thanks ordered to be sent to their donors.

1. G. F. Hill. On Medals; *from the Author.*
2. F. P. Barnard. Petition for the Restoring of Farthing Tokens, 1644; *from the Author.*
3. Journal of the Royal Society of Antiquaries of Ireland. Vol. xlvi, Pt. 2.
4. F. P. Barnard. The Casting-Counter and the Counting-Board; *from the Author.*

5. Proceedings of the Society of Antiquaries of London, 1915-16.

Mr. L. A. Lawrence exhibited a large lead medallion of uncertain date with types of the Syracusan decadrachms.

Mr. G. F. Hill read a paper on Andragoras and Phrataphernes. Gold coins of these rulers were found in the Oxus find in 1877, and some suspicion has been cast on their genuineness. There is no reason to doubt the British Museum specimens, as comparison with other coins shows, although there is little doubt that forgeries exist. The coins belong to rulers of the end of the fourth and beginning of the third century B.C. of Northern Persia or Parthia. Andragoras was established by Alexander as Governor of Parthia, but the identity of Phrataphernes with a satrap of Parthia and Hyrcania about the same time is less certain.

MAY 17, 1917.

SIR HENRY H. HOWORTH, K.C.I.E., &c., Vice-President, in the Chair.

The Minutes of the last Meeting were read and approved.

Miss Winifred Lamb was elected a Fellow of the Society, and the Rev. A. Leigh Barker proposed for election.

The following Presents to the Society were announced and laid upon the table, and thanks ordered to be sent to their donors.

1. *Archaeologia Cantiana*. Vol. lxxii.
2. *Proceedings of the Society of Antiquaries*. Vol. I.
3. *Numismatic Circular*. Vol. lxiv; from *Messrs. Spink & Sons*.
4. *Proceedings of Royal Irish Academy*. Vol. lxxiii, Sect. C. 12-19.

Mr. L. G. P. Messenger exhibited a third brass of Carausius,
rev. **CONCORD. MILIT.** Two hands clasped on ^{SC}_C.

Mr. L. A. Lawrence showed a series of silver coins of Elizabeth, including some with rare m.m.

Prof. Oman read a paper on some Brass Coins of the Third Century, in which he discussed the late dupondii and sestertii and the various metrological problems connected with them.

JUNE 21, 1917.

ANNUAL GENERAL MEETING.

SIR ARTHUR EVANS, P.S.A., F.R.S., &c., President, in the
 Chair.

The Minutes of the Annual General Meeting of June 15, 1916, were read and approved.

Messrs. G. C. Brooke and J. Mavrogordato were appointed scrutineers of the Ballot for the election of office-bearers for the following year.

Rev. A. Leigh Barker was elected a Fellow of the Society.

Sir Arthur Evans exhibited specimens of the medals which won the prizes offered by him for the best designs for a medal to commemorate the Battle of Jutland.

The following Report of the Council was laid before the meeting :

"The Council have again the honour to lay before you their Annual Report on the state of the Royal Numismatic Society.

It is with deep regret that they have to announce the deaths of the following three Fellows of the Society :

H. F. Amedroz, Esq.

General Sir Albert Houtum-Schindler.

The Duke of Norfolk, K.G., &c., &c.

They have also to announce the resignations of the following two Fellows :

Talfourd Ely, Esq., D.Litt.

C. W. Dyson Perrins, Esq., F.S.A.

On the other hand, they have to announce the election of the following five new Fellows :

Rev. A. Leigh Barker.

Rev. Canon Beanlands.

Edward Hart, Esq.

Miss Winifred Lamb.

F. S. Salisbury, Esq.

The number of Fellows is therefore :

	Ordinary.	Honorary.	Total.
June, 1916	272	16	288
Since elected	5	—	5
	277	16	293
Deceased	3	—	3
Resigned	2	—	2
	272	16	288

The Council have also to announce that they have decided to award the Society's Medal to Mr. L. A. Lawrence, F.S.A., for his distinguished work on English coins, notably in the Short and Long-Cross periods."

The Hon. Treasurer's Report, which follows, was then laid before the Meeting :

STATEMENT OF RECEIPTS AND DISBURSE-

FROM JUNE, 1916,

Dr.

THE ROYAL NUMISMATIC SOCIETY IN ACCOUNT

	£	s.	d.	£	s.	d.
<i>To cost of Chronicle—</i>						
Printing	153	5	3			
Plates	6	16	0			
				160	1	3
<i>To Books, &c.</i>					3	9
" <i>Lantern Expenses</i>					4	14 2
" <i>Rent and Refreshments</i>					41	8 2
" <i>Sundry Payments</i>					7	6 10
" <i>Balance carried forward—</i>						
General Account	228	3	10			
Research Account	21	3	8			
				249	7	6
				£463	1	8

MENTS OF THE ROYAL NUMISMATIC SOCIETY

TO JUNE, 1917.

WITH PERCY H. WEBB, HON. TREASURER.

£r.

	£	s.	d.	£	s.	d.
<i>By Balance brought forward—</i>						
General Account	166	0	7			
Research Account	19	12	8			
					185	13 8
<i>By Subscriptions—</i>						
174 Ordinary Subscriptions (less loss on foreign cheques, &c.)	182	13	9			
7 Entrance Fees	7	7	0			
1 Life Subscription	15	15	0			
					205	15 9
<i>By Sales of Chronicles</i>					41	8 8
<i>„ Dividends on Investments</i>					30	4 0
					£463	1 8

Audited and found correct,

LEOPOLD G. P. MESSENGER, }
HENRY GARSIDE, } *Hon. Auditors.*

June 16, 1917.

