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REATTRIBUTION
OF
CERTAIN TETRADRACHMS
OF
ALEXANDER THE GREAT

BY
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REATTRIBUTION

OF CERTAIN

TETRADRACHMS OF ALEXANDER THE GREAT.



THE time has come when all interested in Greek numismatics are feeling the need of a thorough rearrangement of the coins which bear the name and types of Alexander the Great. That Müller's work,¹ however painstaking, is quite out of date and (to say the least) misleading in the majority of its attributions, has long been recognized. Recently, a number of able numismatists have more or less finally worked out and arranged the "Alexanders" struck in Phœnician mints, — a comparatively small fraction of the immense field before us. For the present, this undoubtedly seems the best way of approaching our subject: — that is, to take Alexander's coins group by group, working out each group as carefully and accurately as possible, and some day, these separate fragments, like the parts of a picture puzzle, will no doubt fit together in an intelligible whole.

Of the Alexander coins, a certain Macedonian group, dating from the very beginning of Alexander's reign to the death of Alexander IV, Roxana's son, has of late particularly interested me. That the coins of this group belong together Müller himself recognized, though only in a general way. He collected these coins under the vague title of Class I, but scattered them again throughout the many mints of Thrace, Macedon, and Northern Greece, according as their mint-marks seemed, to him, to resemble the particular types (coats-of-arms as it were) of the several cities. That they really all belong together, being struck in one and the same mint, I hope to prove.

It was the great find of about 20,000 Alexander tetradrachms made at Demanhur,² Egypt, some three years ago, that first interested me in their study. As I have said above, one group in particular drew my attention and

¹ L. Müller, *Numismatique d'Alexandre le Grand*, Copenhagen (1855).

exact *provenance* of the find. Demanhur is the locality generally given, but Memphis, with its environs, would seem to be a much more likely place.

² It is very difficult to ascertain from the natives the

interest,— that under the heading Class I, in Müller's work. Of these I have secured some four hundred specimens, and have filled out my collection with casts of similar coins in the cabinets of the British Museum, Bibliothèque Nationale, and Munich collections, as well as from the stocks of various continental dealers.

It is not only the proofs deduced from the similarity and continuity of the style exhibited by these coins that would lead us to attribute them all without hesitation to the same mint, but it is the absolute proof of identical dies which must bring us to this conclusion. For when the above coins are arranged according to the style and workmanship of their dies, we find one group of four, nine groups of three, and at least thirty-eight groups of two coins, whose reverses present varying mint symbols, but whose obverses, within each group, are from *identical dies*. Evidently this must completely upset Müller's attributions to various mints scattered throughout Northern Greece. For in ancient times, as we all know, dies were cut by hand, without the mechanical contrivances we now have for securing identical copies of the original or model die. Therefore, if two coins, with varying symbols on their reverses, have their obverses from the *same* die, they must necessarily be from the same mint; and not as Müller would have it, the one struck perhaps in Pella of Macedonia, and the other in Magnesia of Thessaly. That these separate groups belong together, the following catalogue can best show.

TETRADRACHMS.

Series A, 336–318 B. C.

Obverse, Head of youthful Herakles *r.* in lion's skin.

Reverse, Zeus seated to left on throne without back. Head sometimes laureated, right arm outstretched, eagle perched on open hand. The left arm rests on sceptre. Inscription: ΑΛΕΞΑΝΔΡΟΥ.

Type No.	Magistrate's Symbol.	Müller's No.	Plate.
I	PROW	503 } Obverses	I { 1
II	FULMEN	3 } identical	I { 2
I	PROW	503 } Obverses	I { 3
III	DOUBLE HEAD	853 } identical	I { 4
II	FULMEN	3	I 5
IV	RUDDER	—	I 6
V	STERN	758	I 7
III	DOUBLE HEAD	853 } Obverses	I { 8
VI	AMPHORA	527 } identical	I { 9

OF ALEXANDER THE GREAT.

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Type No.	Magistrate's Symbol.	Müller's No.	Plate.
VI	AMPHORA	527 } Obverses	I { 10
VII	KANTHAROS	194 } identical	
VI	AMPHORA	527 } Obverses	II { 1
VIII	WREATH	548 } identical	
IX	HELMET	191 } identical	
IX	HELMET	191 } Obverses	II { 4
X	IVY LEAF	244 } identical	
X	IVY LEAF	244 } Obverses	II { 6
XI	BUNCH OF GRAPES	306 } identical	
X	IVY LEAF	244 } Obverses	II { 8
XI	BUNCH OF GRAPES	306 } identical	
XII	KERYKEION	207 } identical	
XIIa	KERYKEION (filleted)	<i>var.</i> 207 } Obverses	III { 1
XIII	QUIVER	<i>var.</i> 591 } identical	
XIV	TRIDENT	<i>var.</i> 107 } identical	
XV	FORE-PART OF PEGASUS	602 } identical	
XIII	QUIVER	<i>var.</i> 591 } Obverses	III { 5
XVI	EAR OF WHEAT	— } identical	
XV	FORE-PART OF PEGASUS	602 } Obverses	III { 7
XVII	BOW	— } identical	
XIII	QUIVER	<i>var.</i> 591 } Obverses	III { 9
XVIII	EAGLE'S HEAD	— } identical	
XVIII	EAGLE'S HEAD	— } Obverses	IV { 1
XIX	CLUB AND MONOGRAM	138 } identical	
XIX	CLUB AND MONOGRAM	138 } Obverses	IV { 3
XX	KERYKEION AND MONOGRAM	— } identical	
XIX	CLUB AND MONOGRAM	138 } Obverses	IV { 5
XXI	MACEDONIAN SHIELD	<i>var.</i> 223 } identical	
XXII	CLUB, UPRIGHT	<i>var.</i> 135 } identical	
XX	KERYKEION AND MONOGRAM	— } Obverses	IV { 8
XXI	MACEDONIAN SHIELD	<i>var.</i> 223 } identical	
XXIII	STAR	— } identical	
XIX	CLUB AND MONOGRAM	138 } Obverses	V { 1
XXI	MACEDONIAN SHIELD	<i>var.</i> 223 } identical	
XXIV	HORSE'S HEAD	528 } identical	
XIX	CLUB AND MONOGRAM	138	V 4
XXV	DOLPHIN	<i>var.</i> 539	V 5
XXVI	ACROSTOLION	281	V 6
XXVII	ROSE	116	V 7

REATTRIBUTION OF CERTAIN TETRADRACHMS

Type No.	Magistrate's Symbol.	Müller's No.	Plate.
XXVIII	COCK	392	V { 8 9 10
XXIX	CRESCENT	259	
XXX	HERM	366	
XXVIII	COCK	392	VI { 1 2 3
XXX	HERM	366	
XXXI	MONOGRAM	181	
XXVIII	COCK	392	VI 4
XXXII	KERYKEION	var. 207	VI 5
XXXII	KERYKEION	var. 207	VI 6
XXXIII	BUCRANIUM	97	VI 7
XXXIII	BUCRANIUM	97	VI { 8 9
XXXIV	PENTALPHA	378	
XXXIII	BUCRANIUM	—	VI 10
XXXV	COCKLE-SHELL	385	VI 11
<hr/>			
I	PROW	503	VII { 9 10
V	STERN	758	
V	STERN	758	VII { 11 12
XI	BUNCH OF GRAPES	306	
VI	AMPHORA	527	VII { 13 14 15
VIII	WREATH	548	
VI-A	STYLIS	—	

(I *Prow*, II *Fulmen*.) These two coins I have placed at the head of the catalogue, as they seem to be among the first issued under the new reign. The style is better and the execution more careful than that of any of the following and this is especially noticeable in the figure of Zeus on the reverse of I. On the coins bearing a *prow*, as magistrate's symbol, the prow is found facing both to right and left; the latter position is much the more frequent. The obverses of these two coins are from the same die. Plate I: figs. 1 and 2.³

(I *Prow*, III *Double head*.) Here we see the commoner variety with the prow facing to the left. The style is quite different from fig. 1, and more in keeping with what follows on the issues of this mint. Obverses identical. Pl. I: 3 and 4.

(II *Fulmen*, IV *Rudder*, V *Stern*.) Though the obverses of these three coins are not from the same die, still, on comparing them closely with each other they prove so similar, that one is inclined to believe the dies to have

³ Owing to possible difficulty in recognizing from the Plates the exact identity between dies, the writer, in case of any serious doubt, will gladly undertake to

make casts from the actual coins in his own collection, and send them, in order to establish his point.

been cut by the same hand. This places types IV *Rudder*, and V *Stern* with types I *Prow*, II *Fulmen*, and III *Double head*, which are linked together by identical dies. I have had at my disposal too few die varieties of types IV and V (in comparison with what must have been coined), to find exact matches with the coins of types I, II, and III. The similarity between the coins however is too striking for us not to place IV and V here tentatively. I do not doubt that some day identical dies will turn up to prove this. Pl. I: 5, 6, and 7.

(III *Double head*, VI *Amphora*.) Here we have type III *Double head* agreeing with a new die bearing as symbol an amphora. Obverses identical. Pl. I: 8 and 9.

(VI *Amphora*, VII *Kantharos*.) Obverses identical. Pl. I: 10 and 11.

(VI *Amphora*, VIII *Wreath*, IX *Helmet*.) This is a series of three coins, all having their obverses from the same die. As type VI *Amphora* is one of these, it connects types VIII *Wreath* and IX *Helmet* with the foregoing. The helmet is found turned both right and left. Plate II: 1, 2, and 3.

(IX *Helmet*, X *Ivy leaf*.) Obverses identical. These two coins form the bridge with the following large series. Pl. II: 4 and 5.

(X *Ivy leaf*, XI *Bunch of grapes*.) Obverses identical. This and the following form one large series. Pl. II: 6 and 7.

(X *Ivy leaf*, XI *Bunch of grapes*, XII *Kerykeion*.) This is another series of three symbols with identical obverses. Pl. II: 8, 9, and 10.

(XIIa *Kerykeion*, XIII *Quiver*, XIV *Trident*, XV *Fore-part of Pegasus*.) A series of four coins with different symbols, but with their obverses struck from the same die. Type XIIa forms the connecting link with the previous series. Though the symbol of the kerykeion varies slightly from that above (being filleted), the styles are too similar for us not to consider them as one and the same symbol. Plate III: 1, 2, 3, and 4.

(XIII *Quiver*, XVI *Ear of wheat*.) Obverses identical even to minute flaws in the die. Evidently a new artist in the mint cut this die, as it varies so considerably in style from any of the preceding. The symbol of the quiver, however, is exactly like that on Plate III: 2. Pl. III: 5 and 6.

(XIV *Fore-part of Pegasus*, XVII *Bow*.) Obverses identical. The Pegasus symbol connects the bow symbol with the above types. Pl. III: 7 and 8.

(XIII *Quiver*, XVIII *Eagle's head*.) Obverses identical. This again makes the bridge with the following series. Pl. III: 9 and 10.

(XVIII *Eagle's head*, XIX *Club and monogram*.) Obverses identical. The club and monogram, so common in the following series, is here seen in combination with the eagle's head symbol. Plate IV: 1 and 2.

(XIX *Club and monogram*, XX *Kerykeion and monogram*.) Obverses identical. Pl. IV: 3 and 4.

(XIX *Club and monogram*, XXI *Macedonian shield*, XXII *Club, upright*.) A series of three with identical obverses. Pl. IV: 5, 6, and 7.

(XX *Kerykeion and monogram*, XXI *Macedonian shield*, XXIII *Star*.) Another series of three with identical obverses. Notice how the same die flaw (on the neck beneath the locks of the lion's skin) is to be seen on all three obverses. Pl. IV: 8, 9, and 10.

(XIX *Club and monogram*, XXI *Macedonian shield*, XXIV *Horse's head*.) Still another series with three identical obverses. Here, too, a flaw in the die is plainly visible on the obverses of all three. Plate V: 1, 2, and 3.

(XIX *Club and monogram*, XXV *Dolphin*, XXVI *Acrostolion*.) Coins with the last two symbols have not yet been found to match with previous pieces. However, XXV *Dolphin*, and XXVI *Acrostolion* must have been struck about the same time as, for instance, XIX *Club and monogram*. On Plate V, Nos. 4, 5, and 6, compare the similarity of features, the three rows of lion locks, the arrangement of human locks on the forehead of Herakles, the arrangement of folds in the lion's skin about the neck. The similarity between the three is very striking. Also the figure of Zeus on the three reverses *might* have been cut by the same artist. Pl. V: 4, 5, and 6.

(XXVII *Rose*.) This probably belongs about here in the series, as the obverse resembles the obverses of previous coins, while the reverse is almost identical in style and workmanship with the following. Pl. V: 7.

(XXVIII *Cock*, XXIX *Crescent*, XXX *Herm*.) A series of three coins with identical obverses. The Herakles head is strikingly similar to Plate V: 4, — the same arrangement of the human locks, the lion locks and the folds of the skin, and also the same facial expression. Pl. V: 8, 9, and 10.

(XXVIII *Cock*, XXX *Herm*, XXXI *Monogram*.) Another series of three identical obverses, with one new symbol. Plate VI: 1, 2, and 3.

(XXVIII *Cock*, XXXII *Kerykeion*.) Shows that the coins bearing the kerykeion as a symbol were struck contemporaneously with the cock coins. We must not confound this kerykeion symbol with that found on type XII. The magistrate may of course be the same, but the date is much later, as the flatter and poorer style of these coins shows; they agree in every detail with types XXVIII to XXXV, and not at all with the earlier pieces. The kerykeion too is considerably changed in appearance, the crescent top being much heavier and flatter than before. Pl. VI: 4 and 5.

(XXXII *Kerykeion*, XXXIII *Bucranium*.) Obverses and reverses very similar in style and appearance; in other words types XXVIII, XXXII, and XXXIII belong to the same time and mint. Pl. VI: 6 and 7.

(XXXIII *Bucranium*, XXXIV *Pentalpha*.) Obverses identical. Pl. VI: 8 and 9.

(XXXIII *Bucranium*, XXXV *Cockle-shell*.) The obverse of XXXV *Cockle-shell* is strikingly similar to coins of the types immediately preceding (as shown by a specimen of type XXXIII, Pl. IV: 10) — while the reverse is evidently cut by the same hand that made the corresponding die of a coin of type XXXVI, *Star in circle*.

Unfortunately, owing to lack of space, it is impossible here to represent all the obverse and reverse dies of types XXVIII to XXXV, and thus show how they constitute a series, in themselves closely bound together by the similarities of their styles, but at the same time forming a bridge between types I to XXVII, and types XXXVI and following. Though their style and workmanship is very distinctive, still, among them are many single pieces that closely resemble both the previous, and the succeeding issues. The output of the mint at this time must have been enormous, as the specimens that have come down to us of types XXVIII to XXXV outnumber nearly two to one those of any previous types. Of the cock variety, for instance, I have counted over thirty different dies for the obverse alone, and judging from experience I am sure there must be many more I have not seen.

I should like to take the opportunity here of expressing my thanks to the authorities of the British Museum, the Bibliothèque Nationale, and the Coin Cabinet at Munich, for their kindness in allowing me carefully to inspect the Alexander coins under their care, and in generously sending me excellent casts of certain coins needed for my work.

SOME ADDITIONAL TETRADRACHMS.

Since the first portion of this article was prepared there have been brought to my notice several Alexander tetradrachms of considerable importance to our study of types I to XXXV.

No. 9, Plate VII, is from a cast, kindly sent me by Mr. J. Schulman, of an Alexander tetradrachm in his sale of December last. The reverse has, as a symbol, the *Prow* (type I); while the obverse is from the same die as No. 10, Plate VII, — a coin of type V (*Stern*) — thus proving my former surmise to be correct that these two types were probably contemporary.

In the coins Nos. 11 and 12, Plate VII, we have the types V *Stern*, and XI *Bunch of grapes*, connected by identical obverse dies.

The most interesting coin is No. 15, Plate VII, with the *Stylis* as symbol in the field. Not only is it important and interesting because, so far as I

know it is unpublished, but also because it adds one more to the many symbols referring directly to the sea, which occur so often on the coins of this series. As the coin itself has its obverse from the same die as two other coins (Plate VII, 13 and 14) of types VI *Amphora*, and VIII *Wreath*, it might conveniently be numbered type VI-A, and so belongs toward the commencement of our series. The symbol forcibly reminds us of M. Babelon's interesting article on the *stylis* as found on the distaters and staters of Alexander the Great,⁴ in which M. Babelon treats of the nature and significance of the *stylis* which Nike bears in her left hand, and gives strong reasons, backed by archaeological evidence and historical facts, why these staters were probably first struck as early as the years 335 and 334 B. C. Does the *stylis* symbol on our coin refer to the same events? This seems to me quite possible as, for other reasons, I had already been inclined to attribute the coins of types VI, VII and VIII to about the years 334 and 333 B. C.

FRACTIONS OF THE TETRADRACHMS.

Along with the tetradrachms of series A, there runs a corresponding series of smaller denominations in silver and in bronze. Their types are as follows:—

DIDRACHM :	Same types as on the tetradrachms.
DRACHM :	Head of young Herakles in lion's-skin headdress. ℞ Eagle on fulmen, his head turned back. (Head, <i>Hist. Num.</i> , p. 198.)
HEMIDRACHM } (TRIOBOL) }	Head of young Herakles in lion's-skin headdress. ℞ Eagle on fulmen. (<i>Ibid.</i> , p. 198.)
DIOBOL :	Head of young Herakles in lion's-skin headdress. ℞ Two eagles face to face on fulmen. (<i>Ibid.</i> , p. 169.)
OBOL :	Head of young Herakles in lion's-skin headdress. ℞ Fulmen. (<i>Ibid.</i> , p. 198.)
BRONZE I :	Head of young Herakles in lion's-skin headdress. ℞ Eagle on fulmen, head turned back. (<i>Ibid.</i> , p. 198.)
BRONZE II :	Head of Apollo, hair long. ℞ Fulmen. (<i>Ibid.</i> , p. 198.)

The inscription on these coins is always: ΑΛΕΞΑΝΔΡΟΥ

Until now, all these coins except the didrachm have been considered as the first issue of Alexander's reign, and as belonging to that well known tetradrachm, of *Phœnician* weight, having a head of Zeus on the obverse, and an eagle like the above on the reverse.⁵ But these fractions we must now

⁴ *Revue Numismatique*, 4th Series, XI: 1-39. Paris, (1907.)

⁵ Imhoof-Blumer, *Monnaies Grecques* (1883), pp. 118 ff., Nos. 19-46. Head, *Historia Numorum*, 1887, p. 198.

place with the regular series of Alexander tetradrachms (those of type I to XXXV as catalogued and described above). For, to begin with, these small coins have symbols identical with those found on the larger denomination; their style also agrees in every particular with, and follows the changes of, the styles of this particular series of tetradrachms. Their weight, too, is *Attic*, the same as the regular tetradrachms, while that of the coin with which they have usually been associated is *Phœnician*.⁶ Though as yet the small denominations, being quite rare, have furnished only thirteen out of the thirty-five symbols found on the tetradrachms type I to XXXV, still there is not a symbol that does not occur on the larger coins, and beyond a doubt there are coins as yet unpublished, to fill the gaps. Thus we have exact similarity in style, in symbols, and in standard; what more is needed to prove their connection with the tetradrachms, and that, together with these, they were all issued from one and the same mint? There are also a few of these small denominations with the same types but without any symbol. These, I think, we may reasonably attribute to the opening years of our tetradrachm series — or, in other words, to parallel types I to VI, whose magistrates' symbols, so far as I can discover, do not occur on any of the small coins.

Type No. (tetdr.)	Denomination.	Reverse type.	Symbol.	Location.
I to VI	DRACHM	EAGLE.	NONE.	
I to VI	HEMIDRACHM	EAGLE.	NONE.	
I to VI	DIOBOL	TWO EAGLES.	NONE.	
I to VI	OBOL	FULMEN.	NONE.	
VIII	OBOL	FULMEN.	WREATH.	Paris.
VIII	BRONZE I	EAGLE.	WREATH.	E. T. N.
VIII	BRONZE II	FULMEN.	WREATH.	Imh.-Bl., E. T. N.
X	DIOBOL	TWO EAGLES.	IVY LEAF.	B. M., Paris, Plate VII, 8.
X	OBOL	FULMEN.	IVY LEAF.	B. M.
X	BRONZE I	EAGLE.	IVY LEAF.	B. M., Paris, E. T. N.
XI	OBOL	FULMEN.	BUNCH OF GRAPES.	Imh.-Bl.
XII	DRACHM	EAGLE.	KERYKEION.	B. M.
XII	HEMIDRACHM	EAGLE.	KERYKEION.	B. M., Paris, Plate VII, 6.
XV	DIDRACHM	ZEUS SEATED.	{ FOREPART OF PEGASUS.	{ Plate VII, 1.
XV	OBOL	FULMEN.	{ FOREPART OF PEGASUS.	{ Imh.-Bl.
XVI	DIDRACHM	ZEUS SEATED.	EAR OF WHEAT.	Warren Coll.
XVI	HEMIDRACHM	EAGLE.	EAR OF WHEAT.	B. M., Plate VII, 7.
XVIII	DRACHM	EAGLE.	EAGLE'S HEAD.	Imh.-Bl.

⁶ This coin has recently been attributed by Sir B. V. Head, with great probability, to some Eastern mint, possibly in India. *Num. Chron.* (1906), 4th Ser., Vol. VI. Therefore the small coins have nothing to do with this.

