









ATHENS  
ITS HISTORY  
AND COINAGE

CAMBRIDGE  
UNIVERSITY PRESS  
LONDON: Fetter Lane  
New York  
The Macmillan Co.  
BOMBAY, CALCUTTA and  
MADRAS  
Macmillan and Co., Ltd.  
TORONTO  
The Macmillan Co. of  
Canada, Ltd.  
TOKYO  
Maruzen-Kabushiki-Kaisha

All rights reserved

HISTORIAE DECUS EST, ET QVASI ANIMA,  
VT CVM EVENTIS CAUSAE COPVLENTVR

BACON, *de Aug. Scient.*



A CONTINGENT FROM CHERSONESUS, ON A HYDRIA IN THE BRITISH MUSEUM [§ 117]

ATHENS  
ITS HISTORY AND COINAGE  
BEFORE *the* PERSIAN INVASION

BY

C. T. SELTMAN, B.A.

LATE GEORGE CHARLES WINTER WARR SCHOLAR,  
PRENDERGAST GREEK STUDENT IN THE  
UNIVERSITY OF CAMBRIDGE



CAMBRIDGE  
AT THE UNIVERSITY PRESS  
MCMXXIV

*To*  
MY WIFE

PRINTED IN GREAT BRITAIN

## P R E F A C E

THE SILVER COINAGE of Athens falls naturally into three periods: the first ended in 480 B.C. with the Persian occupation of Attica; the second concluded when Piraeus became in 322 B.C. an outpost of the Macedonian Empire; Actium terminated the third period with the assumption by the *Princesps* of the monopoly of silver coinage in the Empire. Of these three periods the first alone has been the object of my study in this book, both because its coinage is fraught with more historical interest than is the later money, and because it corresponds precisely with the period covered by the researches of Herodotus.

“It is a curious and somewhat disheartening fact that, in spite of the comparatively large amount of literary evidence available, the early history of the Attic coinage presents more uncertainties than are to be found in almost any other series.” Those words, written less than twenty years ago, summed up the consensus of opinion of scholars who had sought to classify the early money of Athens. If this volume has succeeded in clearing some of these obscurities, if it has contributed but a spark to illuminate the history of ancient Athens, my work will have been rewarded.

In determining the form of the book I have felt it best to keep the historical survey and the catalogue of coins, arranged by groups of die-sequences, apart the one from the other, for the issues of sixth century Athens have a close bearing upon Athenian history, and continuity would have been sacrificed if the chain of historic events had been interrupted by detailed catalogues. The latter are, therefore, placed by themselves at the end of the volume. The method of numeration employed in the catalogue, in the text and on the plates is explained on p. xx below.

My obligations to others are manifold. First I would take this opportunity of expressing my thanks to the Managers of the George Charles Winter Warr and Prendergast Funds for enabling me to carry out these studies as well as to undertake the foreign travel which the work entailed, and to the Syndics of the Cambridge University Press for accepting the financial responsibility of publishing my book. My sincere thanks are due to the Curators of the Museums in Athens, Berlin, Boston, Brussels, Cambridge, Copenhagen, Frankfurt a/M., Glasgow, Gotha, The Hague, London, Milan, Munich, New York, Oxford, Paris and Vienna for the casts they have supplied, and to M. Oikonomos at Athens, Dr Hill in the British Museum, M. Dieudonné at the Bibliothèque Nationale, Dr Regling, M. Tourneur and Mr Cockerell in the Museums at Berlin, Brussels and Cambridge for the facilities afforded me when studying

personally the coins under their care. I should like also to express my gratitude to Mr Beatty, Dr Bernhard, M. Bourgey, M. le Comte Chandon de Briailles, Captain Churchill, Mr A. B. Cook, M. Empedocles, M. Feuardent, Dr Giesecke, Mr H. A. Greene, M. Hindamien, Dr Hirsch, M. Jameson, Miss W. Lamb, Mr G. Locker Lampson, M. Mathey, Mr Mavrocordato, M. Meletopoulos, M. le Comte de Nanteuil, M. Naville, Mr Newell, Mr Noe, Sir Charles Oman, Dr Petsalis, Mr Pierpont Morgan, M. Platt, Dr E. P. Robinson, Madame de Saint Marceaux, Messrs Spink and Son and Mr W. H. Woodward, who have so readily supplied me with plaster casts.

It only remains for me to thank the friends who have helped me. The volume has benefited on many a page by the valuable and acute criticism of a master of numismatics and history, Dr G. F. Hill, Keeper of Coins at the British Museum, to whom I am under the greatest obligation for his reading of the proofs. Mr A. B. Cook read the manuscript in its first form, and those who know something of his scholarship will appreciate the debt I owe to his suggestions. Sir William Ridgeway has given me many valued hints and references, and Mr F. E. Adcock has been most helpful in solving the difficult problems of the chronology of events in Peisistratus' reign, while the acumen of Mr A. D. Nock has helped me round many a corner. To Miss E. T. Talbot I am indebted for her admirably skilful and accurate drawings of vase pictures and coins.