The Reports of the Council and the Treasurer having been adopted, on the motion of the President, the President presented the medal to Mr. L. A. Lawrence, and addressed him as follows:

MR. LAWRENCE,—At such a critical time in our national history it is fitting that the Medal of the Royal Numismatic Society should be assigned to the branch dealing with the coins of our own country. But, quite apart from that consideration, there is, I think, a unanimous feeling among us that no one has devoted himself longer or more wholeheartedly than yourself to any numismatic subject.

It is with great pleasure, therefore, that I hand you the Medal in recognition of your eminent services to English numismatics. With them, too, I may venture to couple your services to the Society itself, of which you have been a member since 1885. You have for many years served on its Council, and from 1915 have been one of its Vice-Presidents, always ready, as I can gratefully acknowledge, to "step into the breach".

Your first publication in the *Chronicle* on "A Baronial Coin of Eustace Fitzjohn" dates from 1890, shortly followed by a paper on English silver coin issues between 1461 and 1483, in which new landmarks for the coinage of Edward IV were established by comparisons with Henry VI's restored coinage of 1470 and that of Richard III. The promise held out by these papers was amply fulfilled, and they were followed by a more or less continuous series of communications illustrating the coinage of this country in the Middle Ages, and embracing almost the whole period from the later Saxon kings to the Tudor dynasty.

I cannot help recalling the fact that my own début in this Society, forty-six years ago—I regret to say—was by a paper in which new points of distinction were pointed out between the coins of the first three Edwards. I fear that since then I have strayed very far from the English fold,

but it is a great satisfaction to me that in your paper on the silver coins of Edward III, published in 1893, twenty-two years later, you should have been instrumental in developing some at least of the ideas that I then started.

Your contributions have been of the most valuable kind, and have supplied a series of new fixed points for English numismatics in their widest sense. You may even be said to have doubled your activities, since many of your more recent contributions have been made to the sister Society which deals in a more special way with the coinage of the British islands. I may here refer to your valuable remarks on the Saxon die-sinker's art in connexion with the moneyer Torhulf, and to your broader conclusions as to mediæval English dies and moneyers, namely that the dies were made in London, but the coins struck by the moneyers named in the actual mint towns.

In this connexion I may also refer to your services in the detection of a whole series of forged coins, notably of William I and II, and of Henry I and his successors, where, it may be added, philological science corroborates your technical results in the case of such hybrid names as **LEEFVILD**, **LIFORD**, and **OSWEF**. In an important paper on the mint of Barnstaple you were able to make good its title to coins hitherto attributed to Bardney. You have been also fortunate enough to describe several ancient hoards. In collaboration with Mr. Grueber you described the important Balcombe find of coins of the Edwards and Richard II, and, together with Mr. Brooke, the Steppingley find of "Long-Cross" coins.

But your most important contribution to English numismatics is your elaborate study of the "Long-Cross" coinage, followed by your monograph on the "Short-Cross" coinage. The chief material of these was published in the *Journal of the British Numismatic Society*, but a paper summarizing the results of your exhaustive researches on the "Chronology of

the Short-Cross Period" has been contributed by you to the *Chronicle* for 1916.

In the later series, the "Long-Cross" coinage, which you first took in hand, you were working on an almost virgin soil. Since the series did not seem to present any outstanding problem or prominent features of interest, earlier numismatists had been content to accept the attribution of the coins by the early historians to the later half of the reign of Henry III and the first year of his successor. They confined themselves to generalities, and did not attempt a detailed attribution of the coins within the thirty odd years of their issue, a problem which you successfully attacked.

In investigating the "Short-Cross" coinage, you had, on the other hand, to deal with a series which had several years before attracted students of English numismatics. The absence of any coins with the names of Richard I and John in this case presented an interesting enigma that had already led to serious attempts at its solution. It was reduced by my father, Sir John Evans, to an analysis which assigned approximately their proper position to the issues of each of the four kings in whose reigns the coins were minted. This classification, however, left considerable scope for more detailed work, and after a lapse of fifty years, during which the series was practically untouched, you, sir, applied to this coinage the methods which had proved so successful with the coinage immediately following it.

In both cases you devoted the most strenuous scrutiny to details of lettering and style, and by this means produced a minute classification. This you obtained by evolving and applying to these series a principle of the gradual degradation of style, interspersed with sudden improvements at certain intervals to which dates could be approximately fixed. By these methods, with the aid of records of mints and moneyers, you succeeded in dividing the two series into fifteen classes, to each of which an approximate date could be fixed.

The two series together comprise the coinage of this country during a whole century. Years ago, in sorting out large hoards for my father belonging to the same series I had personal experience of the great difficulty of seizing definite points of distinction in coins which were to the untrained observer as like as peas, and I at least can fully realize the difficulty of the task which you set yourself to perform. The proof of your success is seen in the minute detail of the classification and the neat adjustment of the results obtained from the work on the coins with the information recorded in the early chronicles. The verdict that you thus arrived at has so far commended itself to all students of the period and defeated criticism. Its importance lies in the narrow limits within which the issue of any coins of the two series can now be dated. That in itself is a great achievement.

Those who have the best right to speak on the matter bear testimony to the fact that your keenness in the study of English numismatics did much to secure its progress and maintain its vitality at a time when there was some danger of stagnation. Many students in your own branch owe a personal debt of gratitude to you for your sympathetic help and for your keen interest in the problems with which they were endeavouring to grapple.

In handing you the Medal, Mr. Lawrence, I feel that it has been won by no more devoted and enthusiastic student of numismatics than yourself.