REATTRIBUTION OF CERTAIN TETRADRACHMS






Type No. (tetdr.)	Denomination.	Reverse type.	Symbol.	Location.
XX	HEMIDRACHM	EAGLE.	{ KERVKEION AND MONOGRAM.	E. T. N., Plate VII, 3.
XXIV	DRACHM	EAGLE.	HORSE'S HEAD.	Plate VII, 2.
XXVIII	DIDRACHM	ZEUS SEATED.	COCK.	Weber Sale 1908.
XXIX	HEMIDRACHM	EAGLE.	CRESCENT.	Imh.-Bl.
XXIX	BRONZE I	EAGLE.	CRESCENT.	Ihm.-Bl., E. T. N.
XXXI	DRACHM	EAGLE.	MONOGRAM.	Paris, Plate VII, 4.
XXXIII	DRACHM	EAGLE.	BUCRANIUM.	{ Rhousopoulos Sale 1905, Plate VII, 5.
XXXIII	DIOBOL	TWO EAGLES.	BUCRANIUM.	B. M.
XXXIV	HEMIDRACHM	EAGLE.	PENTALPHA.	Imh.-Bl.









Series B. Circa 318-308 B. C.

This series, although a direct continuation of series A, has been separated from it on account of a change introduced soon after its commencement. This change consists in the addition of the title $\text{BA}\xi\text{I}\Lambda\text{E}\Omega\xi$ to the name $\text{A}\Lambda\text{E}\Xi\text{AN}\Delta\text{POY}$, which hitherto has been the only inscription.









Type No.	Magistrate's Symbol.	Müller's No.		Plate.	
XXXVI	STAR IN CIRCLE	148		VIII 1	
XXXVII	CORNUCOPIA	368		VIII 2	
XXXVIII	PALLAS PROMACHOS	649		VIII 3	
XXXIX	BOW AND QUIVER	591		VIII 4	
XXXVIII	PALLAS PROMACHOS	649	} Obverses	VIII {	
XXXIX	BOW AND QUIVER	591			identical
XXXVII	CORNUCOPIA	368	} Obverses	VIII {	
XXXIX	BOW AND QUIVER	591			identical
XXXVI	STAR IN CIRCLE	148	} Obverses	VIII {	
XXXVII	CORNUCOPIA	368			identical
XXXIX	BOW AND QUIVER	591			identical
XXXVII	CORNUCOPIA	368		IX 1	
XXXVIII	PALLAS PROMACHOS	649		IX 2	
XXXVIII	PALLAS PROMACHOS	649	} Obverses	IX {	
XXXVIII-a	PALLAS PROMACHOS	650			identical

The following types all have the title ΒΑΣΙΛΕΥΣ added to ΑΛΕΞΑΝΔΡΟΥ.

Type No.	Magistrate's Symbol.	Müller's No.	Plate.
XXXVII-a	CORNUCOPIA	369 } Obverses	IX { 5
XXXIX-a	BOW AND QUIVER	592 } identical	
XXXIX-a	BOW AND QUIVER	591 } Obverses	IX { 7
XL	DOLPHIN	— } identical	
XXXVII-a	CORNUCOPIA	369 } Obverses	IX { 9
XXXIX-a	BOW AND QUIVER	592 } identical	
XXXVII-a	CORNUCOPIA	369 } Obverses	IX { 11
XXXVIII-a	PALLAS PROMACHOS	650 } identical	
XXXVII-a	CORNUCOPIA	369	X 1
XXXVII-a	PALLAS PROMACHOS	650	X 2
XXXIX-a	BOW AND QUIVER	592	X 3
XLI	ANTLER	—	X 4
XLII	MACEDONIAN HELMET	224	X 5
XLIII	PHRYGIAN CAP	854	X 6
XLI	ANTLER	— } Obverses	X { 7
XLII	MACEDONIAN HELMET	224 } identical	
XLI	ANTLER	— } Obverses	X { 9
XLIII	PHRYGIAN CAP	854 } identical	
XLII	MACEDONIAN HELMET	224 } Obverses	XI { 1
XLIII	PHRYGIAN CAP	854 } identical	
XLII	MACEDONIAN HELMET	224 } Obverses	XI { 3
XLIV	TRIDENT	— } identical	
XLI	ANTLER	— } Obverses	XI { 5
XLII	MACEDONIAN HELMET	224 } identical	
XLIII	PHRYGIAN CAP	854	7
XLI	ANTLER	— } Obverses	XI { 8
XLII	MACEDONIAN HELMET	224 } identical	
XLIII	PHRYGIAN CAP	854	10
XLIV	TRIDENT	—	XI 11
XLII	MACEDONIAN HELMET	224 } Obverses	XII { 1
XLV	TRIPOD	146 } identical	
XLVI	MONOGRAM 	862 } Obverses	XII { 3
XLVII	MONOGRAM 	863 } identical	
XLVII	MONOGRAM 	863 } Obverses	XII { 5
XLVIII	MONOGRAM 	860 } identical	
XLVI	MONOGRAM 	862	XII 7

Type No.	Magistrate's Symbol.	Müller's No.	Plate.
XLVIII	MONOGRAM 	860	XII 8
XLV	TRIPOD	146	XII 9
XLVIII	MONOGRAM 	860	XII 10
XLIX-a	LAUREL BRANCH 	560	XII { 11
L-a	EAR OF CORN 	570	
XLIX	LAUREL BRANCH	559	XIII { 1
XLIX-a	LAUREL BRANCH 	560	
L-a	EAR OF CORN 	570	XII { 3
LI-a	CRESCENT 	261	
LII-a	WREATH 	548	No engraving

The inscription, once more, is simply the name ΑΛΕΞΑΝΔΡΟΥ.

LIII	BRANCH 	561	No engraving
LIV	EAR OF CORN 	571	XIII { 5
LV	CRESCENT 	260	
LVI	WREATH 	549	XIII 7
LVII	DOLPHIN 	542	XIII 8
LVIII	BATTLE-AXE 	575	XIII 9
LIX	KAUSIA 	558	XIII 10
LX	AKROSTOLION 	280	XIII 11

(XXXVI *Star in circle*, XXXVII *Cornucopia*, XXXVIII *Pallas Pro-machos*, XXXIX *Bow and quiver*.) These four types form the first group of series B. Though of the four coins illustrated no two happen to have their obverses from the same die, they not only resemble each other very closely, but at the same time are the evident continuations, in style, of types XXXII, XXXIII, XXXIV, and XXXV. An additional bit of evidence for placing these types here presents itself on a close study of the exergual line found on the reverses. Throughout the coins of series A, with only a very few exceptions, the exergue has been represented by a dotted line; — these exceptions, however, occurring most frequently on coins of types XXXIII, XXXIV, and XXXV, where the dotted line at times becomes a plain one. The addition of a foot-stool seems to occur only three times (so far as I have been able to discover) throughout the series; once on a coin of type II, of type XV, and of type XXXIII respectively. But with the commencement of series B great uncertainty seems to have prevailed. Besides dotted or plain lines, we often find no exergual line at all, the feet of Zeus then resting on a foot-stool, or simply on thin air. As the style gradually changes to that exhibited by coins

of types XXXVII-a, XXXVIII-a, XXXIX-a, there is a uniform return to the old type of exergual line, and the dotted line remains supreme to the end of the series. The four varieties are: (a) Dotted line, (b) Plain line, (c) Foot-stool, (d) Nothing at all.

Plate VIII, No. 1 (type XXXVI) shows foot-stool on reverse. Coins of this type I have seen showing varieties a, c, and d.

Plate VIII, No. 2 (type XXXVII) also shows foot-stool on reverse. Of this type there exist coins showing all four varieties.

• Plate VIII, No. 3 (type XXXVIII) foot-stool indicated by short straight line (not to be confounded with an exergual line). I have coins of this type with the dotted, and the straight line, also with the foot-stool, but none with the fourth variety.

Plate VIII, No. 4 (type XXXIX) straight line. Coins exist of all four varieties.

(XXXVIII *Pallas Promachos*, XXXIX *Bow and quiver*.) Obverse dies identical, thus combining these two types with a certainty. The style of the coins in this and the following two groups shows a rapidly advancing change. Pl. VIII: 5 and 6.

(XXXVII *Cornucopia*, XXXIX *Bow and quiver*.) Obverse dies identical. Pl. VIII: 7 and 8.

(XXXVI *Star in circle*, XXXVII *Cornucopia*, XXXIX *Bow and quiver*.) Group of three coins with obverses identical. Pl. VIII: 9, 10 and 11.

(XXXVII *Cornucopia*, XXXVIII *Pallas Promachos*.) The style of these two coins presents a transitional stage between that of the pieces illustrated on Plate VIII: 7 and 8, and the following coins. By combining the above four groups we see that the four types XXXVI-XXXIX must belong together. Pl. IX: 1 and 2.

(XXXVIII *Pallas Promachos*, XXXVIII-a *Pallas Promachos*.) Obverse dies identical, — two very important coins, as they show that the series with the title $\text{BA}\xi\text{I}\Lambda\text{E}\Omega\xi$ must have been the direct continuation of the series having the same symbols in the field, but with only the simple $\text{A}\Lambda\text{E}\Xi\text{AN}\Delta\text{POY}$ legend. Pl. IX: 3 and 4.

(XXXVII-a *Cornucopia*, XXXIX-a *Bow and quiver*.) Obverse dies identical. The inscription on both these coins runs $\text{A}\Lambda\text{E}\Xi\text{AN}\Delta\text{POY BA}\xi\text{I}\Lambda\text{E}\Omega\xi$ in continuous legend. On coins of this particular style (Pl. IX: 5 to 12) the legends all have the name $\text{A}\Lambda\text{E}\Xi\text{AN}\Delta\text{POY}$ coming first, and are either continuous, or are broken in the $\text{A}\Lambda\text{E}\Xi\text{AN}\Delta\text{POY}$. Pl. IX: 5 and 6.

(XXXIX-a *Bow and quiver*, XL *Dolphin*.) Obverse dies identical. Inscription: $\text{A}\Lambda\text{E}\Xi\text{AN}\Delta\text{POYBA}\xi\text{I}\Lambda\text{E}\Omega\xi$. Pl. IX: 7 and 8.

(XXXVII-a *Cornucopia*, XXXIX-a *Bow and quiver*.) Obverses from identical dies. Inscription: As the preceding. Pl. IX: 9 and 10.

(XXXVII-a *Cornucopia*, XXXVIII-a *Pallas Promachos*.) Obverses from identical dies. Inscription: As preceding. By combining these four groups we see that types XXXVII-a to XL must have been contemporaneous and, likewise, the continuations of types XXXVI-XXXIX. The magistrate signing himself *Star in circle* (type XXXVI) seems to have dropped out about the time when the title ΒΑΣΙΛΕΥΣ began to appear on the coins, his place being taken by the magistrate signing *Dolphin* (type XL); at least coins of type XXXVI with ΒΑΣΙΛΕΥΣ, and coins of type XL without ΒΑΣΙΛΕΥΣ, are totally unknown to me. Pl. IX: 11 and 12.

(XXXVII-a *Cornucopia*, XXXVIII-a *Pallas Promachos*, XXXIX-a *Bow and quiver*.) Though the obverses are not absolutely identical, they all exhibit the third and last style found on coins of types XXXVII to XL. From great carelessness of execution the style has gradually developed into one of extreme nicety and dryness. The effect, however, is much less pleasing. The coins of this style must have been the last struck under the four magistrates of types XXXVII-a to XL, as they correspond exactly to the coins beginning the next group. The legend now reads ΒΑΣΙΛΕΥΣ ΑΛΕΞΑΝΔΡΟΥ, the ΒΑΣΙΛΕΥΣ being entirely to the left of the type, and the ΑΛΕΞΑΝΔΡΟΥ to the right. The individual letters, also, are very carefully and neatly executed. Pl. X: 1, 2 and 3.

(XLI *Antler*, XLII *Macedonian helmet*, XLIII *Phrygian cap*.) These coins are in style and execution identical with the preceding, and form the first issues of the new set of magistrates. Obverses not from one die. Inscription: ΒΑΣΙΛΕΥΣ ΑΛΕΞΑΝΔΡΟΥ. Pl. X: 4, 5 and 6.

(XLI *Antler*, XLII *Macedonian helmet*.) Obverse dies identical. Inscription: As the preceding. Pl. X: 7 and 8.




(XLI *Antler*, XLIII *Phrygian cap*.) Obverses from identical dies. Inscription: As the preceding. Pl. X: 9 and 10.



(XLII *Macedonian helmet*, XLIII *Phrygian cap*.) Obverse dies identical. Pl. XI: 1 and 2.



(XLII *Macedonian helmet*, XLIV *Trident*.) Obverses from same die. In the combination of the last four groups we see the proof that the four magistrates signing *Antler*, *Macedonian helmet*, *Phrygian cap*, and *Trident*, were contemporaneous. The style of these coins shows a very gradual transition from that of Nos 4, 5 and 6, Plate X, and approaches that of the following two groups. Pl. XI: 3 and 4.



(XLI *Antler*, XLII *Macedonian helmet*, XLIII *Phrygian cap*.) A group of three with their obverses all from one die. A slight development of the style is noticeable. Pl. XI: 4, 5 and 6.


(XLI *Antler*, XLII *Macedonian helmet*, XLIII *Phrygian cap*.) Another group of three coins with obverse die identical. To this group we may add: — (XLIV *Trident*.) Obverse die of this coin is very similar to the die employed in the foregoing, and was doubtless cut and used at the same period. The style of these last seven coins is now approaching closely that shown under the next group of magistrates. Pl. XI: 7, 8, 9 and 10.

(XLII *Macedonian helmet*, XLV *Tripod*.) Obverses identical. The magistrate signing *Tripod* was more probably a colleague of the magistrates who issued the next three types (namely XLVI , XLVII , XLVIII ). The general appearance and technique of his coins leads me to this conjecture. The fact that we have a concordance with type XLII (*Macedonian helmet*) may mean, simply, that obverse dies cut under previous magistrates were not destroyed at the end of their terms, but continued in use under succeeding magistrates until worn out, or until new ones could be made. It was more important to have new *reverse* dies made at once, bearing the symbols of the new magistrates. Pl. XII: 1 and 2.

(XLVI monogram: , XLVII monogram: ) Obverses identical. Pl. XII: 3 and 4.

(XLVII monogram: , XLVIII monogram: ) Obverses identical. Pl. XII: 5 and 6.

(XLVI monogram: , XLVIII monogram: ) Obverse dies very similar. When taken together with the previous two groups we see that the three types XLVI-XLVIII must belong together. Pl. XII: 7 and 8.

(XLV *Tripod*, XLVIII monogram: ) On these two coins the features of Herakles are peculiarly forbidding and unpleasant, showing a remarkable resemblance to the head found on the coins in the following group. The same artist probably cut the dies. Pl. XII: 9 and 10.

(XLIX-a *Laurel branch* and Γ , L-a *Ear of wheat* and Γ .) Obverse dies the same. A letter, Γ , in addition to the symbol, now appears on the reverse. This may simply mean that some superior official signed the dies as a mark of control over the lower officials whose symbols we see in the field. I prefer, however, to consider this as a *mint* mark, indicating the city where our coins were struck, and so to distinguish them from the coins, of somewhat similar style, struck in other cities of Macedonia and Thrace. This same system was followed at the Aradus and Sidon mints. Pl. XII: 11 and 12.

XLIX *Laurel branch*, XLIX-a *Laurel branch* and Γ .) Obverse dies identical. The first of these two coins is interesting as furnishing a link with previous types; for here the Γ has not yet appeared beneath the throne — the symbol alone is seen in the field. Müller publishes a corresponding tetradrachm signed *Ear of wheat* without the Γ — this would be type L. Pl. XIII: 1 and 2.

(XLIX-a *Laurel branch* and Γ , LI-a *Crescent* and Γ .) Obverse dies identical. Thus we are given three magistrates officiating at this time. The fourth signed himself *Wreath* and Γ , and so type LII-a. But of this coin I have seen only one specimen, and that too poor to illustrate. Müller publishes this coin under his No. 548. Pl. XIII, 3 and 4.

(LIII *Laurel branch* and Γ .) With this issue the title ΒΑΣΙΛΕΥΣ is omitted and once more we find ΑΛΕΞΑΝΔΡΟΥ the only inscription. I do not think there can be any doubt that this and the following coins form two or more issues, struck in our mint and successive to the types described just above. These coins are somewhat crude in appearance, but we have seen how the style has been continually deteriorating, and so these are but a fitting conclusion to the entire series which we have been studying. The actual proof of the sequence, however, I see in the appearance of the letter Γ , first on the four types XLIX-a to LII-a signed *Laurel branch*, *Ear of wheat*, *Crescent*, and *Wreath*; then the appearance of this as Γ on the coins signed similarly *Laurel branch*, *Ear of wheat*, *Crescent*, and *Wreath* — but this time without the title ΒΑΣΙΛΕΥΣ (Müller, Nos. 561, 571, 260, 549). No engraving.

(LIV *Ear of wheat* and Γ , LV *Crescent* and Γ .) Obverses identical. As the entire series bearing Γ and symbol (types LIII to LX) was absent from the "Demanhur" find, the number of these coins that I have been able to study is few. I can therefore give only this pair that show obverses from one die. But doubtless the entire Γ series originally came from one mint, as not only our studies and experiences with their predecessors, but also the similarity of style found on all, would lead us to surmise. Pl. XIII: 5 and 6.

(LVI *Wreath* and Γ .) As shown by type LII-a this coin presents us with the symbol of the colleague of the three magistrates indicated above. Pl. XIII: 7.

The second group of the Γ series includes the following:

(LVII *Dolphin*, LVIII *Battle-axe*, LIX *Kausia*, and LX *Akrostolion*) all with Γ under the throne. Pl. XIII: 8, 9, 10 and 11.

To these may be added, as a third group, Müller, Nos. 142 (*Club* and Γ), 439 (*Helmet* and Γ), and 757 (*Wing* and Γ); but as I have seen no specimens of these coins I simply suggest the probability of their belonging here.

With these last issues the exceptional activity of our mint seems, for a time, to have practically ceased and its place to have been taken by another Macedonian mint which about this time began to issue an abundant series of Alexander tetradrachms signed in the field of the reverse with RACE-TORCH and Λ, together with various monograms or symbols beneath the throne (Müller, Nos. 32 *et seq.*).

CONTEMPORARY ISSUES OF PHILIP'S COINS.

As indicated in our list, among the types which seem to have introduced the Alexander series of Macedon were those distinguished by the symbols: *Prow* (I), *Double-head* (III), and *Stern* (V). This attribution — aside from the internal evidences presented by the coins themselves — is strongly corroborated by the fact that among the tetradrachms of Philip II we find a parallel series of coins bearing these three symbols. The reverses (youthful horseman type) and the rather late style of these coins all point to the end of Philip's reign, and I would therefore recognize in them what most probably constituted the last issue of Philip's coins struck in our mint before the introduction of Alexander's own types and standard. The connection between these two series of coins is evident, and seems to show that the three magistrates who sign themselves *Prow*, *Double-head*, *Stern*, continued after Philip's death to issue the old coinage until the change of standard and types under Alexander had been decided upon and carried into effect, whereupon they commenced striking the new series and continued doing so until the expiration of their term of office. Whether from now on, at our mint, Philip's coins continued to be struck conjointly with Alexander's, can only be asserted when the former have been extensively collected and thoroughly studied. It seems to the present writer, however, that at this point (*circa* 336–334 B. C.) they were discontinued in favor of the Alexander coinage, and that it was not until the appearance of types XLIX to LX (*circa* 312–308 B. C.) that we find an undoubted reissue of the Philip tetradrachms. When we compare the late-style Philip coins as shown on Plate XIV, Nos. 4 to 6, with the Alexanders on Plate XIII, Nos. 5 to 12, we see an identical series of symbols, together with the letter Π or Π, appearing on both categories of coins.

As we have inevitably been led by the sequence and progression of styles, by the identity of obverse dies, by the mint marks, and by the evidence of finds,⁷ to place types XLIX to LX at this point in our series of Alexander coins, the contemporary coins must therefore have been struck some twenty-five years after the death of the monarch whose name they bear. The possibility of there having been a posthumous reissue of Philip's coins has, in fact,

⁷ To be discussed later.

been suggested by Svoronos and other numismatists; and is now clearly confirmed by the sequence of the Alexander coinage as issued from the common mint.⁸ To me there seems nothing strange in this revival of Philip's silver coins. From the countless hoards of their imitations continually unearthed in France, Germany, Austria, and especially Hungary and the Balkan States, we see how popular the prototypes must have been among the Barbarians of the North. For, from the time when they were first issued, Philip's gold staters and silver tetradrachms seem to have immediately "taken" with the Barbarians, and indeed became so firmly established that Alexander's coinage was never able to displace them to any great extent.⁹ However, with the Greeks Alexander's coins found instant acceptance, and these soon replaced his father's issues in most of the lands ruled by himself and his successors. It is therefore but natural that the Macedonian mint, situated as it was in direct trade communication with the North, as well as with the South and East, should have found it necessary to strike contemporaneously two categories of coins—both essential—in view of the divergent requirements of this trade.

The following is a list of the Aeginetan tetradrachms bearing Philip's types which were contemporaneous with Alexander's issues. The first column gives the type numbers of Alexander's tetradrachms, as already explained; the second, the magistrate's symbol; the third, their numbers in Müller, *Numismatique d'Alexandre le Grand*, and the fourth, the numbers of the corresponding Philip tetradrachms in Müller, Appendix, *Les Monnaies de Philip II*.

Struck about 336 B. C.

Corresponding Type of Alexander's issues.	Symbol.	Müller's No.	Müller's Appendix.	Plate.	
I	PROW	503	187	XIV	1
III	DOUBLE-HEAD	853	269	XIV	2
V	STERN	758	210	XIV	3

Struck after 311 B. C.