Of the various works of modern scholarship to which I have turned none has been more often in my hands than the book of a great scholar by whose recent loss his friends and the world of learning are the poorer—I refer to Sir John Edwin Sandys and to his admirable edition of *The Constitution of Athens*.

CHARLES T. SELTMAN

QUEENS' COLLEGE  
9th May 1924

# CONTENTS

	PAGES
BIBLIOGRAPHY . . . . .	xiv-xvi
 INTRODUCTION	
Heraldic coins the key to early Athenian numismatics—Their types—Their incuse squares prove them to emanate from one mint—The money of the Eupatridae—The same devices on early Attic vases—Family badges—Euboea without coins before <i>ca.</i> 560 B.C.—Derivation of Pheidonian and Euboic systems—The Laurian owls of Peisistratus—Historic and archaeological importance of Athenian coins . . . . .	xvii-xix
NOTE ON DIES . . . . .	xx
 <i>Chapter I. THE PRE-HISTORIC AGE</i>	
§§ 1-3. Cattle and currency—Tradition of Theseus and the ox-type—Early Minoan ingots—Talents of iron and copper—A Knossian Computation—The Homeric gold talent and its base-metal equivalents—The ingots shaped like ox-hides explain later tradition . . . . .	1-5
 <i>Chapter II. THE PRE-SOLONIAN COINAGE</i>	
§§ 4-9. Solon the financier changed the standard—Hence Attic money existed before him—Forms of Punches—Didrachms and obols—Types—Tyrrenian Amphorae—Export of oil—Oil-Amphora a civic badge—Trade with Egypt—Hostility of Aegina and Megara—Prasiae an ancient port—Hyperborean offerings—Ceos and Carthaea—Coinage, and trade in ruddle—First Athenian coins—Origins of weight-standard— <i>ἀρχαῖος χαρακτήρ</i> . . . . .	6-15
 <i>Chapter III. THE SOLONIAN REFORMS</i>	
§§ 10-13. Condition of Attica—A change of standard which was lowered, not raised—Corinth and Cyrene—Approximation to Homeric ox-unit—The new coins with the Amphora—Obols—Heraldry in Athens—Return of the Alcmaeonidae from Delphi—Their arms, the "Whitelegs," mentioned in literature—"Whitelegs" on vases—On coins of Athens . . . . .	16-22
 <i>Chapter IV. THE EUPATRID COINAGE</i>	
§§ 14-21. Civic strife—Types and factions—Forepart of a horse—Beetle—Astragalos—The Scirophoria—The cartwheel—The Agricultural party—The bull-didrachm and Philochorus—The horse and half-horse—Peisistratus wins Salamis for Athens—The Annual Commemoration of this event—The eye as a device . . . . .	23-32
 <i>Chapter V. THE EUPATRID COINAGE (continued)</i>	
§§ 22-25. The Alcmaeonidae in Athens—Solar significance of triskeles and wheel—Delphic wheels—Delphi and Alcmaeonids—Their wheel-devices—The older wheel—Chariot victories of the Clan—Factions of the period—Peisistratus and the "Hill party"—The hindpart of a horse . . . . .	33-38