In reply, Mr. Lawrence said: MR. PRESIDENT, LADIES AND GENTLEMEN,—Allow me, please, to return my most grateful thanks to the Council for awarding me this Medal, and to you, Sir Arthur Evans, for the gracious speech you have just made. I wish that I could express in adequate language my feelings of intense pride and gratification at the receipt of this signal honour, although I entirely fail to understand

why I should have been selected for its bestowal. You, sir, have been good enough to make some kindly remarks on my work, more than I deserve. When I joined this Society in 1885, and since then, it has been my pleasure and relaxation to try and know something of the English coinage. I have never thought of it as work, and the thrills of excitement over some small discovery to aid classification or help some obscure identification have been rewards in themselves. To receive such a splendid testimony at your hands as the result of all this pleasure quite overpowers me. This Medal will always be one of my most cherished possessions.

The President then delivered the following address :

THE PRESIDENT'S ADDRESS.

Through a third year of this exacting War the Society has been able to "carry on". A series of interesting papers have been read, and even the publication of the *Numismatic Chronicle* has not been seriously delayed. The number of members of the Society has not fallen off, and the Treasurer will have informed you that, in spite of the addition to the cost of printing, the financial position remains satisfactory.

We have suffered a few losses owing to the deaths of members.

Mr. H. F. Amedroz had been a member of the Society since 1892, and was a frequent visitor to the Society's meetings. A barrister by profession, he was also a distinguished Arabic scholar, and wrote much on the mediaeval history of the Arabs, and edited several Arabic texts. He contributed an article to the *Numismatic Chronicle* of 1907 on the use of the title "Shahanshah" by the Buwayhids.

General Sir Albert Houtum-Schindler, K.C.I.E., had been a member of the Society since 1875. He lived for many years in Persia, where he was engaged in organizing the Persian army. He wrote on the history of Persia in various

Oriental publications, and to the *Numismatic Chronicle* he contributed an article in 1898, "Curious Coins in the Persian Treasury".

The late Duke of Norfolk had been a member of the Society since 1904.

Mr. S. W. Grose has informed us of the death of Mr. H. Chapman, late Second Assistant at the Fitzwilliam Museum, and well known to all who had recourse to its coin collections for his useful help and the excellent reproductions that he supplied. Many numismatists will learn with deep regret that he was killed in action in France on September 10 last.

In connexion with the War, I announced my intention in my last Annual Address of offering prizes for models of Commemorative Medals to record the Victory of Jutland Bank. The large issue of medals in Germany to celebrate the events of the War—which, as will be seen from an article in the present volume of our *Chronicle*, has now been still further increased—made it seem to be a matter of National *amour propre* that a movement in the same direction should be promoted in this country. It was also an opportunity for seeking to raise the level of numismatic art in this country, at present degraded to such a low level by the official tradition prevalent in the Mint.

Among the conditions laid down for the competition, it was provided that medals were to be struck and not cast, that no reducing machine was to be allowed, and the final model was to be made by hand and eye to the scale of the proposed medal. The medals themselves were to be of large module, not over three and a half inches in diameter or less than two. Idealism and artistic simplicity were to be held of primary importance, and were to be combined with boldness of relief and finish and precision in modelling.

In judging of the models sent in, Mr. G. F. Hill and Mr. Eric Maclagan of the Victoria and Albert Museum kindly acted with me as my assessors, and, in the end, as

already announced in the *Numismatic Chronicle*, four prizes were awarded and three medals were struck. As epitomizing the subject of the Jutland Victory, I suggested the following motto, which has been inscribed on two of the medals :

"THE GERMAN HIGH SEA FLEET HELD AGAINST ODDS
TILL ROUTED BY INVINCIBLE MIGHT."

In my presidential capacity I also felt entitled to add to the inscriptions that the medals were issued "Under the Auspices of the Royal Numismatic Society".

The medals are illustrated¹ on pp. 23-25, and speak for themselves. No. 1, to which the first prize was awarded largely for its admirable technique and original artistic treatment, is by Mr. Harold Stabler. No. 2, distinguished by its fine modelling and relief, with the highly dignified lion above the characteristically German eagle, is by Mr. A. Bertram Pegram. The obverse of No. 3, with its portrait busts of the two Admirals, is by Mr. Walter Gilbert, of the Bromsgrove Guild, while the reverse, effective in its simplicity, is by Mr. C. Wheeler. I may add that I ventured to send silver copies of each of the medals to Admiral Jellicoe and Vice-Admiral Beatty, as also to our Admiral Fellow, the Marquess of Milford Haven, as he now is, in whom the Nation recognizes one of the chief organizers of Victory, and that I have received warm and appreciative acknowledgments from all of these gentlemen.

It is satisfactory to have to record that a further impulse towards the improvement of the art of medalling in the country in connexion with the many commemorative occasions presented by the great War has been given by the organizing of an Exhibition, or what promises to be a series of Exhibitions, of Medallie Art. In organizing this Exhibition, Countess Feodora Gleichen, herself the modeller

¹ From blocks kindly lent by Messrs. Spink & Son.



FIG. 1. Obverse.



FIG. 1. Reverse.



FIG. 2. Obverse.



FIG. 2. Reverse.



FIG. 3. Obverse.



FIG. 3. Reverse.

of some of the finest of the modern medals exhibited, took a leading part, and the Georgian Hall was liberally put at the disposal of the Committee by Messrs. Waring. Our Patron the King graciously exhibited the naval reward in gold engraved by Thomas Simon, and struck by order of Parliament in 1653, to be given to Blake, Monk, Penn, and Lawson in commemoration of the recent naval victories over the Dutch.