XLIX-a	LAUREL BRANCH ⌈	560	242	—	
L-a	EAR OF CORN ⌈	570	246	XIV	4
LI-a	CRESCENT ⌈	261	150	XIV	5
LII-a	WREATH ⌈	548	219	—	
LIII	BRANCH ⌈	560	—	XIV	6
LIV	EAR OF CORN ⌈	571	—	—	

⁸ For another theory concerning these Philip coins see: Dr. K. Regling, "Die Griechischen Münzen der Sammlung Warren," Berlin, 1906, page 104. But written as this was before the great Egyptian find could throw light on a correct sequence of the Alexander coinage, his theory is hardly tenable now.

⁹ At a very conservative estimate the imitations of Philip's coins found in the above mentioned hoards outnumber the imitations of Alexander's coins one hundred to one—showing the far greater popularity of the former over the latter.

Corresponding Type of Alexander's issues.	Symbol.	Müller's No.	Müller's Appendix.	Plate.
LV	CRESCENT ☾	260	151	XIV 7
LVI	WREATH ☐	549	218	XIV 8
LVII	DOLPHIN ☐	542	213	XIV 9
LVIII	BATTLE-AXE ☐	575	251	—
LIX	KAUSIA ☐	558	236	—
LX	AKROSTOLION ☐	280	155	XIV 10 ¹⁰

RECENT ADDITIONS.

Every new consignment of casts or of actual coins which reaches me from Europe, without exception, brings new additions to our list of pieces belonging to the Alexander series under discussion. The didrachms reproduced on Plate XV add four more of this denomination to our list of fractional coins struck contemporaneously with the tetradrachms.

Type No. (tetr.)	Denomination.	Symbol.	Location.	Plate.
XIII	Didrachm	QUIVER	Berlin	XV 1
XVII	Didrachm	BOW	E. T. N.	XV 2
XIX	Didrachm	CLUB AND MONOGRAM	Berlin	XV 3
XX	Didrachm	KERYKEION AND MONOGRAM	Berlin	XV 4

Casts Nos. 1, 3, and 4 were generously sent me by the authorities of the Berlin Museum. I here wish to express my grateful acknowledgment of their aid and kindly interest in my behalf.

On Plate XV are also represented a few tetradrachms, of special interest and value to the present study, which have recently been brought to my notice. Not only do they give new combinations of types, but in Nos. 9 and 10, 11 and 12, we have the certain proofs that the two types, XXV *Dolphin*, and XXVI *Akrostolion*, belong to our series. I have already so attributed them¹¹ on account of style alone; we now have specimens whose obverses were struck from dies used for other coins undoubtedly of our series.

Type No.	Magistrate's Symbol.	Müller's No.	Plate.
II	FULMEN	3	XV { 5 6
III	DOUBLE HEAD	853	
VII	KANTHAROS	194	XV { 7 8
X	IVY LEAF	244	
XXI	MACEDONIAN SHIELD	var. 223	XV { 9 10
XXV	DOLPHIN	539	
XXIII	STAR	—	XV { 11 12 ¹²
XXVI	AKROSTOLION	281	

¹⁰ The majority of the reproductions are from casts kindly supplied me by the authorities of the British Museum. I take great pleasure in thanking them for their kindness in so generously helping the advancement of this work.

¹¹ See page 10.

¹² Nos. 5, 6, 7, 8, 9, and 11 are from coins in my own collection; Nos. 10 and 12 are from casts sent me by the Berlin Museum.

THE MINT.

After what may have seemed a tedious, though none the less necessary, catalogue and exposition of types, identical dies, similar styles, etc., the first and all-important question to settle is the location of the mint where these pieces were struck. What mint could have produced a series so evidently important, containing such a variety of denominations in silver and bronze, so unbroken in the regular and continued sequence of its coins, which, in their turn, present such a remarkable homogeneity in general appearance, such a steady gradation in style from those struck at the beginning of Alexander's reign, down through the many succeeding issues, to the last, as pictured on Plate XV? We can only conceive of such a series as being the output of some large and well-regulated mint, supervised by responsible magistrates succeeding each other at stated periods, the work of die-cutters employed there for many years, whose individual styles can be traced in all their changes;¹³ in other words, this coinage can only be the product of a *Royal* mint and, as such, was intended to supply the needs of an empire rather than those of a province.

In our study of the great Egyptian hoard we shall see how during the years from 330 to 310 B. C., the circulating medium of Alexander's dominions in Asia Minor, Syria, Mesopotamia, Babylonia, and Egypt was amply provided for by the immense quantities of coins issued from mints in Cilicia,¹⁴ from Arados,¹⁵ Sidon,¹⁶ Ake,¹⁷ Damascus,¹⁸ Babylon,¹⁹ and Egyptian Alexandria.²⁰ We may follow Müller then, in attributing our coins to the western portion of Alexander's dominions — a conclusion to which we are inevitably forced when we consider that Macedonia, Thrace, and the adjoining provinces are otherwise left without a coinage commensurate to their importance. In fact our series is one of the only four important *groups* of Alexander tetradrachms struck anterior to *circa* 317 B. C., while the Empire was still a unit and administered as such; the other three groups being the Cilician, Phoenician (Arados, Sidon, Ake, Damascus, etc.), and the Babylonian.

Fortunately the corroborations of this attribution to Macedonia and the West are convincing. To begin with, we have seen how coins, dating from the end of Philip's reign, bear the same three mint symbols as our Alexander

¹³ The limits of the present article forbid my going into this particular point more closely, as it would necessitate many plates containing hundreds of reproductions of coins, in order to show clearly how there must have been many die-sinkers working at one time in the mint, and how their individual styles advanced, degenerated, or became modified by the influence of each other's work.

¹⁴ Müller, *Num. d'Alexandre le Grand*, Nos. 1279-80, 1282-94, 1298, 1300-02, 1319-20, 1337.

¹⁵ *Idem*, 1360-64, 1368, 1370, 1375.

¹⁶ *Idem*, 1379, 1407-08, 1410-11.

¹⁷ *Idem*, 1427, 1431-36.

¹⁸ *Idem*, 1338-46.

¹⁹ *Idem*, 667, 671, 678-708 as attributed by Imhoof-Blumer.

²⁰ *Idem*, 7, 9, 10, 601, 1517 as attributed by Svoronos. To all these numbers, in the light of recent research, will have to be added many coins either entirely unpublished by Müller and Prokesch-Osten or wrongly attributed by them to other districts.

tetradrachms of types I, III, and V. The Philip tetradrachms, being simply continuations of the coins issued by this monarch, could not possibly have been struck in any other district than Thessaly, Macedonia, or Thrace, the sole districts ruled over by Philip where it is at all likely that he struck coins. The later and posthumous Philip tetradrachms, running parallel to types XLIX-LX, would also, most probably, have been struck in regions where people had in previous years become accustomed to such coins, and, above all, whence the trade routes ran to the Barbarians for whose especial use these particular coins seem to have been issued.

Again, if we have to be very careful how we draw deductions from find-spots of the Alexander tetradrachms, owing to their exceptionally wide diffusion throughout the ancient world, the case is very different when we come to the small denominations which were only intended for local use, and hence are seldom found outside the actual districts in which they were struck and in which they were consequently current. When therefore we learn that these fractional pieces (Obv., Head of Herakles; Rev., Eagle or two eagles) which bear symbols identical with those on the tetradrachms and so, as indicated above, struck in the same mint as these, are usually found in Macedonia,²¹ we must place the common mint in just this district.

The large Greek cities of Asia Minor undoubtedly struck their autonomous coins until after Alexander's death; Hellas too enjoyed its nominal freedom, and together with Thessaly and Thrace, which were merely subsidiary provinces, need not be taken into consideration when we are looking for the location of a Royal mint. Such an important mint can conceivably only have been situated in some great commercial centre, strategical point, or seat of government,—and so we are limited to certain cities in Emathia, Mygdonia, and the country eastward to the Thracian borders. These lands constituted the heart of Macedonia, the seat of its government, its people, and its treasures—while the rest were mountainous districts or outlying provinces.

Of all the cities which once lay within these limits Pella and Amphipolis are the only ones that can in any way claim the possession of a mint such as ours must once have been. Pydna, though strategically important, was only a second-rate city, and was neither central nor especially strong. Aegae, until Philip moved his seat of government to Pella, had been the capital of the Macedonian kings, and ever remained their burial place. But in the meanwhile Aegae too had sunk to secondary importance, and as it was situated well inland it could not have been the location of our mint. For when

²¹ *Revue Numismatique*, 4th Series, XI, 1907, p. 32, note. "... Mais les drachms aux types de la tête imberbe d'Héracles et au revers de l'aigle, ainsi que les bronzes correspondant, ont bien été frappés en Macedoine; le Cabinet des Médailles possède quatorze

pièces de cette série d'argent et de bronze et la plupart de ces exemplaires ont été acquis de Cousinéry qui fut consul de France à Salonique et les avait recueillis dans cette ville et aux environs."—E. Babelon.

we look closely at the symbols on our coins we find that, out of a total of forty-one different objects, eight refer *directly* to the sea; *Prow* (I), *Rudder* (IV), *Stern* (V), *Stylis* (VI-a), *Trident* (XIV and XLIV), *Cockle-shell* (XXXV), *Dolphin* (XXV and LVII), *Akrostolion* (XXVI and LX).²² It is difficult to conceive that such a large percentage of magistrates, if they lived inland, would choose as their private symbols objects so closely connected with the sea. This also eliminates the only other possible cities — Berrhoea and Philippi (Crenides).

Pella presents us with quite another case. Naturally an exceedingly strong city, built on hills partly surrounded by a marshy lake, strategically and commercially important because situated in the maritime province of Macedonia, accessible to ships from the sea by the river Lydias, and the meeting-place of roads from Greece through Pydna, from the west through Aegae and Berrhoea, from the north along the valley of the Axios, and from the east through Amphipolis and Therma, Pella flourished exceedingly under Philip's patronage and became the seat of his government and his residence. During Alexander's absence in Asia, Antipater, as regent of Hellas and the West, resided in Pella, which therefore became the administrative centre of all the lands west of the Hellespont. Under Cassander, Pella still remained the capital, but lapsed for a time into secondary importance owing to the foundation and patronage, by this king, of Thessalonike and Cassandreia. If we also suppose that Cassander transferred his mint to one, or both, of these cities, we could explain why our series seems to come to such an abrupt end about 308 B. C. But under the later Macedonian kings Pella again came into favor as a royal metropolis, and Livy relates²³ how the royal treasure was kept in the arx or fortress of this city. Pella, therefore, fills all the requirements for the location of a Royal mint. To this we may add the fact that near by, and very accessible to it, were situated the rich *silver* mines of Lete, whence in the early days a large series of coins had been issued by the natives.

Amphipolis, however, must also be taken into consideration, as it presents a very strong case. From the time when first colonized by Athenian Κληροῦχοι, it had flourished and grown into a large and opulent city, the "jewel of the Athenian crown." Most favorably situated near the sea, with many great roads leading into it from all directions,²⁴ it was, like Pella, of the very first importance commercially and strategically speaking. Moreover — and this touches us closely — it was in the centre of the silver-bearing district of Macedonia. To the south-west were the silver mines about Stagei-

²² The symbol of type XV may represent the forepart of a sea-monster instead of a Pegasus — as described; the finlike addition to the extremity of the body seems to indicate this. We would then have nine marine symbols.

²³ Livy: XLIV, 46.

²⁴ Under the Edonians Amphipolis was known as "Ενεα ὁδοί," the "Nine Ways," — the name by which it was called when Xerxes invaded Greece. See Herodotus, VII: 114.

ros in the Chalcidice,²⁵ to the north and north-east the silver mines of Bisaltia and the mines about Philippi, while the city itself was built on the very slopes of Mt. Pangaeos — wonderfully rich both in gold and silver ore. Undoubtedly Philip established a mint here, which continued to operate under Alexander and his successors — but were our particular coins struck here?

Few will probably deny that under Philip II there must have been a Royal mint at Pella, his capital and favorite residence, and that this mint continued to operate under Alexander and his immediate successors — for Pella still remained the capital of Macedonia and the governmental centre of the Western dominions. Our series is certainly the only large and consecutive group of Alexander coins struck in the West before 310 B. C.; we would therefore prefer to attribute it to Pella, which is evidently the most fitting location for a mint which issued a series of coins of such a character as ours proves to be. Again, on all the coins of the later issues, from types XLIX-a to LX, we find, *in addition* to the magistrate's symbol, ϩ or ϫ, which I take to be the "mint mark," that is, the distinctive mark of the Pella mint in contradistinction to the symbol in the field which merely served to indicate the magistrate. Indications would therefore seem to point to Pella as the location of our mint, and it seems best to accept this attribution — at least until more positive evidence to the contrary turns up.

THE DATES.

Since the fractional currency of the "eagle" type is now seen²⁶ to be merely an accessory to our series of tetradrachms, and was struck in conjunction with these until *circa* 318 B. C., we conclude that the Attic tetradrachms of Alexander followed *directly* on the Aeginetan tetradrachms of Philip; otherwise there would be a gap between these two series which hitherto the small coins had been made to fill.²⁷ This direct sequence is also indicated by the fact that we have tetradrachms of both Philip and Alexander (Types I, III, V) struck under the same three magistrates under whom the former were evidently discontinued in favor of the latter. At what date was this change of standard and of types put into effect?

Numismatists seem to be reluctant to admit that Alexander, on his accession, found the time and opportunity *immediately* to supplant his father's coinage by his own. No tetradrachms (always excepting that much discussed eagle tetradrachm, now believed to have been struck in India)²⁸ bearing his own particular types, but of Aeginetan weight, are known to exist. The standard and type must therefore have been changed at one and the same

²⁵ Leake; *Travels in Northern Greece*, Vol. III.

²⁶ See pages 12 *et seq.*, and Plate VII, 2-8.

²⁷ Imhoof-Blumer, *Monnaies grecques*, Paris, 1883.

²⁸ Head, *Num. Chron.*, 1906, 1 *et seq.*; also *Historia Numorum*, 2d Ed.

time, and this has seemed too important and far-reaching a reform to have taken place in the first few troubled years of the young king's reign. Numismatists have explained this difficulty by supposing that during these years Alexander simply continued, even until after his invasion of Asia, to issue coins identical with his father's.²⁹ But is there after all so great a difficulty? The places where Philip's principal (if not sole) mints were located — Pella, Amphipolis, and Philippi, — were all situated in districts which immediately acknowledged Alexander as king. In other words, neither revolt nor disturbed conditions prevented these mints from quietly continuing to issue the money demanded by Philip's plans and Alexander's ambitions. Here were great mints with their complement of regular magistrates, trained die-cutters, and skilled workmen; fully equipped and undoubtedly working to their utmost capacity at the time of Philip's death, — for was he not on the very eve of his projected invasion of the Persian dominions? The death of such a man at such a time might well have paralyzed the country, but history shows that Alexander proved himself equal to the occasion.

Now the question is: Would a change of type on both the gold and silver coinage, and a change of standard in the silver alone, have been too great and sudden a reform to have been introduced at such a critical and feverishly active period of Alexander's life as that which followed his father's murder? His greatest need now was a devoted army — and this his wonderful personality and a liberal pay would easily secure. The latter had heretofore been reckoned and paid in Philip's gold staters.³⁰ If Alexander changed their type³¹ he certainly did not change their *weight*, and this important point, together with the peculiarly appealing nature of the new types chosen, would insure as wide a circulation among Greek peoples as Philip's famous coins had ever enjoyed.

As in the types of the new gold coinage, so too in those of the silver, Alexander proclaimed himself the leader of the Hellenic world against the Persians.³² Since the use of silver would, for a time at least, be greatest among the Macedonian population, the types were chosen with special regard to them, for on the obverse we see the head of Herakles, who was revered as the divine ancestor of the royal house of Macedon; on the reverse we see Zeus of Bottiaea, who had a famous temple at Pella and was honored throughout Macedonia. But the great wisdom of the choice of these types lay in the fact that they would appeal equally strongly to all the rest of the Greeks. In Herakles would be recognized the great national hero of the

²⁹ *Ibid.*, pp. 224 and 225.

³⁰ E. Babelon, *Rev. Num.*, 4th Series, XI (1907) : p. 31.

³¹ *Idem*, p. 32 *et seq.*, where M. Babelon dates the introduction of the new gold types as in the year 335 B. C., after the Council of Corinth.

³² *Idem*.

Hellenic race; in Zeus *the god par excellence* of the Greek people, Zeus Hellenicos, the "Father and King of gods and men." Thus the types on both gold and silver were national and most appropriate to the claims and aspirations of Alexander the Great. So far as the new types are concerned, therefore, he had little to fear from an early and radical change.

It would seem reasonable to suppose that the issue of these new gold and silver coins would occur early in his reign, in order not to long delay the proclamation, by the appearance of his name and his own particular types upon the national coinage, of his accession to the Macedonian throne: for Alexander was not Philip's *fainéant* descendant. From the very first as history teaches us, he relied solely on his own abilities rather than any prestige he might have inherited from his father. In other words he had no need of a policy such as his immediate successors pursued in continuing the types of their predecessor's coinage, to guarantee their own and to support their claims to the Empire.

The next point is the sudden change in the standard used for the silver coins. Here, in support of my view that Alexander must have introduced his coinage very soon after his accession, I can not do better than to quote from Dr. Head,³³ though I fear I differ with him slightly as to the actual date of this introduction. He says:—

The general depreciation of gold made it no doubt impossible for him [Alexander] to maintain, by royal decree, the old relation of 13.3 : 1 to silver which had prevailed in the East down to the fall of the Persian empire, according to which 1 gold daric of about 130 grs. was tariffed as equivalent to 20 silver sigloi of about 86½ grs., or to 10 silver staters of Persic weight, of about 173 grs. The inveterate conservatism of the East, which could brook no change in the number of silver coins exchangeable for a gold piece, would not however be startled by a modification of the weights of the two denominations. The duodecimal exchange system of Philip's coinage, which might have satisfied the European portion of Alexander's empire, where gold had always been subject to variations in its market price, being thus unsuitable for countries where a fixed legal exchange rate had been established for centuries, it became necessary to substitute for it a decimal coinage which would satisfy both East and West. Alexander's choice of the Attic standard for both gold and silver met every requirement, and was, at the same time, in harmony with the existing relation (10 : 1) of the two metals.

There is no doubt that Philip's financial institutions, so wisely conceived, had been a great factor in upbuilding the Macedonian power. But his coinage system had by this time outlived its apparent usefulness, and, knowing Philip's character, his statesmanship, his clearness of foresight, his astuteness, we might well be surprised that he could not perceive its inadequacy

³³ *Historia Numorum*, 2d Ed., pp. 224, 225.

to the needs of a Europaeo-Asiatic empire such as he planned to form.³⁴ To one of Philip's ability, contemplating such a rule, the need of a system which would be acceptable to European Greeks, Asiatic Greeks, and the people further East, must have been plainly apparent. The choice of the Attic standard for the silver, while the gold remained as before, was a plan as simple as it was wise, and worthy of such a financier as Philip undoubtedly was. Shall we believe that he was totally blind to the deficiencies of the old system in the face of new conditions? Is it not conceivable that he may have planned some such reform, only to have it interrupted by his untimely death, and so, instead, left its completion to his great successor? Be that as it may, Alexander, who in other things often followed the direction his father's policy pointed out, introduced his well-known silver coins at his accession to the Macedonian throne. To those who find it difficult to believe that the youthful ruler could have had the leisure as well as the statesmanship, in the first few years of his reign, to plan and carry out such an important monetary reform, simple though it was, may not the suggestion that the reform possibly originated in greater or less degree with the experienced and clear-sighted Philip, be more acceptable? It would not then demand in Alexander too much precocious ability if he merely put his father's plans into effect; neither would the choice of such obvious types as were eventually used for the silver long delay him; and even if he were busily engaged in distant campaigns, a thoroughly equipped mint, situated at the capital, Pella, could well issue the coinage in his absence. Of all this there is naturally no actual proof; as outlined, it is merely a suggestion to explain certain facts, and is only intended as such.

Throughout Series A the issues of the various groups of magistrates follow each other in a rather monotonous sequence, and present nothing on the individual coins that we can attribute to the possible influence of some passing historical event which would enable us to date them with accuracy. It is not until we come to the group consisting of types XXXVII to XXXIX-a that our coins give us any clue whatever to the years of their actual issue. At this point, during the term of office of the three magistrates signing themselves *Cornucopia*, *Pallas Promachos*, *Bow and quiver*, the simple legend ΑΛΕΞΑΝΔΡΟΥ is suddenly changed to ΑΛΕΞΑΝΔΡΟΥ ΒΑΣΙΛΕΩΣ³⁵ and this title henceforth remains on our coins until we come to types LIII and following, when the legend again reverts to the old style.

³⁴ In Philip's mind there was probably no thought of an empire such as Alexander eventually formed, but there is no doubt that he intended to bring Asia Minor under his hegemony, and that would mean, practically,

the same financial conditions as obtained in Alexander's greater empire.

³⁵ Also ΒΑΣΙΛΕΩΣ ΑΛΕΞΑΝΔΡΟΥ.