	PAGES
<i>Chapter VI. THE EUPATRIDAE AND PEISISTRATUS</i>	
§§ 26-30. Peisistratus, Brauron and Laureion—He coins money—Growth of cult of Athena—The new coins—Coins of double weight—Head of Athena—Contemporary art—Owls—Epigraphy—Duration of first issue—Dies and hubs . . . . .	39-44
<i>Chapter VII. THE EUPATRID COALITION</i>	
§§ 31-38. Peisistratus allied with Megacles—The Phyē incident—The wheel coins—Expulsion of the tyrant—Devices of a national type—The owl—The bull's head perhaps the badge of the Eteobutadae—Short-horn cattle in Hellas—Evidence of hasty coining—The Gorgoneion as the arms of Athens—Interchange of dies—The little panther's head—Summary of Eupatrid issues . . . . .	45-52
§ 39. CHART OF EUPATRID COINAGE . . . . .	53
<i>Chapter VIII. PEISISTRATUS IN EXILE</i>	
§§ 40-46. Peisistratus retires to Rhaecelus and the Pangaeon district—Silver mines—The local coinage—Its peculiar type of Thēta—Paeonian Thēta on Peisistratic coins—Heads, owls and dies—He reconquers Athens—Eupatrid issues cease—Later issue of Peisistratus in Paeonia—Sigeum . . . . .	54-60
<i>Chapter IX. PEISISTRATUS SUPREME</i>	
§§ 47-53. Policy—Coins from the Attic mint—Contemporary art—Dies and hubs, duration—Hippias and Dorising tendency—His two mints—Hellenistic mint perhaps at Sunium—Weights from the treasury there—The Peloponnesian War—The <i>Stephanēphoros Hērōs</i> . . . . .	61-70
<i>Chapter X. HIPPIAS</i>	
§§ 54-59. The tyrant an art-patron—His new mint in Athens—Heads of Athena and contemporary art—Owls and epigraphy—A Panathenaic coinage—Fabric—Possible local mints at Eleusis and Marathon—Murder of Hipparchus—Darius and Paeonia—The so-called Hippias "reform"—He demonetizes the old Eupatrid coins—No debasement of Standard—Older theories untenable . . . . .	71-78
<i>Chapter XI. THE EUPATRID EXILES IN PHOCIS</i>	
§§ 60-64. Apollo of Pytho and of Delos—The Delphic temple burnt—Fund subscribed largely in electrum—Alcmaeonids fail at Leipsydriion—They contract to rebuild temple and thus get money—Gold and electrum the mark of military adventure—Alcmaeonids coin electrum—Owl and $\blacktriangleright$ —The wheel and the bull's head—The single leg shorthand for a triskeles—Silver issued on an electrum standard—The triskeles and the single leg—Athenian exiles and Spartans invade Attica—Hippias capitulates . . . . .	79-84
<i>Chapter XII. ISAGORAS</i>	
§§ 65-70. The schemes of Cleisthenes—Isagoras and the Oligarchs—Zeus Karios—Cleomenes and Isagoras—Cleisthenes retires—The Eupatrid Gorgoneion revived—The bull's head—Number of dies—The panther's head—The Carian Zeus and his panther or lion—Signs of value—Spartans expelled from Acropolis . . . . .	85-91

<i>Chapter XIII. THE CLEISTHENIC DEMOCRACY</i>	PAGES
§§ 71-77. The Democracy and its opponents—Chalcis and Boeotia defeated—Their coins—Cleisthenes and Athena—The Civic mint and a Panathenaic coinage—Contemporary art—Athena Erganē—Delphos—Double Athena—The Attic mint—Coiffures—Owls, dies and duration—Coinage of the Cleruchs in Euboea . . . . .	92-101
 <i>Chapter XIV. MARATHON AND AFTER</i>	
§§ 78-83. Effects of the battle—The olive-leaves introduced—The waning moon—Contemporary sculpture—Dies and fractional currency—Decadrachm and didrachm—Laurian mines and the annual dole—Manner of paying it—Work of Athenian mint—The Athenians abandon their city . . . . .	102-109
§ 84. CHART OF PEISISTRATID AND LATER ISSUES . . . . .	110
§ 85. TABLE OF ANVIL-DIES . . . . .	111
 <i>Chapter XV. TALENTS, DRACHMAE AND OBOLS</i>	
§§ 86-101. Prehistoric gold and copper talents—Ratio, gold to copper—Survivals—The Euboic system—Pheidonian system—Obeloi and drax—Ratio, silver to iron—Spartan iron currency—The 4-foot spits—Systems meet at Athens—Milesian system—Croesus' reform—The Persian system—Table of frequency of Athenian coins . . . . .	112-127
 <i>Chapter XVI. MINES AND TRADE</i>	
§§ 102-108. First silver of Hellas and silver mines—Corinth and Damastium—Aegina and Siphnos—Athens and Laureion—Age of mines—Euboean copper—Ancient forgeries—Trade and finds of coins and vases—Egypt—Etruscan imitations—Euxine and Olbia—Olbian imitations—Schubin Find—Scythic relations with Hellas—Amuletic Gorgoneion and wheel . . . . .	128-135
 <i>Chapter XVII. THE CHERSONESE</i>	
§§ 109-120. Miltiades I leaves Athens—His Olympic victory—His coins—Attic and Lydian weight—Hero and Oekist—Cimon I, Olympic victor—Stesagoras—His coins—Miltiades II—Relations with Persia—A new denomination—Ionian revolt—Cardia and arms of Miletus—Popularity of Miltiades—He figures on vases—He is expelled by Persians—Athens regains Chersonese—Cimon II and coinage—Pheidonian weight—Athenian Empire assured . . . . .	136-145
 APPENDIX	
ANALYSIS OF FINDS . . . . .	146-148