The collections of medals in private possession brought together by this Exhibition, illustrating various branches and periods, will have been useful to artists in enabling them to compare with the sketchy and decadent French style at present in vogue the nobler products of the older schools. A series, moreover, like that afforded by the English historical medals, to which your President contributed, and the interesting collection of Naval Medals exhibited by the Marquess of Milford Haven, supplies many useful hints for the commemorative side of the art. It was also certainly a valuable feature of the Exhibition that prizes were offered for the best illustration of such an ideal subject as the "Triumph of Civilization over Barbarism".

As it is my desire to take advantage of the present occasion to say a few words on some subjects about which I feel more competent to speak, I shall only briefly refer to some of the excellent contributions that we have received during the past year dealing with mediaeval and later numismatics, and on more miscellaneous subjects. The paper of Dr. G. Galster, illustrating the influence of English coin-types on those of Denmark in the thirteenth and fourteenth centuries, has a real historical interest. He has also supplemented it by the description of a find of 1201 English "Short-Cross" pennies near Ribe in Denmark. Mr. Lawrence has supplied a commentary on this hoard, and has also given the Society a valuable summary of the results of his further elucidation of the chronology of the "Short-Cross" period,

to which I have already referred. Mr. Henry Symonds has continued his useful investigations into the records of the Mint by an account of some light coins of Charles I. To Miss Helen Farquhar we are indebted for a very complete account of the silver counters of the seventeenth century, accompanied by acute investigations into their technique. She has brought forward good evidence to show that most of the earlier series are hand-engraved, the design being multiplied by an ingenious process, but that others seem to have been cast, and others again are "the distinct product of a die".

It is, however, the Hellenic branch of numismatics that has been brought into special prominence during the last year by a series of papers. Mr. J. Mavrogordato has continued his exhaustive investigation into the chronology of the coinage of Chios. His present study embraces Period VIII, 334-190 B. C., and Period IX, 190-88 B. C., the series now described being specially rich in magistrates' names. Mr. J. G. Milne has described a hoard of bronze coins of Smyrna which supplies some clues as to the connexions and chronological succession of groups of magistrates issuing *Homereia*. Mr. J. W. Hunkin, in a note on the silver coins of the Jews, has afforded ample demonstration that the thick shekels are not Maccabean but belong to the time of the First Revolt.

In Mr. Hill's list of Greek coins acquired by the British Museum, 1914-16, are some interesting pieces, though the cutting off of the Government grant since the War has placed our national collection at a great disadvantage. There are, however, several individual contributions of interest. Fifty-seven bronze coins of Smyrna, including eighteen *Homereia* and several new magistrates' names, were presented by Mr. W. H. Buckler, whose liberality has also added to the Museum 229 ancient Spanish coins of silver and bronze. Mr. J. Anderson of Athens has helped to fill the gap in the Athenian small change of the fifth century B. C.

by his gift of thirty-three specimens of κάλλυβοι. On the other hand, the British School of Archaeology in Egypt has presented, through Professor Flinders Petrie, a little hoard of thirty-nine Athenian "owls" found in the Ptah temenos at Memphis. They are interesting both from their remarkably good style and from the fact that many of them show punch-marks, recalling those on Persian *sigloi*.

A small bronze coin of Aegeae in Lykaonia shows a new type of portrait head on which Mr. Hill detects the characteristic long chin of Alexander Balas which Imhoof-Blumer has failed to recognize in this series. A drachm of Cappadocian fabric gives the name and portrait of a hitherto unknown king, Attalos Epiphanēs. A small bronze coin of Demetrios I belongs to a curious little group showing heads of animals "which suggest that Demetrios took an interest in natural history". Those on this piece are described by Mr. Lydekker as "a mastiff-like hound and an animal with long pointed ears resembling a karakal". Lions, boars, and stags also occur on this series.

A Parthian tetradrachm is the second known with the name and portrait of Orodes III (A. D. 5-6). Among the recent acquisitions of Abyssinian coins there are also several curious specimens, some with Greek inscriptions.

A tetradrachm of Syracuse, formerly in the Headlam Collection, presents an olive branch beneath the chariot. Dr. Headlam has compared this with a similar symbol beneath a chariot on a tetradrachm of Gela,¹ where olive wreaths are of frequent occurrence, and would trace in it a reference to the Congress of Gela of 424 B. C., described by Thucydides. The association would be interesting if established, but the difference in style between the walking quadriga on this piece and that of the "medallions", struck *ex hypothesi* in 413, is such that it is hard to conceive of such

¹ *Num. Chron.*, 1908, pp. 1-9.

a revolutionary advance in art having taken place in a period of ten years. In connexion with this piece I may mention a somewhat parallel tetradrachm in my own collection, showing a walking chariot, with the horse's neck a trifle less thrown back, and in the exergual space below a bay leaf and berry (Fig. 4). The back of the sphendone on the head side is off the die, but the type belongs to a time



FIG. 4.

FIG. 5.

FIG. 6.

representing the finest late development of the severe style, when the eyelashes were well marked and a necklace worn with a prominent lion's head in front.¹

The Cambridge Cabinet, so splendidly enriched by the gift of the late Mr. McClean, is fortunate in having the services of so zealous and competent an exponent as Mr. Grose. Every fresh article from his pen illustrates the

¹ E. g. Du Chastel, *Syracuse*, Pl. 5, 52, 53.

carefully selective spirit in which Mr. McClean formed his collection. Two papers contributed by Mr. Grose to the present volume of the *Numismatic Chronicle* are based on this material.