What is the significance of this passing innovation? It is evident that throughout his lifetime Alexander contented himself with the modest legend ΑΛΕΞΑΝΔΡΟΥ. On the coins especially intended for use in the West³⁶ it would have been far from politic for Alexander to display a title so abhorrent to the Greek mind. By force of arms and circumstances his undoubtedly was the hegemony over Hellas and the Greeks, but he understood their character too well to advertise the fact boldly on what he intended should be a national coinage. Besides, he desired to appear as their champion, as a leader chosen by them and in sympathy with them, not as a self-imposed tyrant, so contrary to Hellenic ideals of true liberty. After his death, however, the Empire he had founded came to be administered by his generals, hard-headed soldiers, proud Macedonian chiefs, who felt their superiority over the Greeks, and could never grasp Alexander's ideals and ambitions, his love and reverence for all that told of Hellas' former greatness. The only empire of which they could conceive was one held together by Macedonian arms and ruled by Macedonian princes. Little did they care for Greek ideals of liberty, either in the concrete or the abstract, except in so far as they could use them to further their own ends or weaken some rival's power. At this time, then, the title ΒΑΣΙΛΕΥΣ seems to have been added³⁷ to the names of the puppet kings Philip Arrhidaios and Alexander son of Roxana, in a vain attempt to give some semblance of unity to the Empire and of dignity to the kings—the one an imbecile, the other a boy. The legends ΒΑΣΙΛΕΥΣ ΦΙΛΙΠΠΟΥ and ΒΑΣΙΛΕΥΣ ΑΛΕΞΑΝΔΡΟΥ were intended to indicate that these kings were the rightful successors of Alexander the Great, and as such, rulers of the Empire, in contradistinction to the many powerful generals and satraps who were setting themselves up either as heads of the Empire itself, or as independent kings in their own particular domains.

On the coinage issued from the Pella mint, the name of Philip Arrhidaios never appeared; instead, the legend ΑΛΕΞΑΝΔΡΟΥ was continued after the great king's death. At that time Antipater was residing at Pella as regent of Thrace, Macedonia, and Greece proper. When the news of Alexander's sudden death at Babylon, in the spring of 323 B. C., reached the West, the Greeks hastened to assert their freedom from Macedonian power, weakened as it was by the uncertainty of conflicting rumors and the rapid sequence of events in the East. Soon Antipater found himself hard pressed in the Lamian war, and had his urgent needs supplied by the Pella mint from which an immense amount of money was issued at that time.³⁸ Uncertain what events

³⁶ As Alexander progressed eastward other mints were established to supply currency for these new provinces.

³⁷ At first in the Asiatic mints only.

³⁸ Discussed later.

might be occurring daily in the East, and not knowing who of the many claimants to the throne might be gaining the upper hand, to the destruction of the rest, Antipater (no doubt wisely) decided to retain on the Macedonian coinage the now almost magic name of Alexander.

It was not till February of the year 320 B. C., that, after many vicissitudes, the royal court with the associate kings Philip Arrhidaios and Alexander IV, arrived in Macedonia to take up their residence in Pella, and thence to rule the great Empire which had come so near disintegration, and which was still in constant danger of such a fate. The coinage having now for some three years continued the old legend, it was probably not thought necessary, or even advisable, to alter it.

In 318 B. C., Eurydike, the ambitious and headstrong wife of Philip Arrhidaios, aspiring to the first place in the Empire, proclaimed her husband sole king and called on Cassander to replace Polysperchon as regent. However, in deference to their hero's memory, the army went over to the opposing faction led by Alexander's mother Olympias in behalf of his son Alexander IV. Philip and Eurydike were taken prisoners and soon after done away with, and Olympias found herself ruling Macedonia in her grandson's name. It is to this period, 317 B. C., that I would attribute the first appearance of the title ΒΑΣΙΛΕΥΣ on the coins struck at the Pella mint. For although Cassander soon advanced north, besieged Olympias in Pydna, forced her to surrender, and so seized all the country to the borders of Thrace, he nevertheless continued this new style of legend on the coins issued under his immediate authority. Alexander IV was now the only true scion left of the royal house of Philip and Alexander, and as yet, Cassander did not dare deny him. Unwillingly enough, no doubt, and solely to gain the support and goodwill of the people and the army, he recognized him as the Empire's ruler while proclaiming himself his regent.

On the coins struck just before and just after the introduction of ΒΑΣΙΛΕΥΣ, and connected with each other by identical obverse dies, we find the three symbols: *Cornucopia*, *Pallas Promachos*, *Bow and quiver*. Hence we conclude that the three magistrates whose symbols these are, were colleagues in office together. This forcibly reminds us of the system in vogue under the Roman Republic by which three officials, called *Tresviri Monetales*, issued from the mint under their charge a coinage bearing their respective names. In our mint there seems to have been at times a fourth magistrate officiating temporarily with the other three — temporarily, because his coins are always comparatively few in number. Thus the fourth colleague to the above-mentioned three was the moneyer signing himself *Star in circle* (type XXXVI); later he seems to have been succeeded by the one signing *Dolphin* (type

XL).³⁹ That there were as many as four magistrates actually working together at one time is confirmed by the fact that a little later we have a group of four symbols: *Laurel branch* (XLIX), *Ear of wheat* (L), *Crescent* (LI), and *Wreath* (LII), all appearing on coins which bear the legend $\text{BA}\xi\text{I}\Lambda\text{E}\Omega\xi\text{A}\Lambda\text{E}\Xi\text{AN}\Delta\text{POY}$; when however the $\text{BA}\xi\text{I}\Lambda\text{E}\Omega\xi$ is finally dropped, the coins still continue to display these four symbols.

Taking as an example the group types XXXV to XL, the quantity of the coins themselves, and the number⁴⁰ of different obverse and reverse dies which have come down to us, preclude the possibility of our moneyers having been *Annual* magistrates; but if we consider them *Biennial* we find the results correspond surprisingly closely to such historical facts as are known to us. Thus the first part of this group (types XXXVI–XXXIX) we may attribute, as suggested above, to the year 318–317 B. C.; while the second part which bears the title $\text{BA}\xi\text{I}\Lambda\text{E}\Omega\xi$, would belong to the year 317–316. Continuing this system with the following types, which fall naturally into three groups of four signs each, we get this result: types XLI, XLII, XLIII, with XLIV as the fourth, cover the two years 316–315 to 315–314; types XLV, XLVI, XLVII, with XLVIII as the fourth, cover the two years 314–313 to 313–312; types XLIX, L, LI, and LII (all with $\text{BA}\xi\text{I}\Lambda\text{E}\Omega\xi$, but few in number) cover the year 312–311.

Now it was in the summer of the year 311 B. C.⁴¹ that Cassander caused the little Alexander to be put to death. It is to the influence of this important event that I would attribute the sudden discontinuance of $\text{BA}\xi\text{I}\Lambda\text{E}\Omega\xi$ on the coinage henceforth issued from the Pella mint, under the actual as well as the nominal rule of Cassander. As the last four magistrates had been in office only one year when this event occurred, their coins until the end of their term are those described under types LII, LIV, LV, and LVI, — all with $\text{BA}\xi\text{I}\Lambda\text{E}\Omega\xi$ omitted. As types LVII to LX, with the possible addition of three other symbols,⁴² brings us to the close of our series, I have given the year 308–307 as the approximate date of the closing of the Pella mint under Cassander, when in all probability he transferred the striking of the valuable metals to Cassandreia and Thessalonike, two cities founded and patronized by this monarch.

In a general way the system suggested above, — namely that three magistrates, with the addition of an occasional fourth, were in office for two years, — works backwards as well. Types I to XXXV, plus the newly discovered

³⁹ See *Am. Jour. of Num.*, XLV (1911): p. 40. The "Dolphin" is not very clear — it may simply prove to be a deformed cornucopia (type XXXVIIa).

⁴⁰ In my own possession are over a hundred different obverse, and even more reverse dies of types

XXXVI to XL. As new varieties are continually coming to my notice, these numbers are probably only a portion of what once existed.

⁴¹ Droysen, *Geschichte des Hellenismus*, II: p. 73.

⁴² See *Am. Jour. of Num.*, XLV (1911): p. 43.

type (VI-a) give us thirty-six symbols in all; according to the system, this would cover a period of eighteen years.⁴³ As types XXXVI and following seem to belong to 318-317 B. C., we get 336-335 for the beginning of our series. In other words have we not a date coincident with the accession of Alexander the Great — a result I have already argued for on other grounds?

THE GREAT FIND OF DEMANHUR.

IN commenting on the famous hoard of Alexander tetradrachms unearthed a few years ago in that inexhaustible archaeological treasure-house — Egypt — I feel that an apology is due for thus boldly entering upon a subject concerning which we have no actual records. However, as the discovery of this deposit is so important to the student of Alexander's coinage, I feel justified in giving all the available information and such records as I have myself collected. I sincerely hope that others may supplement these and thus help in saving such a find from possible oblivion.

It seems, then, that sometime in the years 1906 and 1907 there suddenly appeared on the Egyptian coin-market a most remarkable quantity of Alexander tetradrachms. There seemed to be no end to the supply; new coins were always forthcoming to take the place of those disposed of, until, in fact, the bottom dropped out of the "Alexander" market, and his tetradrachms could be bought at bullion prices. The discovery of such a hoard has been most opportune, for its great size has made it possible for collectors and museums to secure large numbers of varieties, a fact which will no doubt prove invaluable in reviving the interest in Alexander's issues.

Sig. G. Dattari, of Cairo, at my request for the latest information concerning the hoard, has very kindly supplied such facts as are known to be trustworthy, and all that are available at the present moment.

The find was made by natives. Its true *provenance* is therefore impossible to determine, though many localities from Abukir to Assuan have been suggested. At any rate the treasure eventually fell into the hands of certain merchants residing at Demanhur, and has ever since been known by the name of that city. The deposit, containing anywhere from ten to twenty thousand tetradrachms, was divided into five parts of several thousand coins each; one part was sent to Alexandria and the rest to Cairo for disposal. From these places it has been scattered piecemeal throughout Egypt, Syria, Europe, and America, thus making a complete record of the types and varieties it originally contained absolutely impossible.

As we are thus deprived of any definite information concerning its immediate surroundings, it seems useless to speculate as to whether it once

⁴³ That is, $36 \div 4 = 9$, or nine groups of four magistrates each; and 9×2 (allowing two years as the term of office for each group) $\equiv 18$.

formed a temple treasure, a military war-chest, or a private fortune. All that we can say is that it seems to have been an accumulation of years, not a sudden massing together of money, for even the earliest issues are well represented, and among these are many coins in an almost uncirculated condition, which therefore must have been stored away soon after they were struck. The pieces of later date, issued only just before the burial of the hoard, can boast of a condition seldom found on the coins which have come down to us from ancient times. In fact their state very nearly approaches what among collectors of modern coins is known as a proof surface.

The total number of coins contained in the hoard is as variously estimated as its *provenance*. We shall not be far wrong, however, if we put it at about fifteen to twenty thousand Alexander tetradrachms. Sig. Dattari thinks there must have been between ten and twenty thousand coins. Thanks to his long residence in Egypt, his keen numismatic ardor, his consequent close touch with the Egyptian coin-market, and his wide acquaintance among the dealers and native merchants, Sig. Dattari is in a unique position to ascertain the facts concerning whatever finds may come to his notice in Egypt. My own experience in looking over parcels of the "Demanhur coins," together with the reports of friends who were able to inspect many which I did not myself see, seems to show that the foregoing estimate must be approximately correct.

Such, then, are the few facts regarded as trustworthy, which it has been possible to select from the unusually large amount of stories, contradictions and rumors afloat concerning the deposit.

In turning now to a closer description of the hoard, it must be understood that the following lists contain only such coins as I myself possess, or have actually handled, and have been able to study minutely. While these may number only about one-eighth to one-tenth of the entire deposit (some two thousand out of a possible twenty thousand), they form, nevertheless, an almost complete collection of the various monograms and symbols represented, and at the same time give us, in a general way, the original numerical proportions which the coins of the different varieties discovered held to each other. The pieces have been grouped, where possible, under their respective mints; where there is doubt under districts. Müller's classifications under various cities have had to be discarded except in the cases of Arados, Sidon, Ake, and Damascus, where his attributions are undoubtedly correct.

I would very much like to have been able to present here a more advanced and painstaking study of these other mints, to supplement what we have learned of that at Pella. Unfortunately time and space have prohibited this, as well as the fact that a trip abroad for the purpose of working in the

great collections there — a *sine qua non* for a correct understanding of all of Alexander's issues — chanced to be impossible at the present time. The authorities in the Museums of London, Paris, Berlin, Munich and Athens have done much to help me out by kindly sending many casts, information, etc., but there is no way of securing adequate casts from important private collections and certain public ones. Besides, the actual seeing and handling of the original coins is most important in this kind of work. Therefore, for the present, only such notes and passing observations have been added to each group as may help towards the correct attribution of its coins in the future. The majority of these groups are indeed mere tentative assignments, and are not to be considered in any way permanent, for further and more careful studies may very likely prove them erroneous. The attempt has been made, however, to group together coins whose similar style and execution would lead one to infer a common origin.

In carefully recording the number of obverse and reverse dies of each variety which have come to my notice, my hope has been that in so doing we may be able to gain a correct idea of the size of each issue, the commercial importance of the issuing city, and the relative status it enjoyed as compared with other contemporary mints. For instance, we may safely infer the far greater importance of the Pella mint, with its hundreds of obverse and reverse dies, as compared with the Ake mint with its paltry dozens, although the two series cover almost the same period of time. Even better instances than these might be cited, but for the present that given will suffice, until we secure a firmer hold on the evidence which the coins themselves furnish us.

In the following tables the varieties, for ease of reference, are numbered consecutively. These numbers form the first column. The second column contains the distinctive symbols or monograms; the third, the references to the two leading catalogues of Alexander's coins (M = Müller: *Numismatique d'Alexandre le Grand*; IP¹ = *Inedita*, published by Prokesch-Osten in Vol. I of the *Zeitschrift für Numismatik* (1857); IP², a continuation by the same author in Vol. III of the *Zeitschrift* (1860). The fourth column contains the number (not necessarily confined to the coins of the Demanhur hoard which I have studied) of obverse dies found on the coins of each variety; the fifth, the total number of obverse dies found employed for an entire series, — a necessary addition, as very often one obverse die was used for two, three, four, and even more varieties; the sixth, the number of reverse dies; the seventh, the number of coins of each variety which I have seen of the Demanhur hoard; while the eighth and last column contains the Plate references.

MINT PELLA.⁴⁴

Type No.	Symbol.	Reference.	Obv. dies.	Total obvs.	Rev. dies.	Specimens in find.	Plate.
1	PROW	M. 503	15	14	29	35	I, 1, 3; VII, 9
2	FULMEN	M. 3	10	22	10	12	I, 2, 5; XV, 5
3	DOUBLE HEAD	M. 853	20	40	23	25	I, 4, 8; XV, 6
4	RUDDER	IP. ¹ 63	7	46	6	5	I, 6
5	STERN	M. 758	13	58	14	15	I, 7; VII, 10, 11
6	AMPHORA	M. 527	12	66	20	21	I, 9, 10; II, 1; VII, 13
6a	STYLIS	—	1	69	1	1	VII, 15
7	KANTHAROS	M. 194	4	71	4	6	I, 11; XV, 7
8	WREATH	M. 548	4	71	6	7	II, 2; VII, 14
9	HELMET	M. 191	3	72	4	2	II, 3, 4
10	IVY LEAF	M. 244	14	82	16	22	II, 5, 6, 8; XV, 8
11	BUNCH OF GRAPES	M. 306	6	85	13	14	II, 7, 9; VII, 12
12	KERYKEION	M. 207	3	86	2	4	II, 10
12a	KERYKEION (FILLETED)	IP. ¹ 67	5	90	4	5	III, 1
13	QUIVER	M. 591	6	94	5	7	III, 2, 5, 9
14	TRIDENT	M. 107	1	94	1	2	III, 3
15	PEGASUS (FOREPART OF)	M. 602	9	101	9	11	III, 4, 7
16	EAR OF WHEAT	—	1	101	4	4	III, 6
17	BOW	—	1	101	5	9	III, 8
18	EAGLE'S HEAD	IP. ¹ 4	7	106	11	12	III, 10; IV, 1
19	CLUB and Σ or Ω	M. 138	14	119	20	34	IV, 2, 3, 5; V, 1, 4
20	KERYKEION and Σ or Ω	IP. ¹ 75	10	126	10	9	IV, 4, 8
21	SHIELD	M. 223	14	134	14	19	IV, 6, 9; V, 2
22	CLUB	M. 135	2	135	2	3	IV, 7
23	STAR	—	4	138	4	5	IV, 10; XV, 9, 11
24	HORSE'S HEAD	M. 528	8	144	7	9	V, 3
25	DOLPHIN	M. 539	4	147	5	3	V, 5; XV, 10
26	ACROSTOLION	M. 281	2	148	2	3	V, 6; XV, 12
27	ROSE	M. 116	1	149	1	1	V, 7

Carried forward

252 305

⁴⁴ The remainder of the types attributed to the Mint at Pella, namely: LIIa, LIII-LX inclusive, were not present in the Demanhur hoard, and so are not enumerated here.

Type No.	Symbol.	Reference	Obv. dies.	Total obsv.	Rev. dies.	Specimens in find.	Plate.
<i>Brought forward</i>							
28	COCK	M. 392	43	206	252	305	V, 8; VI, 1, 4
29	CRESCENT	M. 259	13	216	53	69	V, 9
30	HERM	M. 366	33	244	14	16	V, 10; VI, 2
31	E or E	M. 181	23	262	36	47	VI, 3
32	KERYKEION	M. 207	18	279	26	36	VI, 5, 6
33	BUCRANIUM	M. 97	25	302	24	25	VI, 7, 8, 10
34	PENTALPHA	M. 378	3	304	31	34	VI, 9
35	COCKLE-SHELL	M. 385	1	305	4	4	VI, 11
36	STAR IN CIRCLE	M. 148	7	312	1	1	VIII, 1, 9
37	CORNUCOPIA	M. 368	20	330	6	7	VIII, 2, 7, 10; IX, 1
38	PALLAS PROMACHOS	M. 649	15	345	26	34	VIII, 3, 5; IX, 2, 3
39	BOW AND QUIVER	M. 591	14	353	22	26	VIII, 4, 6, 8, 11
	Henceforth with title: BAΣIΛEQΣ.						
37a	CORNUCOPIA	M. 369	22	368	17	19	IX, 5, 9, 11; X, 1
38a	PALLAS PROMACHOS	M. 650	20	387	23	30	IX, 4, 12; X, 2
39a	BOW AND QUIVER	M. 592	20	404	27	31	IX, 6, 7, 10; X, 3
40	DOLPHIN	—	2	404	21	22	IX, 8
41	ANTLER	—	18	422	3	4	X, 4, 7, 9; XI, 5, 8
42	HELMET	M. 224	24	443	20	21	X, 5, 8; XI, 1, 3, 6, 9; XII, 1
43	PHRYGIAN CAP	M. 854	43	472	40	55	X, 6, 10; XI, 2, 7, 10
44	TRIDENT	—	2	473	53	66	XI, 4, 11
45	TRIPOD	M. 146	8	479	2	2	XII, 2, 9
46	☿	M. 862	9	488	8	7	XII, 3, 7
47	☿	M. 863	9	495	9	7	XII, 4, 5
48	☿	M. 860	14	505	11	11	XII, 6, 8, 10
49	LAUREL BRANCH	M. 559	1	506	16	11	XIII, 1
49a	LAUREL BRANCH Γ	M. 560	7	511	1	2	XII, 11; XIII, 2, 3
50a	EAR OF CORN Γ	M. 570	4	514	8	6	XII, 12
51a	CRESCENT Γ	M. 261	9	521	5	2	XIII, 4
					8	7	
<i>Total</i>				521	767	903	

As we have previously dealt at length with the issues of the Pella mint, there remains but little to add here, especially as we shall have occasion to return to the subject when we have completed the list of the Demanhur find. We shall then be in a better position to study the Pella coins in their relation to those of the other mints.

Of coins belonging to Types 1-35 inclusive, the hoard contained many worn specimens as evidences of a long circulation. On the other hand, in each variety were several pieces in "mint" condition, which leads us to the inference, stated above, that the hoard was formed during a long period of years. On the coins of Type 36 and following, the wear is much less noticeable,—in fact, finely preserved specimens begin to predominate. All the coins of Types 44 to 48 especially, are *at least* finely preserved, while the majority are in a "brilliant" condition; and *all* of Types 49, 49a, 50a, 51a, are brilliant. Thus the comparative preservation of the coins themselves corroborates the general sequence of the various types issued from the Pella mint.

In the list of the Demanhur coins it is perhaps possible that the returns given for Types 44-51a are misleading, as their numerical proportion to the rest was probably greater in the original hoard. The coins are in such a remarkable state of preservation that most likely, in the early days of their discovery, a great many were removed in order to dispose of them at the high prices which such coins inevitably command. At any rate I know that this happened to certain other varieties found at Demanhur.

The number of obverse dies, as given above for Types 1 to 43, probably approaches the original number. For the later Types many new dies are still to be found. The reverse dies outnumber the obverse,—more so than the returns given above would indicate. New reverse dies are continually coming to my notice, but it is only once in a great while that a new obverse die occurs. The natural explanation is, that in ancient mints it was the custom to embed the obverse die in an anvil-like arrangement, while the reverse die was in the nature of a punch. It therefore did not have the added resistance of the anvil, and moreover, in the process of coinage, this was the die which was struck by repeated blows of the hammer. The greater strain to which it was thus subjected made it necessary to replace it by a new one at much more frequent intervals than was the case with the obverse die.

Throughout the period under discussion loose dies were used at Pella. Fixed dies seem to have been an oriental invention, and, as we shall see, were sometimes employed in the eastern mints of the Alexandrine coinage.

















In weight, the coins of the Pella issues are very uniform indeed. Of the seventy-five uncirculated pieces of all types, which were carefully weighed, the results are as follows:—1 weighed 17.10 grammes; 5 weighed 17.12 to 17.14 grammes; 61 weighed 17.15 to 17.18 grammes; 8 weighed 17.16 to 17.22 grammes. 17.19?

UNCERTAIN MINTS IN MACEDONIA, THRACE, AND ASIA MINOR.