Among the coins of the series discussed in Mr. Grose's recent communications many derive a special interest from having been restruck. Certain conclusions with regard to the relative antiquity of types may, in nearly all cases, be drawn from this phenomenon, and judgements formed from style alone must occasionally be revised on this ground. Mr. Grose, for instance, seems to have demonstrated that a di-drachm type of Metapontion showing the head of Leukippos in a Corinthian helmet is struck over an earlier date with the head of Niké and the inscription **NIKA**—a type which is placed in the *Historia Numorum* after that with the helmeted head of the Achaean hero.

The overstriking of a Terinaean type on a stater of Neapolis is interesting as supplying a new numismatic connexion between the two cities otherwise illustrated by the Niké on the hydria seen on a rare Neapolitan obol. From the occurrence of two drachms of the Campanian mercenaries at Entella, both overstruck on coins of Katané dating from about 404 B.C., Mr. Grose draws the very probable conclusion that the free horse with the grain of corn below it, which here already appears as a type of these mercenaries, has nothing to do with Timoleon's capture of Entella in 342, but must be regarded as having been borrowed from the Siculo-Punic coinage. The appearance of a hybrid type with a female head and the legend [**ΣΥΡΑΚ**]ΟΣΙΟΝ, coupled with a quadriga and the inscription *Zis*, in Punic letters, suggests reasonable doubts as to whether it should be attributed to Syracuse or Panormos.

On one coin described by Mr. Grose, the noble tetradrachm of Katané with the river fish swimming upwards beside the head of Apollo, I may be allowed to speak a little more at length. Mr. Grose does not express too strong an opinion

when he says, "for beauty combined with severity of artistic restraint it does not seem to me that the equal of this coin can be found, not even in Apollo heads of the coins of the Chalcidic League, where the artist was probably acquainted with types of Catana". He notes, among other points, the delicate treatment of each strand of hair and "the avoidance of loose ends that distract the eye", the intertwining of the stems of the laurel wreath, and the fact that the treatment of the hair follows "an older tradition of the mint when under the influence of Leontini".

This last observation is certainly true, but I venture to think that it has an application that goes a good deal beyond the conclusion drawn by Mr. Grose.

The other side of this coin from the lower die presents a quadriga with prancing horses showing two necks and heads, with crawfish below. This transitional quadriga type reappears on a fellow piece of Katané, where it is associated with a head of Apollo of somewhat later style¹ with a leaf, doubtless of *σέλινον* or water-parsley, behind. This latter type is also coupled with a walking quadriga.²

As what are beyond doubt the finest existing specimens of these beautiful pieces, formerly in the Benson Collection,³ are now before me, an inspection of them may be agreeable to the Society (see Figs. 5, 6).

The prancing quadriga on these coins, as Mr. Grose admits, is practically identical with that found on Syracusan tetradrachms dated by Head not later than 466 B.C.,⁴ "and probably never yet placed later than c. 450-440 B.C." The heads on the Katanaean coins belong, as Tudeer points out, to a somewhat more advanced stage of development than that

¹ Tudeer, *Die Tetradrachmenprägung von Syrakus*, p. 245, also points out that the other head is some years older.

² B. M. Catalogue, No. 25.

³ Benson Catalogue, Pl. vi, 208, 209.

⁴ *Chronological Sequence of the Coins of Syracuse*, p. 11 and Pl. ii. 12.

illustrated by the Syracusan tetradrachms with the similar quadriga type. But the difference is very slight.

In a paper communicated to this Society in 1896 I had already called attention to the close parallelism between some of the later tetradrachms of Leontinoi, whose coinage breaks off in 422 B. C., and certain Katanaean types, a parallelism at times of such a kind as to point to an actual alliance between the two cities.¹ The artistic stage already reached by some of the later Leontine coins which we may approximately date c. 425 was itself remarkable; the expression, indeed, of Apollo's face is at times curiously suggestive of Italian Renaissance heads of the late Quattrocento or early Cinquecento.

That the severely beautiful head (Fig. 5 above) is distinctly earlier than the latest types of Leontinoi is clear. Tudeer, who accepts my comparisons of these Leontine and Katanaean issues as a chronological basis, taking the style of the head in connexion with the early tradition represented by the quadriga, draws the conclusion that the appearance of this type "must go back to a somewhat higher date than 425".² Personally, I should incline to a date nearer 440 B. C. In face of the comparisons cited I am unable to find any warrant for Mr. Grose's pronouncement that "when the Apollo head on the reverse of one coin is considered it becomes apparent that if any account is to be taken of the normal artistic development in the fifth century B. C. the coin cannot be dated earlier than c. 413 B. C."

Still less am I able to accept Mr. Grose's conclusion as to the date of the Syracusan tetradrachm, now published by him, of the common type showing a female head with the hair bound with a cord twisted four times round, but with the remarkable retrograde inscription showing Ω in place

¹ *Contributions to Sicilian Numismatics*, ii (*Num. Chron.*, 1896, pp. 28-30).