Beginning with type 52 it has been found expedient to insert in the tables two extra columns, the one to indicate the presence of the title $\text{BA}\xi\text{IAE}\Omega\Xi$, the other to describe the relationship existing between obverse and reverse dies. In the most recent numismatic works considerable attention is being paid to this point.¹ It often proves an aid in the correct dating and even attribution of coins concerning which there has been more or less doubt. By far the greater number of the coins belonging to the types present in the Demanhur find were struck from "loose" dies—that is, no care or system was used in placing the obverse and reverse dies in any particular relation to each other during the process of striking. In some of the eastern mints, however, the dies seem to have been adjusted *by hand*. That is, the dies, when struck, were placed in some definite relation to each other, either M , or H , or F , but were not held rigidly in position. In this case, if we compare two or more coins from identical obverse and reverse dies, we shall find the dies showing one of the above-mentioned relationships, but varying slightly to right or left for each coin. This system was gradually finding favor and spreading to other mints about the time of the burial of our hoard. A very few of our coins are from "fixed"—that is, hinged dies. These dies, being thus rigidly held, do not show any variation in their relative positions.

Type No.	Symbol.	Inscr.	Refer.	Obv. dies.	Rev. dies.	Position of dies.	Specimens in find.	Plate.
52	ATHLETE		—	3	6	Loose	7	XVI, 1
53	SUPPLIANT		M. 637	2	2	"	3	XVI, 2
54	M		M. 836			"	1	XVI, 3
55	INSECT ON ROSE		M. 856			"	2	XVI, 4
56	H		M. 762			"	1	XVI, 5
57	\odot		M. 197			"	3	XVI, 6
58	HELMET, $\text{A}\xi$		M. 1472			"	3	XVI, 7
59	EAR OF WHEAT		—			"	1	XVI, 8
60	HEAD OF GOAT		IP. ¹ 71			"	1	XVI, 9
61	SHIELD	B	M. 223			"	1	XVI, 10
62	F , Λ	B	M. 859			"	1	XVI, 11
63	F		M. 838			"	1	XVI, 12
64	BUCRANIUM		var. M. 97			"	1	XVII, 1

¹ G. Macdonald: "Fixed and Loose Dies in Coinage," *Corolla Numismatica*, 1906.

Type No.	Symbol.	Inscr.	Refer.	Obv. dies.	Rev. dies.	Position of dies.	Specimens in find.	Plate.
65	TRIDENT, 		—			Loose	1	XVII, 2
66	Λ, TORCH, 		M. 37			"	2	XVII, 3
67	KERYKEION		var. M. 207			"	1	XVII, 4
68	VINE BRANCH		—			"	1	XVII, 5
69	VINE BRANCH	B	—			"	2	XVII, 6
70	ARTEMIS W. TORCHES		—			"	1	XVII, 7
71	ARTEMIS W. TORCHES, 		M. 397	14	23	"	27	XVII, 8, 9, 10
72			—			"	1	XVII, 11
73	HOPLITE,  or 		IP. ³ 5			"	4	XVII, 12
74			IP. ¹ 86			"	1	XVIII, 1
75	 , BEE		M. 512			"	3	XVIII, 2
76	 , ROSE		—			"	1	XVIII, 3
77	 , SPRIG	B	—			"	2	XVIII, 4
78	FULMEN	B	—			"	1	XVIII, 5
79	KERYKEION		var. M. 207			"	2	XVIII, 6
80			IP. ¹ 83			"	2	XVIII, 7
81		B	—			"	1	XVIII, 8
82	EAR OF WHEAT		IP. ¹ 151	4	9	Fixed	10	XVIII, 9
83	 		var. M. 1599			Adjusted	3	XVIII, 10
84			IP. ¹ 157			"	4	XVIII, 11
85			IP. ¹ 158			"	2	XVIII, 12

98

Total brought forward, 1001

The coins which have been thus vaguely attributed above to the districts Macedonia, Thrace, and Asia Minor, were, with one or two exceptions, very scantily represented in the Demanhur Hoard. Müller's attribution of these coins to separate cities is highly conjectural; but that their mints once lay within the boundaries given is indicated by their style. Style has also influenced their actual grouping; but as style without other evidences to back it, is a very uncertain reed to lean upon, nothing definite is claimed, or even attempted, in the present case.

Only in one or two instances where enough specimens to warrant conclusions have been inspected, has there been any attempt to give the number of different obverse and reverse dies.











Types 54, 55, and 56 are similar enough to be assigned to one mint. The same may be said of types 57 and 58; also of types 59, 60, and 61, — 59 and 60, moreover, have their obverses from the same die. Müller's attribution to Perinthus in Thrace for type 71 (and 70) has a greater claim to consideration than any of the rest, though even here there is considerable doubt. Types 74, 75, 76, and 77 are evidently from one mint, as is definitely proved

by identical obverse dies. If in this case the small symbols (*Bee, Rose, Sprig*) under the throne are magistrates' symbols — as seems more than likely — the monogram in the field *may* indicate the mint. If so, it is very tempting to resolve it into "ΑΜΦΙΠΟΛΙΞ." Types 82, 83, 84, and 85 are among the most recent in the find, their coins being invariably in superb condition. This is likewise the case with types 62, 64, 65, 66, and a portion of type 71. The remainder cover the interval between the hoard's burial and the commencement of Alexander's reign.

In weight the specimens in mint state, belonging to the present group of types, vary somewhat more than similar coins of the Pella mint. The weights run anywhere from 17.05 grammes for a coin of type 58, to 17.35 grammes for a coin of type 65. The majority, however, average between 17.10 and 17.15 grammes per coin — a slightly lower level than was found in the Pella issues.


CILICIAN DISTRICT.

Type No.	Symbol.	Title.	Refer.	Obv. dies.	Total obsv.	Rev. dies.	Specimens in Find.	Relation of dies.	Plate.
86	•		—	4	8	3	6	Loose	XIX, 1
87	A		M. 1291	6		31	50	"	XIX, 2
88	(no symbol)		—	4	16	5	9	"	XIX, 3
89	B		M. 1289	12		28	70	"	XIX, 4
90	B		—	5		13	23	"	XIX, 5
91	α ς	B	M. 1301	2	15	9	16	"	XIX, 6, 7
92	α ς		M. 1300	2		9	10	"	XIX, 8
93	α ς ς		M. 1298	5		14	25	"	XIX, 9
94	α ς ς		—	3		3	5	"	
95	BA ς	B	—	5		21	28	"	XIX, 10
96	BA ς	B	—	1		1	1	"	
97	BA ς		M. 1302	2		6	10	"	XIX, 11
98	AA ς	B	M. 1308	1		1	1	"	XIX, 12
99	PLOW ⌊		M. 1282	1		1	1	"	
100	PLOW ⌊		—	3		13	20	"	XX, 1
101	PLOW ⌊		—	6		9	21	"	XX, 2
102	PLOW ⌊		M. 1284	6		14	20	"	XX, 3
103	PLOW ⌊		—	1		2	2	"	
104	PLOW ⌊		M. 1283	1		2	2	"	XX, 4
105	PLOW ⌊		—	2	7	3	4	"	XX, 5
106	PLOW ⌊		IP. 81	1		2	2	"	XX, 6
107	PLOW ⌊		—	1		1	1	"	
108	PLOW ⌊		—	2		2	2	"	XX, 7
109	PLOW ⌊		—	2		2	2	"	XX, 8
110	PLOW	R	M. 1280	1		3	3	"	XX, 9
111	PLOW ⌊	B	M. 1285	1		1	2	"	XX, 10

Type No.	Symbol.	Title.	Refer.	Obv. dies.	Total obsv.	Rev. dies.	Specimens in Find.	Relation of dies.	Plate.
112	AP 		—	1	15	1	1	Loose	XX, 11
113	AP 	B	M. 1286	1		1	1	"	XX, 12
114	NIKE 	B	IP. ¹ 92	2		2	2	"	XXI, 1
115	NIKE 	B	M. 199	3		3	4	"	XXI, 2
116	NIKE 	B	M. 198	4		6	5	"	XXI, 3
117	NIKE 	B	IP. ¹ 91	1		2	2	"	
118	NIKE 	B	M. 203	2		4	4	"	XXI, 4
119	NIKE 	B	M. 204	1		2	2	"	XXI, 5
120	NIKE 	B	IP. ¹ 93	3		7	7	"	XXI, 6
121	SCORPION 		M. 1337	5		8	15	Loose & Fixed	XXI, 7

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MINTS UNDER CILICIAN INFLUENCE.

122		B	M. 1294	34	59	81	Fixed	XXI, 8, 9
123	BOW	B	M. 1288	3	3	4	"	XXI, 10
124	BOW		M. 1287	18	35	67	"	XXI, 11, 12

152

Total 1532

The coins of distinctive Cilician fabric fall into five groups; but it cannot be said that each of these groups represents a separate mint. Types 86 and 87 having some obverse dies in common, form the first group. In the same manner types 88, 89, and 90 form the second; types 91 to 98 inclusive the third; and types 99 to 111 the fourth group. Type 121 comprises the fifth group. Groups three and five are certainly from different mints. The fourth group really contains also types 112 to 120 inclusive, though only the first few of these show Cilician style. This is enough, however, to class them all as belonging to one series and the continuation of types 99 to 111. Müller's attribution of these latter pieces to Therma in Macedonia cannot therefore be endorsed.

Correctly to apportion these several groups among those Cilician cities which probably issued coins under Alexander and his successors is no simple matter. In fact it may be said to be practically impossible at the present moment. Our knowledge of the conditions obtaining in Cilicia during the period under discussion is far too scant to warrant any conclusions; and the coins themselves help us but little. It is certain, though, that with

the advent of Alexander into these regions all local autonomous issues, as well as the Persian satrapal issues, ceased; and it is furthermore probable that a local Alexandrine coinage was instituted shortly afterwards at some or all of the principal cities, namely: Nagidos, Soli, Mallos, Tarsos, and Issos.

The symbol ☸ on coins of group 3 is identical with a type found on certain bronze coins struck at Tarsos during the 2d and 1st centuries B. C. The symbol ☸ (provided it is not a monogram composed of the letters OKI or OKΔ) reminds us of the well-known Baal symbol ☸. As Baal (or BAAL-TARS) was the particular god of Tarsos, it is well within the bounds of possibility that types 91-98 were struck in this city.

The plow seen in the field of types 99-111 may denote the mint (like the ram on the Damascus coinage) while the dots, letters, and symbols seen beneath the throne, or to the right of Zeus, probably served to distinguish the various magistrates, die-cutters or other mint-officials connected with the issuing of this coinage. Some of the earlier of the obverse dies are connected with as many as five or six of these reverse signs. Type 121 has already been attributed by Müller to Commagene on the strength of the scorpion symbol. The attribution is plausible but lacks confirmation.

The Cilician issues maintained a high standard of excellence with respect to weights. Of forty-three specimens in mint state twelve weighed between 17.10 and 17.19 grammes, thirty weighed between 17.20 and 17.30, and one weighed 17.35.

MINTS UNDER CILICIAN INFLUENCE.

The style of the earliest of these coins shows clearly that their die-cutters were under Cilician influence. Type 123 is an almost direct copy of type 91, while type 124 resembles very closely some of the coins of type 90. Strange to say, however, the Syrian (or Phoenician) custom of striking coins from hinged or adjusted dies was followed. Such coins are not found among the issues which can be attributed to Cilicia. The style, though evidently influenced by the Cilician coins, is much poorer, the workmanship coarse, — at times almost barbarous. To choose a mint for these coins is as yet impossible, but style and manufacture together place them in some district not far from the north-east corner of the Mediterranean Sea.

The weights of type 123 show a gradual deterioration from 17.15-17.25 grammes at the commencement, to 17.10-17.14 at the end of the issue. Types 124 and 125 keep an average well above 17.20 throughout the entire period of their issue.

SYRIA AND PHOENICIA.

Type No.	Symbol.	Refer.	Obv. dies.	Total obs.	Rev. dies.	Relation of dies.	Specimens in find.	Plate.
125	Γ A	—	4		6	Adjusted	14	XXII, 1
ARADOS.								
126	(style II) Α	H. "k" ⁴⁵	17		24	"	28	XXII, 2
127	(style IV) Α	R. 64 ⁴⁶	7		5	"	5	XXII, 3
128	Obv. Δ Rev. ⌘	—	2		3	Loose	4	XXII, 4
129	Obv. M Rev. ⌘	—	2		7	"	8	XXII, 5
130		R. 48	14		16	"	17	XXII, 6
131	Ξ ⌘	R. 52	18		29	"	32	XXII, 7, 8
132	Λ ⌘	R. 50	6		10	"	10	XXII, 9, 10
133	Δ ⌘	R. 54	2	3	3	"	3	XXII, 11
134	Ι ⌘	R. 49a	2		3	"	3	XXII, 12
135	⊞ ⌘	R. 49	14			"		
136	⊞ ⌘	}			15	"	16	XXIII, 1
137	⊞ ⌘					"		
138	A ⌘	H. "h"	2		2	"	3	XXIII, 2
139	Σ ⌘	R. 51	5		10	"	15	XXIII, 3
140	KADUKEUS ⌘	R. 56	41		67	"	75	XXIII, 4

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SIDON.

141	Σ	M. 1320	6		14	Adjusted or fixed.	36	XXIII, 5
142	IVY LEAF Σ	M. 1318	1	1	1	"	1	XXIII, 6
143	GALLEY ΣΙ	—	1		2	"	2	XXIII, 7
144	ΣΙ	H. 1	1		3	"	6	XXIII, 8
145	⊞ ΣΙ	—	1		2	"	2	XXIII, 9
146	⊞ ΣΙ	H. 12	1		1	"	2	XXIII, 10
147	λ ΣΙ	H. 16	1		2	"	4	XXIII, 11
148	(ΦΙΛΙΠΠΟΥ) Ο ΣΙ	H. 2	1		1	"	1	XXIII, 12

54

AKE.

149	Υ 9	—	1		3	Adjusted	9	XXIV, 1
150	Υ 4	—	2	3	4	"	10	XXIV, 2
151	FULMEN	—	2		4	"	9	XXIV, 3
152	Σ	PI. ¹ 79	2	10	4	Loose	7	XXIV, 4
153	M	—	2		7	"	17	XXIV, 5
154	O	—	5		20	"	38	XXIV, 6
155	40	M. 1427	3		6	"	13	XXIV, 7
156	42	M. 1433	2		3	"	4	XXIV, 8

⁴⁵ Hill, "Notes on the Alexandrine Coinage of Phoenicia," *Nomisma*, IV: 1909.

⁴⁶ Rouvier, "Numismatique des Villes de la Phé-

nicie," *Journ. Intern. d'Arch. et Num.*, III (1900) to VII (1909).

REATTRIBUTION OF CERTAIN TETRADRACHMS

Type No.	Symbol.	Refer.	Obv. dies.	Total obvs.	Rev. dies.	Relation of dies.	Specimens in find.	Plate.
157	49	M. 1434	2	5	5	Loose	5	XXIV, 9
158	49	M. 1435	2		3	"	5	
159	49	—	2		4	"	7	
160	49	M. 1436	1		7	"	7	
161	49	M. 1437	1		2	"	2	XXIV, 10

133

UNCERTAIN MINT.

162	Δ	M. 1293	4	6	9	Loose	12	XXIV, 11
163	Δ	—	1		1	"	2	
164	Δ	M. 1292	2		6	"	7	
165	A	—	1		6	"	13	XXIV, 12

34

DAMASCUS.

166	ΔA	M. 1345	1	3	2	Adjusted	2	XXV, 1
167	ΔA	—	2		2	"	2	
168	ΔA	—	1		1	"	1	
169	ΔA	M. 1346	1		2	"	2	
170	—	—	1	48	1	"	2	
171	RAM ΔA	M. 1339			25	"	49	
172	RAM ΔA	M. 1340			17	"	31	XXV, 2
173	RAM ΔA	—			1	"	1	
174	RAM ΔA	—			18	"	37	
175	RAM ΔA	—			4	"	8	
176	RAM ΔA	—			5	"	9	
177	RAM ΔA	—			24	"	41	XXV, 3
178	RAM ΔA	M. 1341			2	"	3	
179	RAM ΔA	—			1	"	2	XXV, 4
180	RAM ΔA	M. 1342			1	"	3	XXV, 5
181	RAM ΔA	M. 1344			4	"	9	XXV, 6
182	RAM ΔA	M. 1338			17	"	42	XXV, 7

244

Total, 2230

SYRIA AND PHOENICIA.

UNCERTAIN MINT.

Type 125 has been placed here on account of its close resemblance to a certain tetradrachm published by Babelon⁴⁷ which seems to have been the first of the Alexander type issued from the Arados mint. Unfortunately there were no coins of this rare variety among the lots that reached me from the Demanhur find. As its presence in the hoard might be looked for, perhaps some

⁴⁷ Babelon: *Mélanges Numismatiques*, p. 242, Pl. X, fig. 2.

other collector, more fortunate than I, has been able to secure one. On the strength of this resemblance type 125 may be attributed to Arados or some neighboring mint. The weights for five uncirculated specimens are 17.18, 17.20, 17.22, 17.24 and 17.30 grammes respectively.

ARADOS.

Coins of types 126 and 127 have long been given to Arados—an attribution supported by the monogram (which is found on later undoubted Aradian Alexanders), and by the fact that the style on some is very similar to the above-mentioned coin published by Babelon as certainly struck at Arados. The style found in types 126 and 127 shows a steady progression from what Müller calls "style II" to his "style IV"—a development which must have covered a number of years. On Plate XXII are shown the two extremes—space has prevented the reproduction of the intermediate stages. Like other Phoenician issues the coins are struck from adjusted,—in some cases, perhaps, from fixed dies.

When we come to the series represented by types 128 to 140, we are at once in serious difficulties if we propose to attribute them also—as indeed they always have been—to Arados. The time limit of twenty-five years, namely 333–308 B. C.,⁴⁸ to which our coins belong, seems too short a space to hold both series, each of which must have consumed a number of years in developing their respective styles. The Demanhur specimens of the earliest coins of each of these series are worn; those of the latest are all in mint state. It is therefore impossible to think of the one series as succeeding the other. On the other hand, the styles of the two series are so totally different in feeling and execution that it is well-nigh impossible to think of them as belonging to contemporary coinages of the same mint. Also, types 126 and 127 are struck from adjusted, and types 128 to 140 from loose dies. If it is comparatively easy to throw doubt on their attribution to a common mint, it is another matter to suggest a better. The internal evidences presented by each series, when taken separately, are far from inimical to an Aradian attribution of these coins. The solution perhaps may be that types 126 and 127 were local city issues; types 128 to 140 were regal or military issues, struck by Alexander's generals or successors at Arados, but under separate management and in a separate mint. This might account, in a degree, for the great divergence of the two series in style, execution, monograms, and other details.

Of the second series, types 128 and 129, with the letters Δ and Μ on their respective obverses, are both unpublished and important. By monogram they are connected with types 130 to 140, but their style shows them to have

⁴⁸ It will be shown later that the Demanhur hoard could not have been buried after 308–307 B. C.

been earlier in date. For the arrangement of types 130 to 140 we find that J. N. Svoronos, in his great work on the coins of the Ptolemies,⁴⁹ has adapted these Aradian Alexanders to his theory, and contends that the letters Δ, Ζ, Ι, Λ, Σ, are alphabetical dates such as were frequently used for dating the true Ptolemaic issues. He has moreover assigned these Alexanders to the years 307-293 B. C. As our hoard was already buried by 307 B. C., these dates are evidently too late. Mr. G. F. Hill, in his monograph⁵⁰ on this subject, also considers these letters to be annual dates, but refers them to the era of Alexander the Great commencing in Phoenicia with the year 333-332 B. C. The Demanhur hoard which has enabled us to study and compare so large a number of these particular Aradian coins, forces us to the conclusion that the date theory, so far as this coinage is concerned, will have to be abandoned: for we find ourselves attributing to the first year (333-332 B. C., and of this only the months January to September, for Arados did not open its gates to the Greeks till about January of 332) firstly, the tetradrachms published by Babelon — as this is the earliest Alexander struck in this mint; secondly, types 128 and 129, as their style shows them to be earlier than the series Α, Δ, Ζ, Ι, Λ, Σ, ΣΩ, and lastly, type 138 with the letter Α (= year 1) — manifestly too great a diversity of types and styles to crowd into the short space of eight or nine months. We might perhaps refer the dates Α, Δ, Ζ, Ι, Λ, Σ, to an era commencing with the *death* of Alexander (323 B. C.); but this again would carry our series of dates beyond the burial year of our hoard. Again, we can not well separate ΣΩ (type 139) from the series Α, Δ, Ζ, Ι, Λ, Σ, of which it seems to be an integral part; but ΣΩ can only be considered as a monogram, not a date letter.

Let us take up the question from another point. The earliest coins of the series 130 to 140 are those of type 130 with no letter in the field. The style shows this clearly: the absence of an exergual line, the Zeus-figure of modified Cilician style, his stiff attitude and parallel legs, and the absence of a back to the throne, all bind these coins closely to those of types 128 and 129. Identical in style with type 130 are a few coins of types 131 and 132 with Λ and Σ in their reverse fields. If our letters were dates we should naturally have expected Α (1) and Δ (4) instead of Λ (11) and Σ (18). The remaining coins of Λ and Σ are most similar to Δ and Ι. Besides, there also happen to be in my possession coins of Δ and Ι with their obverses from the same die. Under the conditions obtaining in mints of the ancients, it would be somewhat strange if a die made in the year 4 (Δ) could still be in use in the year 9 (Ι) and exhibit at the same time but little, if any, wear. Especially

⁴⁹ Τὰ Νομίσματα τοῦ Κράτους τῶν Πτολεμαίων. Athens, 1901.