² *Op. cit.*, p. 245.

of O. The appearance of the *omega* is certainly unexampled in this class, but it is impossible to revolutionize the principles on which the chronology of the late fifth-century coinage of Syracuse ultimately rests on account of the intrusion of a single letter. The Ω appears already at Syracuse on the earliest signed coinage with Sôsiôn's name, for which, striking a mean between various estimates,¹ the approximate date 430 B.C. may be given. The Ω already appears on the early coins of Thurioi c. 443 B.C., while at Velia it goes back to about 500. The type referred to, both from the style and associations of the head and the walking quadriga, belongs to the close of the period of the unsigned coinage of Syracuse, c. 440 B.C., and the intrusion of the Ω on one of these coins, though itself a unique phenomenon, is not inconsistent with known epigraphic facts. But Mr. Grose cites the Catalogues of Dr. Hirsch and the more or less random entry in the compilation of Count Du Chastel² as serious authorities for 412 as the date of the beginning of the Signed Coinage of Syracuse, and accordingly brings down the date of this late transitional piece to c. 413 B.C.!

In this connexion I may be allowed to say a few words of a more general nature. In my monograph on Syracusan "Medallions" and their engravers, communicated to the Society in 1891, one main proposition was brought forward which has since been regarded as a fixed point in Sicilian numismatics. The central fact thus established was that the silver *pentekontalitra*, or "Medallions", showing the prize trophy beneath the racing chariot, were first struck in connexion with the new games instituted at Syracuse

¹ These are summarized by Tudeer, *op. cit.*, pp. 276, 277. His own estimate is "probably a few years earlier than 425". Holm, Hill, and Regling approve of 430. My own original estimate was c. 440 B.C.

² Text to Plate vi.

to commemorate the crowning victory over the Athenians on the Assinaros in 413 B. C. That the earliest specimens of these, the first, namely, from Kimôn's dies, go back to that date has been generally acknowledged, and the logical consequences of this conclusion as bearing on the Syracusan coin-types of the latter half of the fifth century have also been largely accepted by those who have written on the subject from Holm to Tudeer, and by none more warmly than by Furtwängler, writing from the larger artistic and archaeological standpoint. This conclusion involved in fact the throwing back of the date of a whole series of tetradrachm types presenting artists' signatures to a date which is now generally recognized to be at least as early as c. 430 B. C. On the other hand, it tended to create a certain void in the later tetradrachm issues, and the absence of such in the later style of the dekadrachms, both of Kimôn and Euainetos, as well as other indications, led to what still appears to me the inevitable conclusion that there was a practical cessation of tetradrachm issues early in the reign of Dionysios. This, however, I know is a hard saying, and I am not here to elaborate its defence.¹

But there is one logical deduction which it seems to me is very difficult to avoid. The grand and artistically fully developed action of the horses on the earliest "Medallions" struck *ex hypothesi* in 413-412 B. C. must be taken as a norm of the stage of maturity reached in the quadriga designs of the contemporary issues of lesser denominations. This general result is not affected by the survival of old dies

¹ Tudeer, *op. cit.*, pp. 284, 285, considers that many of the the coins signed by Eukleidas belong to Dionysios' reign. I can only repeat that in my opinion the continuance of the archaic type of curled earring weighs against the late date of this group. Some at least of these were imitated on the earlier Siculo-Punic coins. The Contessa find contained a good example of such an imitation of this Eukleidas type. See *Notizie d. Scavi*, 1888, Pl. xviii. 33.

perpetuating earlier types so well illustrated by the exhaustive analysis of Dr. Tudeer. If already by 413 B.C. the designs of the chariot and horses, as well as of the head of the Goddess, had reached the exquisite perfection seen on the "Medallions"; if already by 409 B.C. the beautiful facing head of Arethusa on Kimôn's tetradrachms was imitated at Himera, destroyed that year by the Carthaginians, we are bound to seek the direct antecedents of these masterpieces in the signed work of the immediately preceding period. It is difficult to attribute the execution of dies in the late Transitional style to any date approaching 413 B.C.

I am glad to acknowledge a much greater measure of agreement with the main thesis of Mr. Grose's paper, in which he discusses Greek coin dies.¹ Taking as his starting-point seven specimens of dekadrachms from a fractured die by Kimôn, he pertinently asks how, if the die were of soft metal, it could still have been continuously in use and the outline of the fracture have remained clear and sharp. The old idea that dies were cut in soft material and rapidly produced does not seem to be tenable. My own observations corroborate the view expressed by Mr. Grose that the number of known coins from the same die is surprisingly large. This points, as he says, to the use of a very durable metal, though it may well have been hardened bronze.

That a greater number of varieties of impressions of the upper die which produced the reverse of the coin, in the technical sense of the word, exists than of the obverse is a natural result of its greater liability to break, the lower die being let into the anvil. This was particularly the case with designs in high relief on the Sicilian coins belonging to the finest period of art, such as the facing heads on the coins of Syracuse and Katanê. Eukleidas, who engraved

¹ *A Dekadrachm by Kimon and a Note on Greek Coin Dies* (*Num. Chron.*, 1916, pp. 113 sqq.).

the earliest of these, the three-quarter facing head of Athena, on the punch or upper die, according to the usual Syracusan practice, was a deterrent example, since the extant impressions have in several cases suffered from fracture.¹ Tudeer² is no doubt right in supposing that Kimôn was warned by this experience to select the lower die for his facing head of Arethusa. In the same way, contrary to the Katanaean custom, the late engraver Choiriôn executed his full-facing head of Apollo for the obverse side."

These observations lead to a very difficult question which is becoming daily more urgent, especially in the field of Greek numismatics. How are we rightly to define the "obverse" and "reverse" of a coin?

Till within recent years the word "obverse" was applied to what was considered to be the most important side, in most cases marked by a head, and "reverse" to the other. This, in fact, is the rough classification implied by "heads" and "tails". Our words are the English translation of the *antica* and *aversa* of the older numismatists who wrote in Latin. The French equivalents are *face* or *droit* and *avers* and *revers*; the German *Vorderseite* or *Hauptseite* and *Rückseite* or *Kehrseite*. The French "pile ou face", still used as equivalent to our "heads or tails", goes back to the mediaeval coinage, *pile*³ being so called from the anvil on which the lower die was placed.