⁵⁰ Hill, "Notes on the Alexandrine Coinage of Phoenicia." *Nomisma*, IV: 1909.

is this true if we remember that for the intervening year 8 (Ξ) there was a very large coinage. A more plausible solution might be to consider Δ and I as signatures of magistrates who were in office either the same year or in consecutive years. The continued use of a die would not then be unusual. As the sum total of these facts seems to speak so decidedly against the theory that Α, Δ, Ζ, Ι, Λ, Σ, are alphabetical dates, would it not be better to explain them all as the initials or private marks of magistrates superintending the coinage? This would also account for ΣΩ and the Kadukeus symbol (type 140) which under the old system would be abnormal signs and difficult to explain. Above all, it would obviate the hopeless and impossible muddle of styles which results from the sequence proposed by Svoronos and Rouvier, and accepted by Hill.

The weights of our coins vary but slightly. Types 126, 127, 128 and 129 average slightly over 17.20. Types 130 to 140 average slightly under 17.20 grammes.

SIDON.

Types 142 and 143 have their obverses from the same die. This connecting link, together with evidences of style, enables us to attribute 141, as well, to the Sidon mint. Müller had previously given both 141 and 142 to Soli in Cilicia. In the case of Sidon the letters (at first Phoenician, then Greek), seen in the left field of the coins, are undoubtedly dates. It has also been proved that they refer to the era of Alexander the Great which began 333-332 B. C., in Phoenicia.⁵¹ The Demanhur hoard probably contained specimens of the years 10 (Κ), 11 (Λ), 12 (Μ), 13 (Ν), 15 (Π), etc., but being very rare and much sought after, they were probably picked out of the hoard shortly after its discovery; at any rate, none chanced to reach me. Of six coins, all in mint state, four weighed 17.20 grammes; the other two weigh 17.24 and 17.25 grammes respectively.

AKE.

My reasons for radically disturbing the orthodox and hitherto accepted arrangement of the Ake issues are too many and too complex to give here in detail. It is my intention to incorporate them in a future monograph on the Alexander issues of the Phoenician cities. Suffice it now to say that dated coins were first struck at Ake in the twentieth year of Alexander's Eastern era (=313 B. C.), continued through to the fortieth year (=293 B. C.), when the era of Alexander was superseded by the era of the battle of Ipsos (301 B. C.), and coins dated in the eighth, ninth, tenth, eleventh, and thirteenth (?) years of the new era were issued, probably by Ptolemy I of Egypt. The main objec-

⁵¹ Rouvier, *Revue Numismatique*: 1909, pp. 321-354.

tion to this proposed arrangement is that it does not seem to take into account certain published coins dated 5, 6, 14, 15, and 16. The first two and the last one can be proved to have been misread, and so do not exist; 14 and 15, if they exist, may of course be placed at the end of the new arrangement.

The first of the Alexander issues of the Ake mint are represented by types 149 and 150 with Phoenician letters in the field and under the throne: types 150 and 151 have an obverse die in common, and so were certainly issued from a common mint. To these types 152 and 153 are so similar in style that they can not well be separated from them — the required "mule," or connecting link, will no doubt turn up some day to prove this combination. Of one thing at least we are certain: there being in my possession certain coins which by their identical obverse dies bind types 152 and 153, 152 and 154, 153 and 154, and as the key-stone to these combinations, 154 and 155, 155 and 156, we have certain proof that types 152–154 were struck at Ake. The letter O on type 154 appears to be the Phoenician letter γ , commencement of the name $\gamma\gamma$ (AK α) which in the next issue (155) was placed in the left field of the coins. The next issue is similar, but beneath $\gamma\gamma$ we now see the date π (20). The year $\pi \text{ III } \pi$ (25) is the latest date found in the Demanhur hoard, — at least careful inquiries have not elicited any more which can certainly be traced to this find.

The weights of the Ake issues show unusual irregularity, varying from 16.75 to 17.27 grammes per coin.

UNCERTAIN MINT.

These types have been separated from type 87 and placed here on account of their great similarity to the Ake issues. This similarity is seen in their styles, fabric, and minor peculiarities. Types 162–165 are struck from loose dies. Weights of uncirculated specimens vary between 17.10 and 17.24 grammes.

DAMASCUS.

Next to Arados, Damascus seems to have been the most prolific mint in the Syro-Phoenician district, probably on account of its strategical and commercial importance, as it commanded the shortest trade route between Egypt, Phoenicia and the province of Babylonia — the seat of Alexander's new capital.

Types 166 to 169, with $\overline{\text{APX}}$ in the field, are seen by their style to be the earliest issues. Types 170 to 184, with the forepart of a ram in the field, may chronologically be divided into two parts, an earlier and a later, by the relative position of the feet of Zeus. In the earlier, the right foot is partly hidden behind the left; in the later it is seen quite separate and sometimes well out

in the field of the coin. Coins showing this later type must have been issued but shortly before the hoard's burial, as all of the Demanhur specimens that I have seen are practically uncirculated.

Though loose dies were used at this mint, their adjustment (by hand) must have been carefully attended to, as every one of the 244 odd specimens inspected invariably shows the relative position of the dies thus ↑↑, with but slight variations to right or left. The private marks ., :, ÿ, ÿ̇, ∞, Φ, etc., do not seem to have indicated distinct issues or distinct *officinae* of the mint. They were used contemporaneously with each other throughout the entire period of activity in the Damascus mint—a period we can not well put at less than ten years. There are in my possession over a score of series of these Damascus coins, each series struck from one obverse die,—the reverses, however, bearing the above-mentioned marks in various combinations of three, four, and five for each series. These marks can not therefore have been used to indicate distinct issues or *officinae* of the mint, as, in this case, a common obverse die would hardly have been employed. It might be suggested that the marks were of some private nature, perhaps to distinguish die-cutters, magistrates, or other officials employed in the mint. It is curious to note that in later times, under the Roman Emperors Trajan Decius, Trebonian, and Volusian, a similar system of marking coins by dots was used in their eastern mint at Antioch.

The thirty-two uncirculated specimens weighed give as results: one 16.39; one 17.20; one 17.22; two 17.23; six 17.24; fourteen 17.25; five 17.26, and two 17.27 grammes; showing, with one remarkable exception, a closer maintenance of the norm than was usual among the coins we are studying.

UNCERTAIN MINTS.

The Eastern origin of this group of Alexander tetradrachms (183-8) is well attested both by the style and by the relationship of their dies, but to assign them to any one mint is as yet impossible. In a vague way they seem to be connected with a coinage attributed by Imhoof-Blumer⁵² to the mint at Babylon. In type 183 we have the M alone; soon a Φ appears in the field, and often a symbol beneath the M. In the following group we at first (type 189) see the Φ in the field and the M beneath the throne just as before, but this is followed by type 190, where we see the Φ placed beneath the throne and over the M. While the groups 183-188, and 189-190 seem thus connected by monograms, the divergence of their styles is so marked that it is impossible to assign them both to one mint. In style, types 189-190 are strikingly similar to the group which, as stated above, Imhoof-Blumer has attributed to Babylon. On these

⁵² *Numismatische Zeitschrift*, Vol. XXVII.

latter the M is still under the throne, but the Φ has been changed to the monogram M (perhaps to be resolved into the letters $\Phi\text{I}\Lambda\text{O}\Xi$), and a symbol has been added, sometimes in the exergue, sometimes in the field.

Uncirculated specimens of types 183–188 weigh 17.16, 17.21, 17.22, 17.26, and 17.27 grammes; of type 189, 17.21; of type 190, 17.20, 17.21 grammes.

UNCERTAIN MINTS.

Type No.	Symbol.	Refer.	Obv. dies.	Total dies.	Rev. dies.	Relation of dies.	Specimens in find.	Plate.
183	M	—	1	6	1	Adjusted	2	
184	Φ M	—	6		26	"	28	XXV, 8
185	Φ M DOLPHIN	—	1		2	"	2	XXV, 9
186	Φ M KYLIX	—	1		1	"	2	
187	Φ M TRIDENT	—	1		1	"	1	
188	Φ M GRAPES	—	1		2	"	2	XXV, 10
							37	
BABYLON (?).								
189	Φ M	—	2		2	Adjusted	2	XXV, 11
190	Φ } M }	M. 805	3		6	"	6	XXV, 12
							8	

The coins below may be divided into four groups or sections, as indicated over types 191, 194, etc. In Group A are those with the symbol in the *exergue*, while a monogram composed of M combined with Φ between its upright bars, and placed over the letter M, is beneath the throne. This monogram appears on *all* the types from 191 to 240, both inclusive, but is omitted below, for convenience in tabulating. Group B is similar to Group A, but the symbol is in the *field*; the monogram and M are beneath the throne. Group C has the symbol in the *field over* M in each case (the M omitted in the table), and the monogram *alone* is under the throne. (Type 234 of this Group, and 240 of Group D, have no symbol, but only M, as in the table.) Group D is similar to C but with the title $\text{BA}\xi\text{I}\Lambda\text{E}\Omega\xi$. Groups A and B are contemporaneous, and were followed by Groups C and D in the order named. An obverse die will often be found used for two groups, such as A and B, or B and C, or C and D, but never otherwise, thus showing that little time elapsed between the striking of the several groups. In the four groups (191–240) there are a total of sixty-one dies.

BABYLON (Circa 330–323 B. C.).

GROUP A.

Type No.	Symbol.	Refer.	Obv. dies.	Rev. dies.	Relation of dies.	Specimens in find.	Plate.
191	KADUKEUS	M. 690	5	8	Loose	13	XXVI, 1
192	CLUB	—	4	5	"	6	XXVI, 2
193	TRIDENT	—	3	4	"	5	XXVI, 3

GROUP B.

Type No.	Symbol.	Refer.	Obv. dies.	Rev. dies.	Relation of dies.	Specimens in find.	Plate.
194	BIRD	—	4	4	Loose	12	XXVI, 4
195	WREATH	—	4	6	"	13	XXVI, 5
196	STAR	M. 684	4	4	"	5	XXVI, 6
197	BEE	M. 697	7	8	"	21	XXVI, 7
198	TORCH	M. 704	5	8	"	13	XXVI, 8
199	SERPENT	—	5	7	"	9	XXVI, 9
200	DOLPHIN	M. 699	5	5	"	7	XXVI, 10
201	IVY	M. 691	4	4	"	4	XXVI, 11
202	LION SCALP	M. 694	4	5	"	6	XXVI, 12
203	NIKE	M. 687	3	3	"	4	XXVII, 1
204	DEMETER	M. 701	3	2	"	3	XXVII, 2
205	PICK	—	2	1	"	3	XXVII, 3
206	GRAPES	M. 693	4	6	"	7	XXVII, 4
207	Ω	M. 678	3	3	"	6	XXVII, 5
208	PROW	—	1	1	"	1	XXVII, 6
209	AKROSTOLION	—	1	1	"	1	XXVII, 7
210	ROSE	—	2	2	"	3	XXVII, 8
211	KYLIX	—	4	4	"	8	XXVII, 9
212	FULMEN	M. 679	3	4	"	6	XXVII, 10
213	TRIDENT	—	2	2	"	2	XXVII, 11
214	WHEAT EAR	M. 700	4	5	"	9	XXVII, 12
215	EAR (?)	—	2	2	"	2	XXVIII, 1
216	LION	M. 705(?)	1	1	"	1	XXVIII, 2
217	SICKLE	—	3	4	"	6	XXVIII, 3
218	KADUKEUS	M. 689	1	1	"	1	XXVIII, 4
	DOUBTFUL				"	7	

GROUP C.

219	CLUB	M. 682	4	4	Loose	4	XXVIII, 5
220	STAR	M. 683	2	2	"	2	XXVIII, 6
221	BEE	M. 696	2	2	"	2	
222	CAP	M. 707	2	2	"	4	XXVIII, 7
223	NIKE	M. 686	1	1	"	3	XXVIII, 8
224	EAR (?)	M. 702	2	2	"	2	XXVIII, 9
225	GRAPES	M. 692	6	6	"	7	
226	KADUKEUS	M. 688	3	3	"	3	XXVIII, 10
227	TRIDENT	M. 680	1	1	"	2	XXVIII, 11
228	DOLPHIN	M. 698	2	2	"	2	XXVIII, 12
229	KYLIX	—	3	5	"	5	XXIX, 1
230	FULMEN	—	2	3	"	3	
231	RAKE (?)	—	1	2	"	2	XXIX, 2
232	SICKLE	M. 703	1	2	"	2	
233	TORCH	—	1	1	"	1	
234	M	M. 671	3	2	"	2	

REATTRIBUTION OF CERTAIN TETRADRACHMS

GROUP D.

Type No.	Symbol.	Refer.	Obv. dies.	Rev. dies.	Relation of dies.	Specimens in find.	Plate.
235	EAR (?)	—	2	3	Loose	3	XXIX, 3
236	CLUB	—	1	1	"	1	XXIX, 4
237	GRAPES	—	2	2	"	2	
238	TORCH	—	1	1	"	1	
239	SICKLE	—	1	1	"	1	
240	M	M. 672	3	5	"	11	

BABYLON (323-317 B. C., and later).

241	ΦΙΛΙΠΠΟΥ ΒΑΣΙΛΕΩΣ M B	M. 103	2	2	Loose	1	XXIX, 5
242	ΦΙΛΙΠΠΟΥ ΒΑΣΙΛΕΩΣ M B	M. 104	2	2	"	2	XXIX, 6
243	ΦΙΛΙΠΠΟΥ ΒΑΣΙΛΕΩΣ M AY	M. 99	6	6	"	6	XXIX, 7
244	ΑΛΕΞΑΝΔΡΟΥ " M AY	M. 1272	8	12	"	6	XXIX, 8, 9

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ALEXANDRIA (EGYPT).

245	FULMEN Π	M. 10	1	2	Fixed	2	XXIX, 10
246	FULMEN ΔΙ	M. 7	6	7	Adjusted	8	XXIX, 11
247	RAM'S HEAD Δ	M. 1517	4	7	Fixed	8	XXIX, 12
248	PEGASOS Π	M. 601	1	1	"	1	XXX, 1

UNCERTAIN MINTS.

Type No.	Symbol.	Refer.	Obv. dies.	Total obs.	Rev. dies.	Relation of dies.	Specimens in find.	Plate.
249	ROSE ΔΙ	M. 123	1	5	1	Adjusted	1	XXX, 2
250	ROSE ΔΙ	M. 124	5		15	"	16	XXX, 3
251	WREATH ΔΙ	M. 550	22	24	39	Loose	46	XXX, 4
252	ΔΙ Ε	M. 217	3		7	"	8	XXX, 5
253	ΑΙ ΒΞ	M. 1483	1	1	3	"	3	XXX, 6
254	-Β ΒΞ	M. 1482	1		2	"	2	XXX, 7
255	ΦΙ ΒΞ	—	1		2	"	2	XXX, 8
256	WREATH Φ 3	—				Fixed	1	XXX, 9
257	TROPHY Φ	—				"	1	XXX, 10
258	PROW	—	4		13	"	17	XXX, 11, 12

116

Grand total, 2645

BABYLON (Circa 330-323 B. C.).

In assigning this series to Babylon we are but following Imhoof-Blumer, who, in 1896, first proposed this interesting and plausible attribution.⁵³ Sir Henry Howorth in the *Numismatic Chronicle*, Fourth Series, Volume IV, came out very strongly against this attribution, and seemed inclined to revert

⁵³ The late J. P. Six also endorsed this attribution. See *Num. Chron.*, Third Series, Vol. XVIII, 1898.

once more to Müller's rather antiquated work. In a short but very able rejoinder⁵⁴ Imhoof-Blumer disposed of the objections raised and maintained his position. Since then, no one, to my knowledge, has seriously attempted to question his attribution, and I think we are justified in following it here—especially as certain evidences furnished by a study of the Demanhur hoard would seem to be for, rather than against, considering Babylon as one of Alexander's mints. It would be strange indeed if he had not established an important mint in this great Asiatic metropolis, which he intended should henceforth be the capital of his empire.

The dates given for this series are determined on the one hand by the fall of Babylon and the capture of the Persian treasures lying in Susa (from which our coins may well have been struck) in November of the year 331 B. C., and on the other hand by the changing of the inscription ΒΑΣΙΛΕΥΣ ΑΛΕΞΑΝΔΡΟΥ to ΒΑΣΙΛΕΥΣ ΦΙΛΙΠΠΟΥ which probably took effect shortly after the accession of Arrhidaeos to the throne in 323 B. C.

The coinage must have been enormous, an inference drawn not only from the comparative commonness of the coins, but also from the fact that such a large number of magistrates were engaged in its production. As it did not stretch over a long number of years, many magistrates must have been officiating at one and the same time. This fact is furthermore proved by my records, which show several instances where as many as five, six, or even seven distinctive reverse symbols are connected with only one obverse die. As ancient dies were seldom able to last any length of time, this would mean that the magistrates represented by each of these groups were all officiating within the short space of a year at most.

The results obtained from weighing thirty-five uncirculated specimens are as follows: one 17.14; one 17.15; one 17.16; four 17.18; seven 17.19; nine 17.20; five 17.21; one 17.22; three 17.23; one 17.24; one 17.26; one 17.27 grammes. This reveals that at the Babylonian mint there was considerable fluctuation in the weights, but within certain well defined limits.

BABYLON (323-317 B. C., and later).

Of this group types 243 and 244 only were included by Imhoof-Blumer among the issues he attributed to Babylon. The same style, fabric, and workmanship however, is also found on coins of types 241 and 242. This points with no uncertain finger to a common mint; furthermore this mint was undoubtedly that of types 191-240,—in other words, Babylon. On close inspection we shall find that all the reverses of types 191 to 240 show a Zeus-

⁵⁴ *Numismatische Zeitschrift*, Vol. XXIII. *Numismatic Chronicle*, Fourth Series, Vol. VI.

figure with legs parallel, and feet resting on a footstool, and also that an exergual line never appears except spasmodically on a few reverses of types 191–218 as the result of the work of a single die-cutter who chanced to favor this device. With type 219 the exergual line is definitely abandoned until a later period. In my possession there is a tetradrachm inscribed $\text{BA}\xi\text{I}\Lambda\text{E}\Omega\xi\ \Phi\text{I}\Lambda\text{I}\Pi\text{P}\text{T}\text{OY}$ (var. M. 85) which, besides identical style, shows the same peculiarities.⁵⁵ This coin forms the transition to types 241–244. Coins of type 241 still lack an exergual line, but the right leg of Zeus is drawn back behind the left. Types 242 and 243 follow with the same peculiarities. With type 244 $\text{BA}\xi\text{I}\Lambda\text{E}\Omega\xi\ \Phi\text{I}\Lambda\text{I}\Pi\text{P}\text{T}\text{OY}$ is changed again to $\text{BA}\xi\text{I}\Lambda\text{E}\Omega\xi\ \text{A}\Lambda\text{E}\Xi\text{AN}\Delta\text{POY}$, probably on receipt of the news of the death of Philip Arrhidaeos and the consequent accession of Alexander IV to the sole power. With this type we also see the disappearance of the footstool and the addition of an exergual line. Thus my reasons for separating types 235–240 from type 244, though their inscriptions are identical [$\text{BA}\xi\text{I}\Lambda\text{E}\Omega\xi\ \text{A}\Lambda\text{E}\Xi\text{AN}\Delta\text{POY}$], and interpolating the $\text{BA}\xi\text{I}\Lambda\text{E}\Omega\xi\ \Phi\text{I}\Lambda\text{I}\Pi\text{P}\text{T}\text{OY}$ coins, are based solely on certain peculiarities of style. This arrangement alone will satisfactorily display the commencement, progress and development of certain individualities of style and type peculiar to our series up to their culmination (so far as we are concerned) in type 244.

The weights vary between 17.15 and 17.21 grammes for coins of types 241 to 244.

ALEXANDRIA (EGYPT).

Svoronos' attribution of these particular Alexanders to Egypt⁵⁶ is probably correct — at least no contrary evidence can be deduced from a study of the Demanhur find. Of type 247, Sig. Dattari writes me, the hoard contained over a hundred specimens, mostly in the finest condition. This fact speaks well for an Egyptian origin. Svoronos, in the work cited, thinks type 248 was struck *circa* 309–308 B. C., by Ptolemy I, for the use of his garrison in Corinth. If this is accepted, we shall have to bring types 246 and 247 down to a later date than that at which he has put them,⁵⁷ for the styles of the three pieces are contemporaneous. It must be noted that practically all the coins of these three types from the find were in uncirculated condition, the remainder showing but very slight wear, which all goes to show that they were struck but a short time before the hoard's deposit.

Uncirculated specimens weighed: Type 245, one 17.24; type 246, one 17.25; two 17.24; type 247, one 17.25; type 248, one 17.20 grammes.

⁵⁵ Inasmuch as the specimen in question did not come from the Demanhur deposit, it is not shown in the plate.

⁵⁶ Svoronos: *Tà Νομίσματα τοῦ Κράτους τῶν Πτολεμαίων*. Athens, 1904.

⁵⁷ *Circa* 330–323 B. C., for type 247; 323–317 for type 246.

UNCERTAIN MINTS.

The close resemblance of types 249 and 250 to the varieties we have given to Egypt seems to indicate the same mint. Certainly Müller's assignment to Traclium in Macedonia may be rejected. All the Demanhur specimens of these types were in mint state. Weights: 17.20, 17.22, 17.23, 17.24, 17.25, 17.26 (two coins).

Types 251 and 252 are from a common mint, as some of their obverse dies are identical. Weights: 17.18, 17.23, 17.26, 17.28 (two coins), 17.30 grammes.

Types 253, 254, and 255 are also from one mint. So far, I have found only a single obverse die used with the three reverse varieties. Weights: 17.23 for two coins of type 253; 17.20 for a coin of type 254; and 17.16 and 17.21 for two coins of type 255. A specimen of type 256 weighs 17.25 grammes; another, of type 257, weighs 17.24 grammes.

Type 258 is certainly of Eastern origin. The earliest ones are of fine style (Plate XXX: 11), and weigh between 17.22 and 17.26 grammes per coin. There seems to have been a later issue, of very poor style (Plate XXX: 12). The weights of these latter fall to 17.09 and 17.13 grammes per coin.

RESTRICKES, COUNTERMARKS, AND "GRAFFITI."

RESTRICKES. — While a great many of the Demanhur Alexanders show unmistakable signs of having been struck over old flans, in only two cases is it possible to distinguish enough of the original coin to place it in the group to which it once belonged. In one case we have type 89 (attributed to Cilicia) struck over a coin from the Pella mint (one of types 28–33); in the other we have type 244 (attributed to Babylon) struck over a coin of type 125 of uncertain mintage. This habit of restriking seems to have been fairly common in the Eastern mints, judging from the many examples found which show evident signs of such a practice.

COUNTERMARKS. — Countermarks appeared only three times on the coins of Demanhur origin which I have been able to inspect. One countermark consists of a pellet in the centre of a sunken circle, with six rays running out from the pellet to the circle's edge—the whole resembling a wheel. This occurred once on a coin of type 1. The second countermark in general appearance is not unlike certain ones often found on Fourth century coins of Crete. It seems to consist of a raised, oblong object, surrounded by pellets. This particular countermark occurred once on a coin of type 28 (Pella), and once on a coin of type 129 (Arados).

"GRAFFITI."—"Graffiti," or letters scratched on the surface of the coin, are very common on the Demanhur specimens. Particularly often are they found on the issues which have been attributed to Pella. Such letters are: A, Δ, ΔΑ, Λ, ΛΑ, M, N, ΠΑ, Σ, X, XI, IK, and others now indecipherable. Many of these occur also on coins of Cilician fabric, or Babylonian, Phoenician, and other Eastern mintages. On these, too, we often find Phoenician letters: ♂, ♀, ♂. In a few cases we have symbols like the "pentalpha" (☆), arrow-points, etc., but these are rare. None of the "chopmarks" so often seen on Athenian and Ptolemaic tetradrachms from Egyptian finds have occurred on the Alexanders known to have come from Demanhur.

BURIAL OF THE HOARD.

The obvious and most definite aid in determining the approximate date at which the great hoard of Demanhur was buried is found in the dated series of the Ake mint. Of this series the only dates represented by coins in the find are 20, 21, 22, 23, 24, and 25. Unfortunately there chance to be two eras to which these may refer; namely, the regular era of Alexander the Great, beginning with the year 336 B. C., and the era of Alexander in Phoenicia, commencing with the year 333 B. C., in which he overthrew the Persian power at the battle of Issos, and liberated the Phoenician cities from the Persian yoke. If we take the last year (25) known to have been present in the find as a criterion on which to base calculations for the earliest possible date at which the hoard could have been buried, we arrive, according to the first era, at 311 B. C., or according to the second, at 308 B. C. Rouvier's arguments⁵⁸ for the second (333 B. C.) as that used throughout the Phoenician cities are most convincing, and to my mind should be accepted here. It certainly was the era used at Sidon, and evidences of the latest issues of Ake point to the same conclusion for this city. On the other hand the hoard itself, though in a purely negative way, seems to favor 311–310 B. C., as the date of deposit, for we notice that Ptolemy's first issue (attributed by Svoronos to 316–311 B. C.) of types other than Alexander's, was present,⁵⁹ but none of his later issues (after 311 B. C.); the Pella issues of the hoard, as we have seen, fit very nicely into the period 336–311, but not later; the year-numbers of the Ake coins *may* refer to the era 336 B. C.; the Babylonian series seems to stop with the issue of the years 316 to *circa* 315 B. C., etc. A conservative numismatist may therefore prefer to place the date of burial at about 311–310 B. C. Certainly the hoard was not buried *before* 311 or much after 307 B. C.

⁵⁸ *Revue Numis.*: 1909, pp. 321 *et seq.*

⁵⁹ Sig. Dattari, in a letter to me, confirms the presence in the hoard of ten specimens bearing the types: *Obv.* Beardless male head (Alexander the Great?) in

elephant's head-dress. *Rev.* Seated Zeus, as on the regular Alexander tetradrachms. See Svoronos: *Ta Nomismata tou Kratous tōn Ptolemaion*, Plate I: Nos. 12 to 18.

RÉSUMÉ.

The great value which the Demanhur hoard holds for science lies in the fact that it furnishes us with some concrete evidence as to the comparative importance of the various mints during the period 336 to 310 B. C., and the relative magnitude of their several coinages. Thus we learn that the most important of the many mints in operation throughout Alexander's empire was undoubtedly Pella, and this not only during his life-time, but also during that of his two successors, Philip Arrhidaios, and Alexander, son of Roxana:— for over one-third of the coins which have been brought to my notice from the Demanhur hoard belong to the Pella series. This alone shows what an important *rôle* this mint once played in the economy of the empire, for it must be remembered that our hoard was probably formed and was certainly *buried* in Egypt. Egypt had always been and undoubtedly continued to remain, at least during Alexander's reign, in much closer commercial relations with the great cities of the Phœnician coast and inland as far as Babylon, than with Macedonia and the north. The preponderance of Pella coins is therefore significant, — doubly so when we notice that other northern mints are but scantily represented in the find.⁶⁰

Moreover, the Pella issues seem to have followed each other in rapid and continuous succession throughout the period covered by the hoard,⁶¹ whereas the other contemporary Alexander mints, with the possible exception of Babylon, show a much more irregular and spasmodic activity in their coinage. Aside from the fact that the actual coins of the Pella mint outnumber those of any other source in the Demanhur find (which of itself might be due to pure chance), we fortunately have an incontrovertible piece of evidence showing the preëminence of Pella, — namely, the total number of obverse and reverse dies made and used there, many times outnumber those employed at any other one mint during the same period. We therefore conclude that even though the mints of the great commercial cities of the East, such as Arados, Sidon, and Babylon and others, played an important part in the administration of Alexander's empire, it was none the less a secondary one, and that the first place was undoubtedly occupied by Pella. This city then, as the capital of Macedonia, as the administrative centre of Alexander's dominions in the West, as his base of supplies, and as the recruiting grounds for the most powerful and reliable portion of his army — the Macedonian — issued the bulk of his coinage, and continued to do so for some time after his death.

⁶⁰ By less than one hundred specimens.

⁶¹ Our previous study of the actual coins shows that all the various magistratal issues of Pella are linked together in an almost unbroken chain, from first to

last, by a series of identical obverse dies; thus proving that there was no cessation of coining during this period, and that each series followed closely on the heels of its predecessor.

It is interesting to note in this connection what time has preserved for us in the pages of Arrian and Diodorus Siculus. Arrian, XVI, says: "He [Alexander] also sent Menes down to the sea, as governor of Syria, Phoenicia, and Cilicia, giving him 3,000 talents of *silver* [note this, especially] to convey to the sea, with orders to dispatch as many of them to Antipater as he might need, to carry on the war against the Lacedaemonians."⁶² Diodorus (Book XVII) says that Menes used 1,000 talents; hence Antipater received 2,000 talents, or roughly speaking about \$2,500,000 in silver to coin. Now we know that Pella was his administrative residence, and that there he recruited his army. Hence there can be no doubt that it was the Pella mint which turned this immense amount of bullion into coin of the realm to pay the soldiery. In this little passage therefore we have a neat explanation why so much silver was coined there. We are sure that more treasure-fleets reached Macedon from Alexander, as hoard after hoard of Persian wealth fell into his hands in his triumphal progress eastward. In Diodorus, Book XVIII, 12, we read: "He [Antipater] left Macedonia . . . with all the fleet, composed of one hundred and ten triremes, which Alexander had used to transport to Macedonia the royal treasures of the Persians." This is in connection with Antipater's preparations for the Lamian war and his advance into Thessaly. One hundred and ten triremes could transport a great deal of bullion, and a considerable part of this was no doubt intended for Antipater to use in defraying the expenses of the war. That he turned this into coin, and at Pella, is a reasonable deduction.

It is also rather interesting to note that numerically, both in actual coins and in obverse and reverse dies, the largest of the Pella issues are types 28-33. The sequence of the Pella types as given, is proved to be approximately correct by the sequence of identical obverse dies. If my attribution of types 36-39 to the year 318 or thereabouts is correct, it follows that types 28-35 cover the years between Alexander's death and 319 B. C., — in other words the exact period when Antipater was undergoing extraordinary expenses for the Lamian war, to meet which in his capacity of regent he must have coined great quantities of money at his capital, Pella.

The Demanhur hoard makes it clear that the provinces under the direct jurisdiction of the royal house of Macedon were well supplied with regal coinage, struck within their boundaries, during the reigns of Alexander and his successors. Thus we have a large and busy mint at Pella, supplemented by certain subsidiary mints in Macedon and Thrace, supplying the necessary coinage for the European provinces. Hellas and the coast of Asia Minor were provided for by the autonomous issues of their principal cities; after the

⁶² Translation of E. J. Chinnock, M. A.: London, 1893.

death of Alexander many of these cities lost their autonomy, and their coins were probably supplanted by more or less spasmodic issues of Alexander coins. Cilicia seems to have been administered by royal appointees. We are certain that all true autonomous coinage ceased with Alexander's conquest, and a coinage of regal character succeeded. This is represented by types 86 to 127. For Syria and Phoenicia the mints of Arados, Sidon, Ake, and Damascus issued coins of Alexander's types in huge quantities. These issues may be civic rather than regal, as in all cases the cities' names appear on the coins (in abbreviated form), and we know that Alexander allowed these cities a quasi-autonomous form of government. A few coins have been attributed to Egypt, and some collected under "Uncertain Mints" seem to have been struck there as well.

We now have the large and evidently very important coinage bearing the monogram 𐌸 (types 191-240) still to be accounted for; and at the same time the province of Babylonia, the ancient centre of Asiatic culture and power, the seat of Alexander's new capital, is left entirely without a coinage. Can this be merely a coincidence? It does not seem possible. The evidences that can be adduced to support this are: First, — All of the principal cities and districts outside of Babylon and the valleys of the Tigris and Euphrates rivers seem so well supplied with Alexandrian coinages, that it is difficult, if not impossible, to find a gap which will contain such a large series. Second, — The style of these coins is highly individualized, and, taken as a series, entirely unlike any of the others which make up the Demanhur hoard. Third, — The mint where the series was struck lay to the east of the Mediterranean, because (a): Not only is the style unlike anything in Greece or Asia Minor, but is identical with certain thick coins, *Obv.* Seated Baal (or Zeus); *Rev.* Lion prowling to left, — which are certainly Eastern, and furthermore, as a rule, are found to the east of Syria.⁶³ (b): The style is continued on certain coins of Seleucus I, of Alexander types but inscribed ΒΑΣΙΛΕΩΣ ΣΕΛΕΥΚΟΥ, which can not well be attributed west of Syria. (c): Dr. Head in his *Historia Numorum*, p. 198, says: "Decadrachms also exist, but are of great rarity; didrachms, triobols, and obols occur somewhat more frequently. All coins of these unusual denominations appear to be of Syrian origin." In fact, some of the very few known specimens of the decadrachm⁶⁴ were found at Nippur, a site in the district of Babylonia. The Babylonian origin of the series seems to be fairly well attested, and so completes the chain of provinces belonging

⁶³ Imhoof-Blumer in *Numismatische Zeitschrift*, Vol. XXIII; *Numismatic Chronicle*, Fourth Series, Vol. VI.

⁶⁴ All of Alexander's decadrachms are of *one* style; this style is identical with that of the series under discussion.

to Alexander's empire, where it is most probable that a coinage bearing his particular types was struck.

As it has been my intention that this monograph should deal solely with the issues of the Pella mint from 336 B. C., to *circa* 307 B. C., and with the Demanhur hoard which illustrates it, I have in no place drawn attention to such gold or subsidiary silver and bronze coins⁶⁵ as were struck in conjunction with the silver tetradrachms of Alexander. The latter alone went to form the hoard, and so have alone been discussed here.

In closing I would like to express the hope that collectors and museums possessing important specimens known to have come from this great Egyptian find will not fail to publish them, in order that the sum total of such information which can be drawn from a study of the hoard may be further increased or definitely confirmed.

⁶⁵ Except in the case of Pella.



CORRECTIONS.

Page 7, : to the second group of three types (x, xi, xii) add "VII KANTHAROS—194—11."

Page 9, line 21: add "VII Kantharos" to the three types in Parentheses.

Page 9, line 22: for "three" read "four." Add '11' after '10.'

Page 37, fifth column: Top figure '14' should read "15."

Page 46, : To note at bottom add "Vol. I."

~~Page 48, last line: substitute "Seleucus Nicator" for "Ptolemy I of Egypt."~~

Page 52, last line of text: insert "obverse" before "dies."



I - 1

II - 2

I - 3

III - 4



II - 5

IV - 6

V - 7



III - 8

VI - 9

VI - 10

VII - 11

TETRADRACHMS OF ALEXANDER THE GREAT. — PLATE I.



VI-1



VIII-2



IX-3



IX-4



X-5



X-6



XI-7



X-8



XI-9



XII-10



VII-11





XII a - 1

XIII - 2

XIV - 3

XV - 4



XIII - 5

XVI - 6

XV - 7

XVII - 8



XIII - 9

XVIII - 10



TETRADRACHMS OF ALEXANDER THE GREAT.—PLATE 4.



XIX - 1

XXI - 2

XXIV - 3



XIX - 4

XXV - 5

XXVI - 6

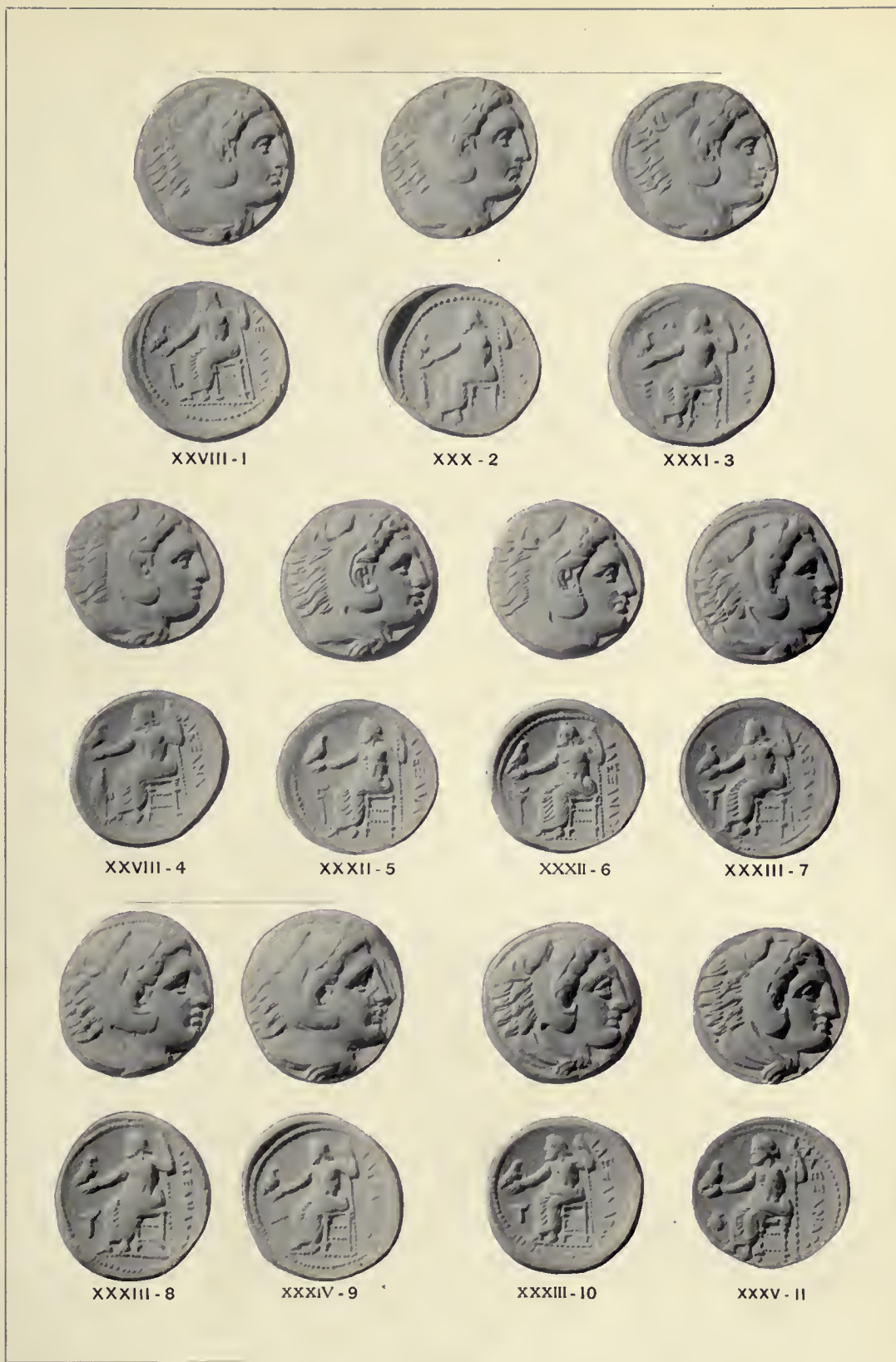
XXVII - 7



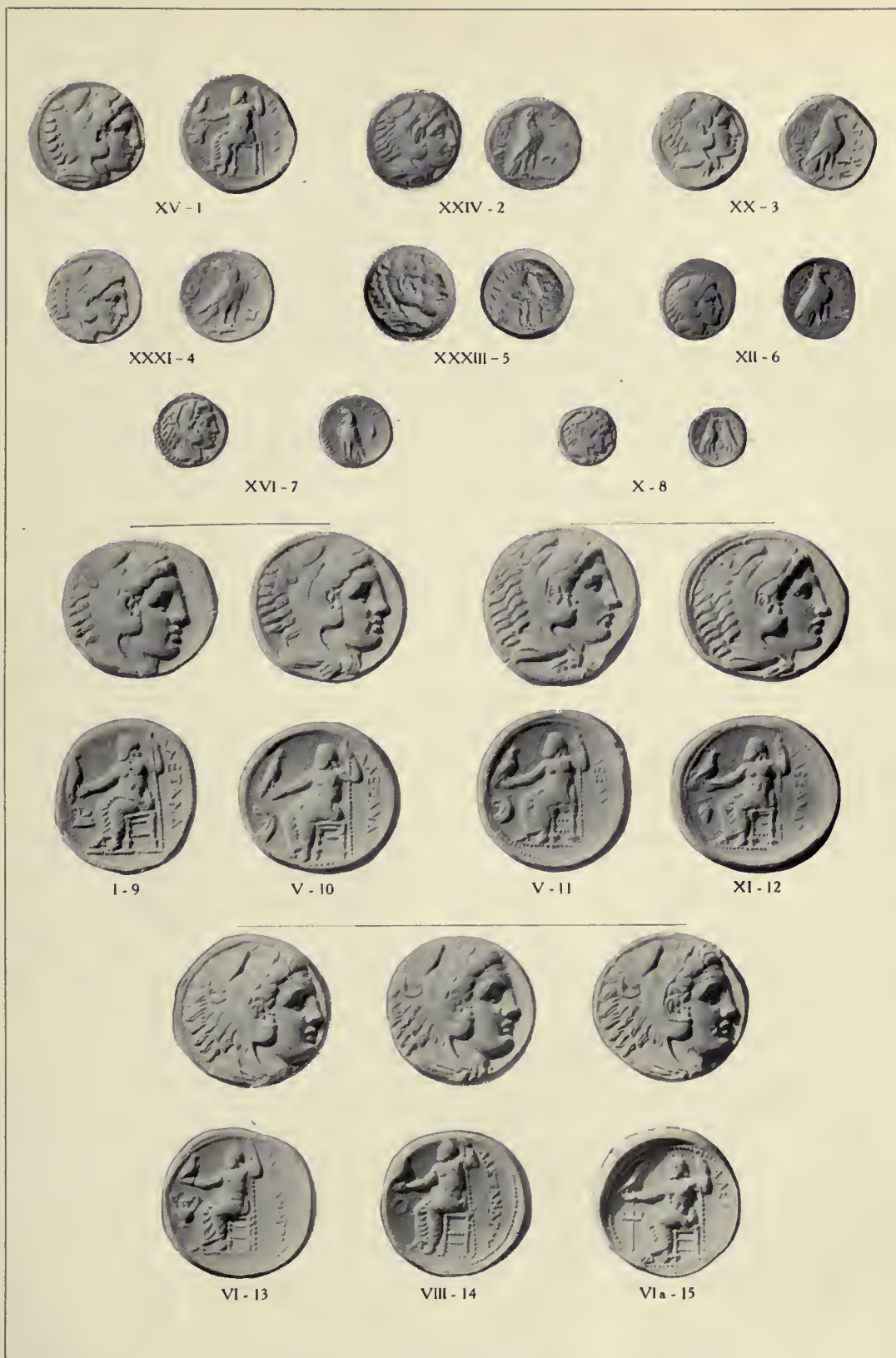
XXVIII - 8

XXIX - 9

XXX - 10



TETRADRACHMS OF ALEXANDER THE GREAT.—PLATE 6.



TETRADRACHMS OF ALEXANDER THE GREAT.—PLATE 7.