The *antica*, or obverse, to our great numismatic master

¹ So too on a unique drachm of this artist in my possession presenting a three-quarters facing head of Arethusa on the reverse, there is a trace of an incipient flaw to the left of the head.

² *Op. cit.*, p. 227.

³ Herakleidas still followed the older custom, and his three-quarter facing heads of Apollo are on the reverse of his tetradrachms.

⁴ See Blanchet et Dieudonné, *Manuel*, ii, p. 22.

Eckhel meant simply the principal face of the coin. Where, as on some early Lydian coins, there were punch-marks only on one side he spoke of it as the *antica* simply. The use of the terms "obverse" and "reverse", according to the traditional plan, was due to an estimate of which was the more important side, and was based on individual judgement or a general consensus of opinion. It was "psychological", therefore, in character.

That such a distinction was often arbitrary it must be admitted. Yet as a rough and ready method it had distinct conveniences. It did not, however, square with the scientific plan of distinguishing between the impressions from the upper and the lower die. Thus a new nomenclature was introduced by Mr. Hill,¹ and followed by Regling, Tudeer, and others, by which the word "obverse" is confined to the side of the coin impressed by the lower die let into the anvil, and "reverse" to the upper die that was actually struck by the hammer. This, as opposed to the other, may be called the "technological" system.

Apart from the fact that it is always difficult to run counter to a system in general use—not in itself a sufficient argument—it seems to me that certain grave inconveniences attach to the new system. It is founded on no principle such as is implied by the comparative importance of the two sides of a coin. It is quite true, indeed, that in the earlier classes of coins the new system generally corresponds with the old. Owing to the use of the punch-marks on the upper face of the coin the development of the design was excluded or greatly restricted on that side, and was relegated to the lower die. Thus on many early coins there is really no type except that of the obverse as above defined.

Later on, however, as the punch-marks developed into the *quadratum incusum*, and that itself finally disappeared,

¹ *Coins of Ancient Sicily*, Introduction, pp. 5, 6.

the original cause for the predominant importance of the "anvil" side was no longer operative. Moreover, new religious types in many cases came to the fore which displaced the old civic emblems.

Let me take a single instructive instance. The Ionian colonists of Velia brought with them a variation of a native lion type, which appears on the anvil side of their early drachm coinage, accompanied on the other by a *quadratum incusum*. But on a didrachm of somewhat later date, of Italian fabric, the incuse square is replaced by an archaic head of the Nymph Velia. Next, on a coin with a very similar head the lion is shifted to the "hammer" side. Once more, in the case of the didrachm with the very beautiful head of the fountain Nymph of later fabric, accompanied by a vine spray, the lion returns to his second position on the "anvil" side.

The Nymph's head is succeeded by that of Athena, and this now permanently occupies the "anvil" side, the lion being again relegated to the upper die.

We have then presented to us, according to the new system of classification, the following table:

1. Obverse. Forepart of lion, &c.	Reverse. Incuse square.
2. Obverse. Lion.	Reverse. Head of Velia.
3. Obverse. Head of Velia.	Reverse. Lion.
4. Obverse. Lion.	Reverse. Head of Velia.
5. Obverse. Head of Athena.	Reverse. Lion.

Is not such a result itself a *reductio ad absurdum* of the proposed system?

So too, to take, almost at random, examples of coins of Sicilian cities, the "head" side on coins of Kamarina, the two eagles on tetradrachms of Akragas, the River God at Selinus, shift from face to face according to the die-sinker's whim. On the early coins of Leontinoi the head of Apollo is on the upper die; on the later issues he appears on the

lower. According to the new arrangement the same God is on the "reverse" in the first case, and on the "obverse" in the other. In tabulated columns the artistic succession of all these types would be broken up.

The proposed new nomenclature, moreover, at most touches a section of ancient coins. In the modern system of mintage it is a pure accident which type occupies a place on the upper or lower die. The craftsman entrusted with the striking of a coin takes up at haphazard one of the two dies and bevels its rim for insertion into the anvil. To take an individual instance, the Jutland medals illustrated on pp. 23-25 were executed in this way without any reference to the design or comparative relief, and it could only be by referring to the actual dies that it would be possible to discover which, in the new interpretation of the word, is the obverse and which is the reverse. Yet no intelligent person would doubt in any case which was the principal side.

But it is unnecessary to cite further examples of the confusion that would result from the adoption of the new system. A principal object in the exposition of any group of coins is to be able to trace the evolution of the types of the same class. By the time-honoured system of obverse and reverse as applied to Greek coins this object was at least secured. But the shifting about of types of one kind or another between the upper and lower dies to suit the convenience or often, it would seem, the caprice of the mint official is a subject of quite subsidiary importance as compared with the other. It is true that this changing over, as in the case of the dies with the facing heads cited, from the hammer to the anvil side may at times illustrate a technical need. So, too, the constant tendency of the chariot types to appear on the obverse side of coins is not the result of mere caprice, but of the artistic need of securing the widest possible field for the development of such designs, which, in

the earlier period at least, was more easily obtained on the flat lower die. But the weight of scientific interest clearly preponderates in favour of providing the best apparatus for comparative study. Could there be a better instance of the disadvantages of the other system than the parallel columns of types given by Dr. Tudeer, one of the adherents of the new system, in his exhaustive work on Syracusan tetradrachms? His method of exposition, in any case, requires a special study for its understanding, but it is rendered still more difficult by the breaking up of columns giving the succession of head types by others representing chariots, and vice versa.