XXXVI - 1



XXXVII - 2



XXXVIII - 3



XXXIX - 4



XXXVIII - 5



XXXIX - 6



XXXVII - 7



XXXIX - 8



XXXVI - 9



XXXVII - 10



XXXIX - 11



XXXVII - 1

XXXVIII - 2

XXXVIII - 3

XXXVIIIa - 4



XXXVIIa - 5

XXXIXa - 6

XXXIXa - 7

XL - 8



XXXVIIa - 9

XXXIXa - 10

XXXVIIa - 11

XXXVIIIa - 12



XXXVIIa-1

XXXVIIIa-2

XXXIXa-3



XLI-4

XLII-5

XLIII-6



XLI-7

XLII-8

XLI-9

XLIII-10



XLII - 1

XLIII - 2

XLII - 3

XLIV - 4



XLI - 5

XLII - 6

XLIII - 7



XLI - 8

XLII - 9

XLIII - 10

XLIV - 11



XLII - 1

XLV - 2

XLVI - 3

XLVII - 4



XLVII - 5

XLVIII - 6

XLVI - 7

XLVIII - 8



XLV - 9

XLVIII - 10

XLIXa - 11

La - 12



XLIX - 1

XLIXa - 2

La - 3

Lla - 4



LIV - 5

LV - 6

LVI - 7

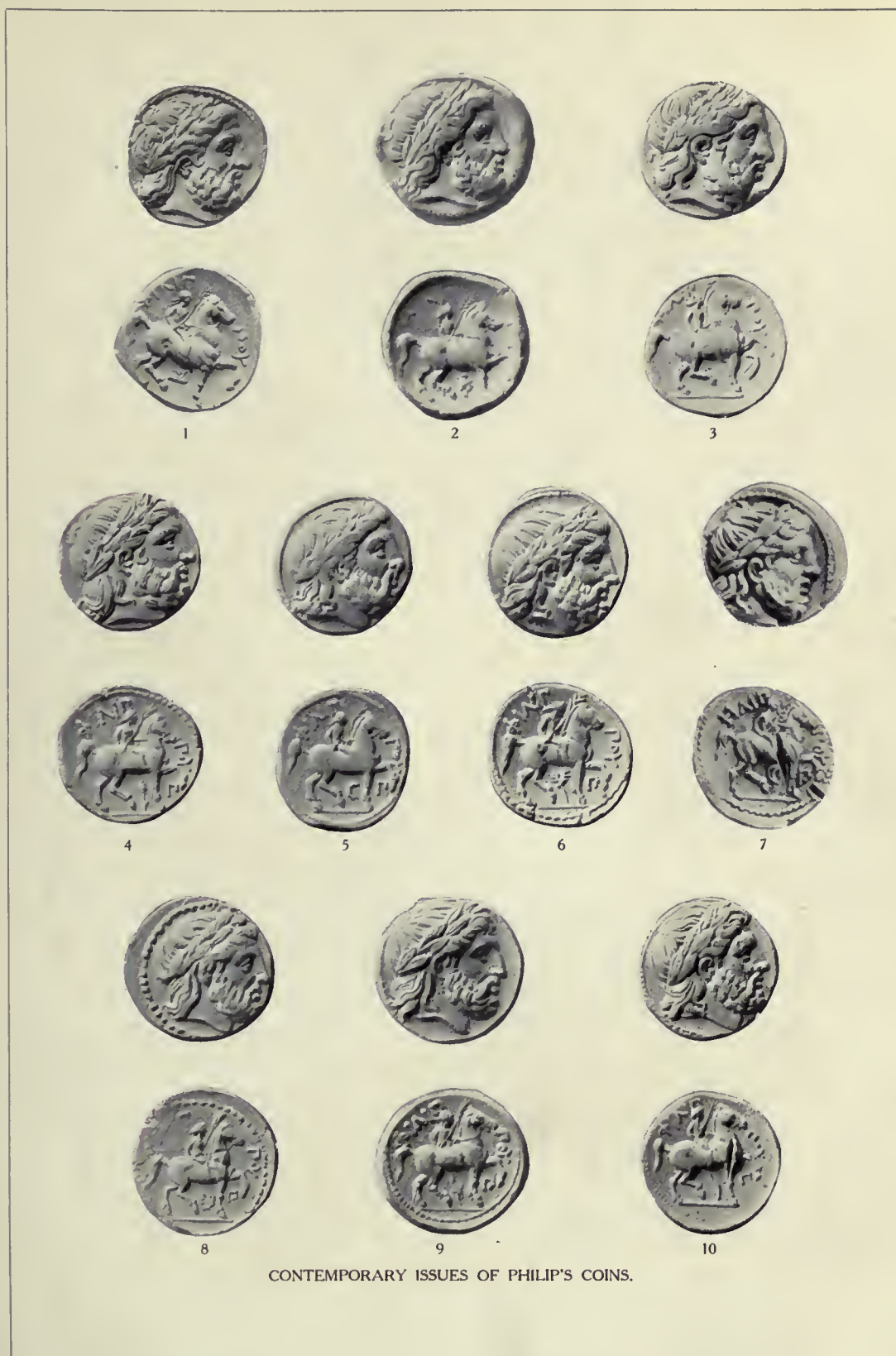
LVII - 8



LVIII - 9

LIX - 10

LX - 11



TETRADRACHMS OF ALEXANDER THE GREAT—PLATE 14.

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1



2



3



4



5



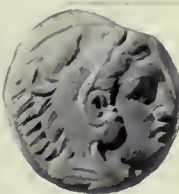
6



7



8



9



10



11



12

RECENT ADDITIONS.

DIDRACHMS AND TETRADRACHMS OF ALEXANDER THE GREAT—PLATE 15.

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UNCERTAIN MINTS.



UNCERTAIN MINTS.

TETRADRACHMS OF ALEXANDER THE GREAT.—PLATE 17.

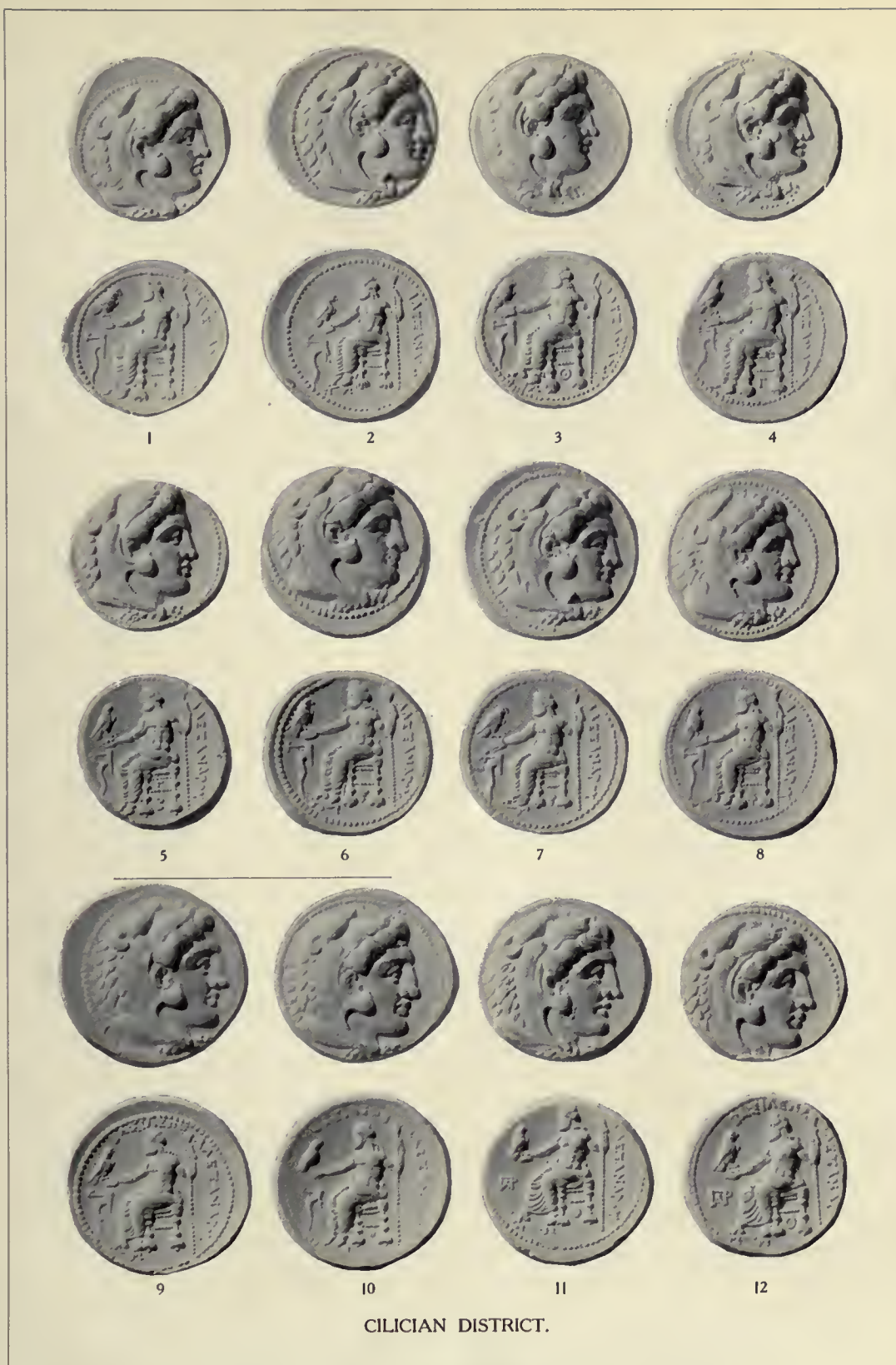


UNCERTAIN MINTS.

TETRADRACHMS OF ALEXANDER THE GREAT. — PLATE 18.



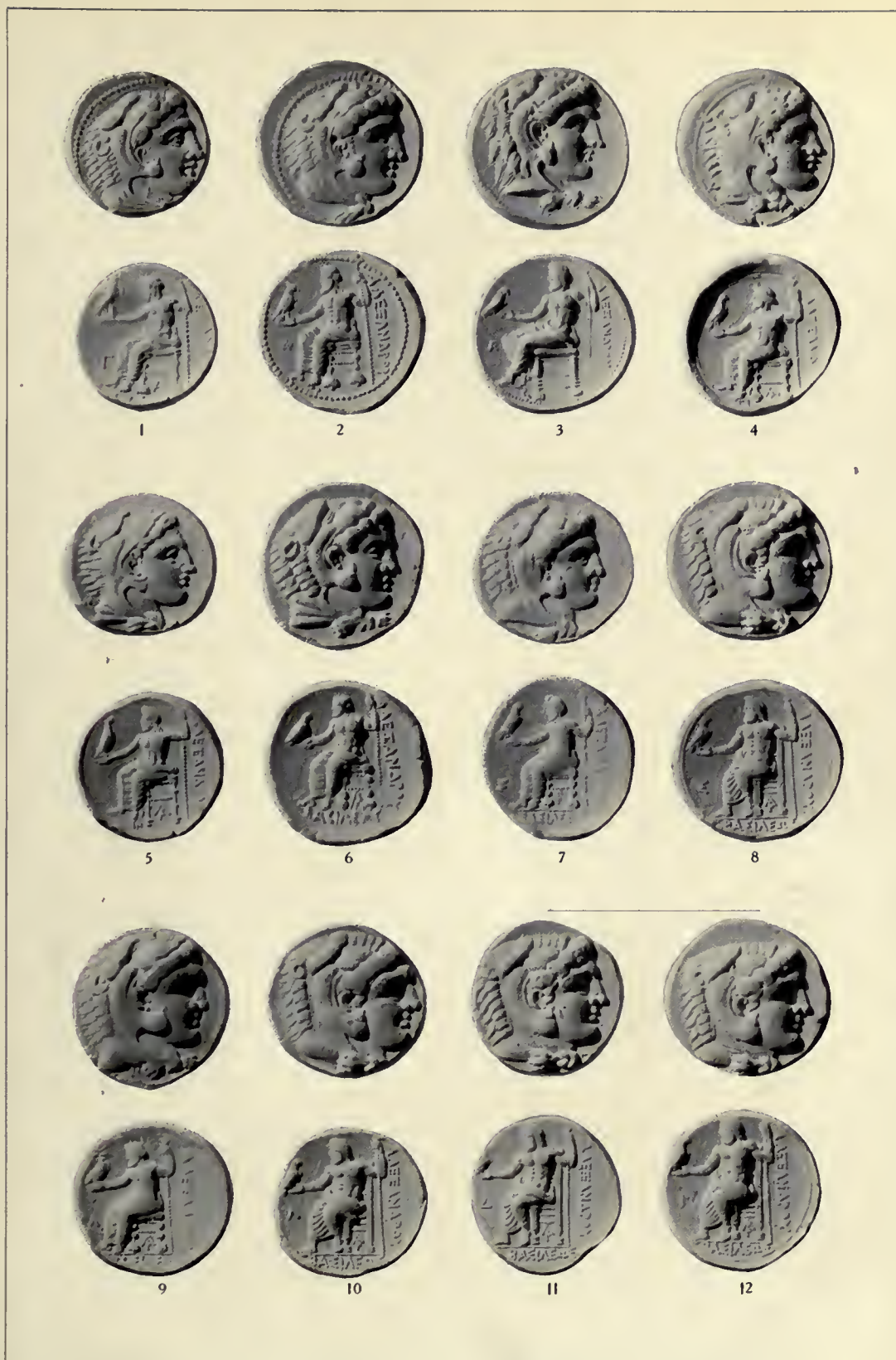
TETRADRACHMS OF ALEXANDER THE GREAT — PLATE 19.



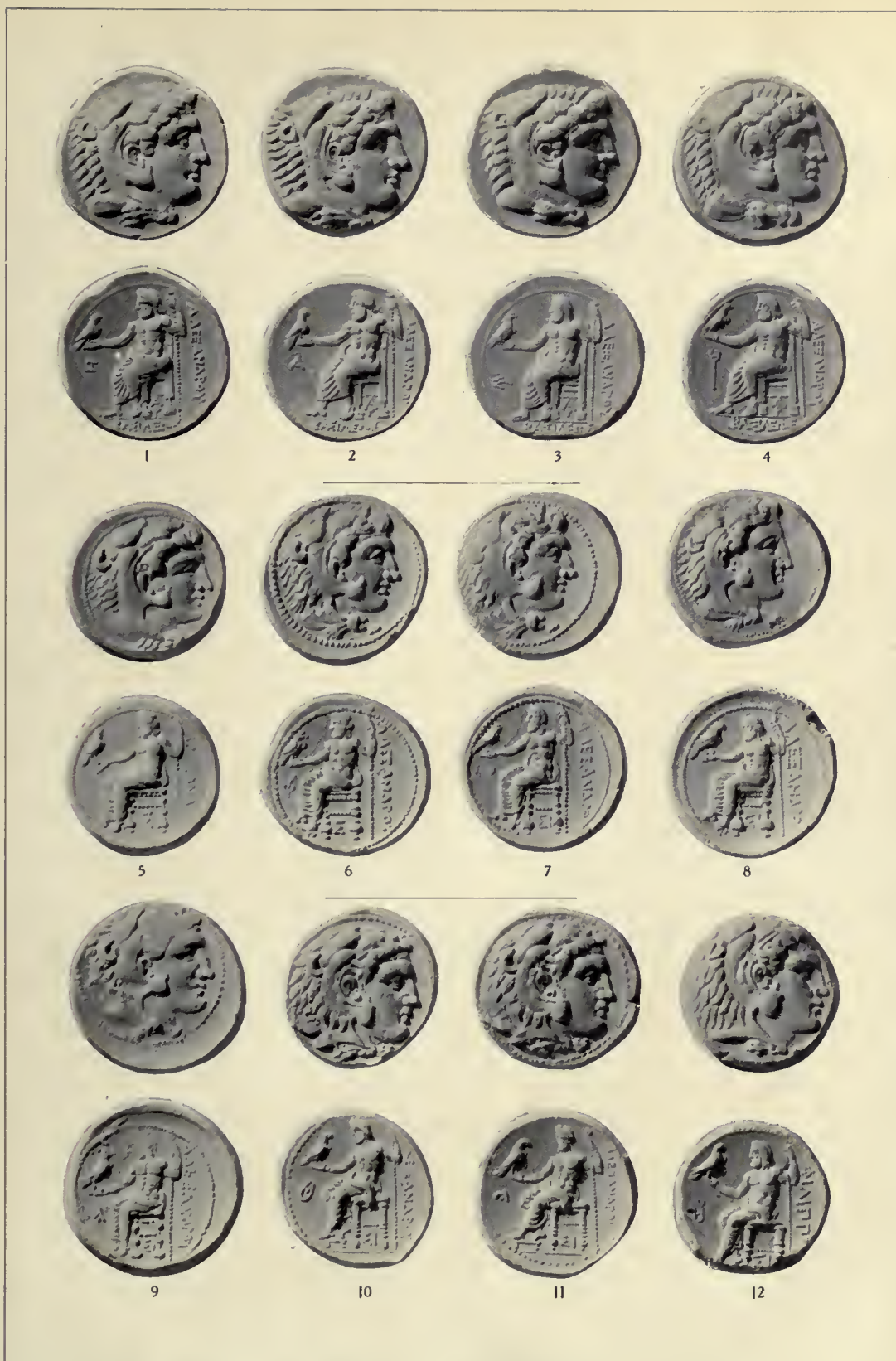
TETRADRACHMS OF ALEXANDER THE GREAT — PLATE 20.



TETRADRACHMS OF ALEXANDER THE GREAT.—PLATE 21.



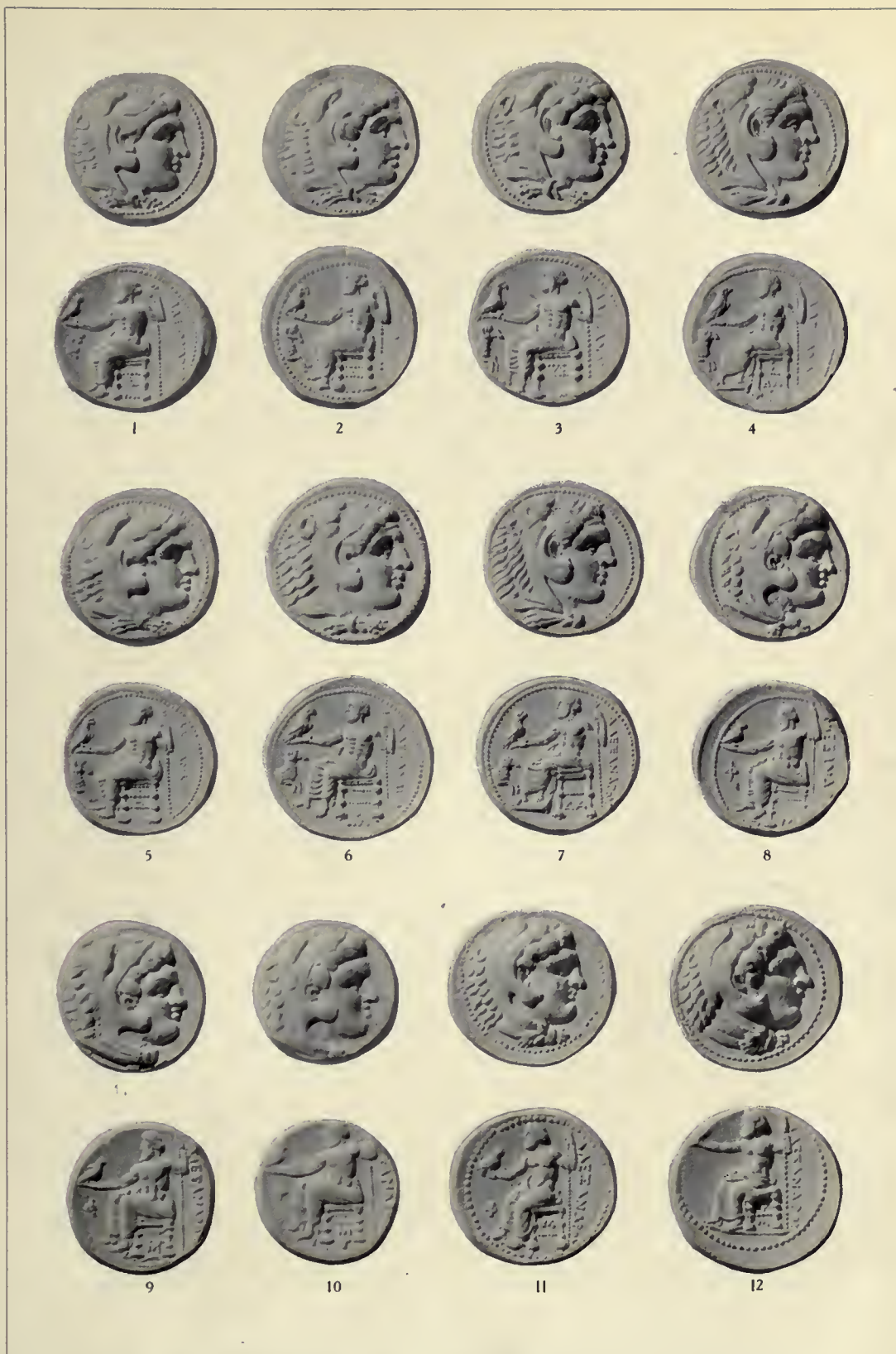
TETRADRACHMS OF ALEXANDER THE GREAT.—PLATE 22.



TETRADRACHMS OF ALEXANDER THE GREAT. — PLATE 23.



TETRADRACHMS OF ALEXANDER THE GREAT—PLATE 24.



TETRADRACHMS OF ALEXANDER THE GREAT -- PLATE 25.



TETRADRACHMS OF ALEXANDER THE GREAT — PLATE 26.

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TETRADRACHMS OF ALEXANDER THE GREAT — PLATE 27.

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2

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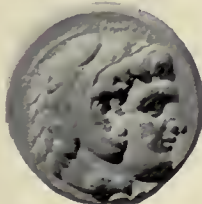


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12



TETRADRACHMS OF ALEXANDER THE GREAT — PLATE 29.

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TETRADRACHMS OF ALEXANDER THE GREAT.—PLATE 30.

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