But though I am quite unable to accept the new use of the terms "obverse" and "reverse" in the case of Greek coins as approved by the eminent numismatists cited, I am so far in agreement with them that I fully recognize the desirability of placing on record, where it is possible, the technological distinction between the upper and lower dies. Surely, however, it should not pass the wit of man to supply such a record without interfering with the older and simpler terminology. Where, as is almost invariably the case in the older series of coins, the "obverse" in fact represents the impression of the lower die, no distinguishing note need be appended. But where a "head" type, for instance, was executed on the upper die and the "tail" type on the lower, some such an indication might be supplied as *sup.* (superior) in the first case, and *inf.* (inferior) in the other. I would, at any rate, take this opportunity of throwing out this suggestion.

I may add that there is one more practical obstacle in the way of the adoption of the new system. As a matter of fact, in the case of many of the later coins from the last part of the fifth century onwards it is often impossible—I speak, at least, from my own experience—to make out whether the face or back of an individual coin belongs

respectively to the upper or the lower die. It is only by investigating their connexions and derivation that a probable answer can in most cases be supplied. We are almost reduced to the state of puzzlement of the German Professor who is credited with the profound observation that "which is the right bank and which is the left bank of a river can only be determined at its source".

A vote of thanks having been proposed by Prof. Oman to the President for his address, the result of the ballot for office-bearers for 1917-1918 was announced as follows:

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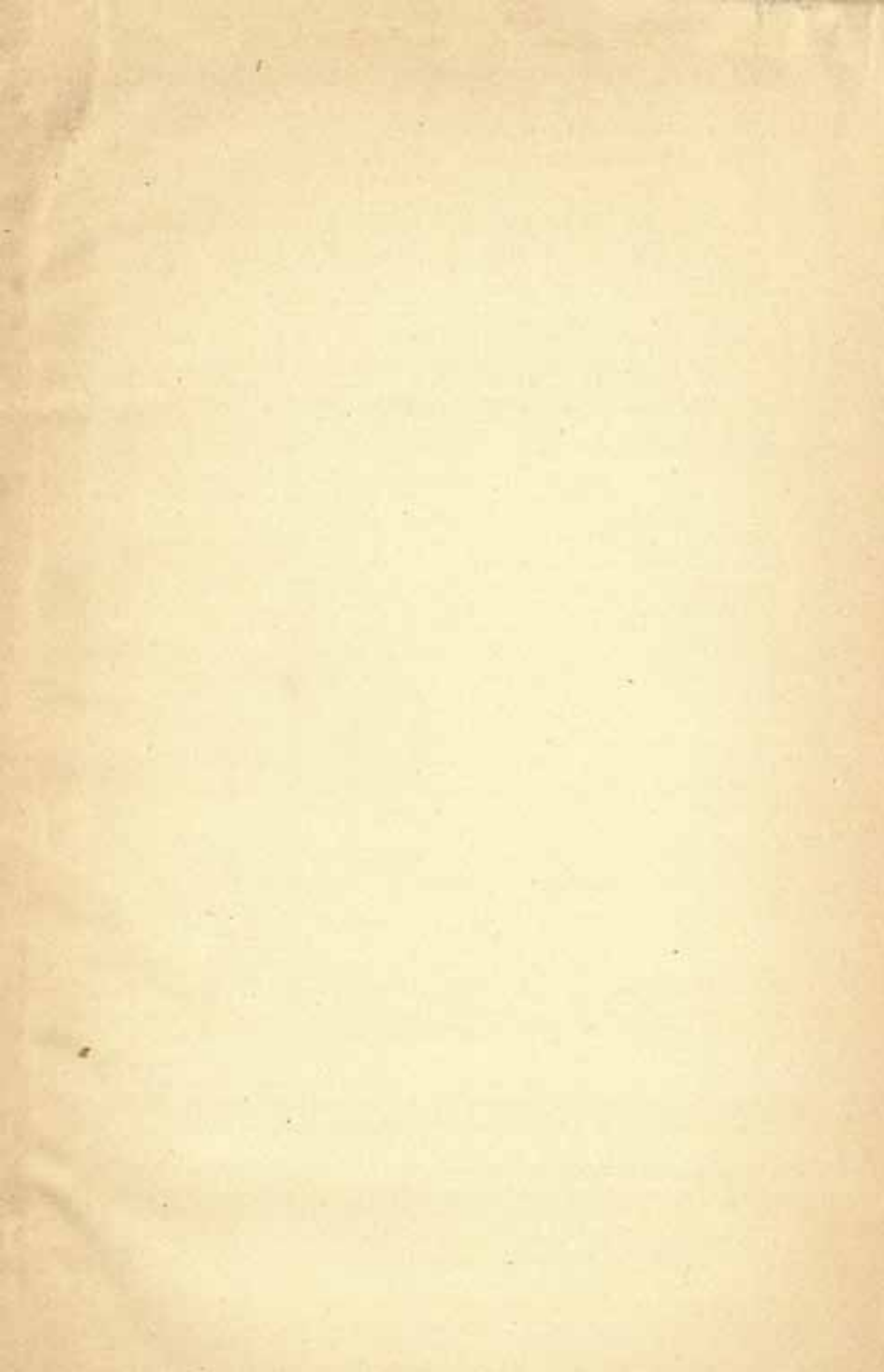
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The President then proposed a vote of thanks to the Auditors and Scrutineers, and adjourned the Society till October.



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