## A CATALOGUE

*of* ATHENIAN COINS *issued*  
BEFORE *the* PERSIAN INVASION

	PAGE		PAGE
GROUP A . . . . .	151	GROUP H FRACTIONS. . . . .	192
A FRACTIONS. . . . .	152	GROUP J . . . . .	193
GROUP B . . . . .	153	J FRACTIONS. . . . .	194
B FRACTIONS. . . . .	157	GROUP K . . . . .	195
GROUP C . . . . .	159	GROUP L . . . . .	197
C FRACTIONS. . . . .	161	L FRACTIONS. . . . .	199
GROUP D . . . . .	162	GROUP M . . . . .	201
D FRACTIONS. . . . .	166	M FRACTIONS. . . . .	206
GROUP E . . . . .	168	GROUP N . . . . .	207
E FRACTIONS. . . . .	171	N FRACTIONS. . . . .	210
GROUP F . . . . .	172	GROUP O . . . . .	211
GROUP Gi . . . . .	175	GROUP P . . . . .	215
Gi FRACTIONS . . . . .	181	P FRACTIONS. . . . .	216
Gii . . . . .	182	ANCIENT FORGERIES . . . . .	216
Gii FRACTIONS . . . . .	188	BARBAROUS IMITATIONS . . . . .	217
GROUP H . . . . .	189	GROUP Q . . . . .	218
INDEX . . . . .			222

## P L A T E S

- I. Pre-Solonian Mint, *ca.* 610–595 B.C. (Group A). Eupatrid Mint, 594–562 B.C. (Group B).
- II. Eupatrid Mint, 594–562 B.C. (Group B). Attic Mint, 561–556 B.C. (Group C).
- III. Attic Mint, 561–556 B.C. (Group C). Eupatrid Mint, 560–546 B.C. (Group D).
- IV. Eupatrid Mint, 560–546 B.C. (Group D). Fractions (Groups A to D).
- V. Paeonian Mint, 555–546 B.C. (Group E).
- VI. Paeonian Mint, 555–546 B.C. (Group E), and 546–536 B.C. (Group F).
- VII. Paeonian Mint, 546–536 B.C. (Group F). Attic Mint, 546–527 B.C. (Group G i).
- VIII. Attic Mint, 546–527 B.C. (Group G i).
- IX. Attic Mint, 546–527 B.C. (Group G i).
- X. Attic Mint, 546–527 B.C. (Group G i), and 527–510 B.C. (Group G ii).
- XI. Attic Mint, 527–510 B.C. (Group G ii).
- XII. Attic Mint, 527–510 B.C. (Group G ii).
- XIII. Civic Mint, 527–514 B.C. (Group H).
- XIV. Civic Mint, 514 B.C. (Group H), 510–507 B.C. (Group K). Delphic Mint, 514–510 B.C. (Group J).
- XV. Civic Mint, 506–490 B.C. (Group L).
- XVI. Attic Mint, 506–490 B.C. (Group M).
- XVII. Attic Mint, 506–490 B.C. (Group M).
- XVIII. Attic Mint, 506–490 B.C. (Group M), and 490–480 B.C. (Group N).
- XIX. Attic Mint, 490–480 B.C. (Group N).
- XX. Attic Mint, 490–480 B.C. (Group N). Civic Dole, *ca.* 486 B.C. (Group O).
- XXI. Civic Dole, *ca.* 485 and 484 B.C. (Group O).
- XXII. Fractions (Groups E, G, H, K, L, M, N).
- XXIII. Cleruchy, 506–490 B.C. (Group P). Plated Coins. Barbarous imitations.
- XXIV. Chersonesian Mint, 559–493 and 478 B.C. (Group Q). Carthaea.

# BIBLIOGRAPHY

## ABBREVIATIONS

- Ath. Mitt.* *Mitteilungen des deutschen archäologischen Instituts in Athen.* 1876–  
*B.C.H.* *Bulletin de Correspondance Hellénique.* Paris, 1877–  
*B.M.C.* *Catalogue of Greek Coins in the British Museum.*  
*B.S.A.* *Annual of the British School at Athens.* London, 1894–  
*B.T.II.* E. Babelon, *Traité des Monnaies Grecques et Romaines, II<sup>e</sup> partie, Description historique.* 1907, etc.  
*Cat. H.* Various sale catalogues issued by Dr J. Hirsch in Munich.  
*Cat. N.* Various sale catalogues issued by M. Naville in Geneva.  
*F.H.G.* *Fragmenta Historicorum Graecorum.* Paris, 1841–73.  
*H.N.<sup>2</sup>* B. V. Head, *Historia Numorum*, 2nd Edition. Oxford, 1911.  
*I.G.* *Inscriptiones Graecae.*  
*J.H.S.* *Journal of Hellenic Studies*, London. London, 1881–  
*J.I.A.N.* *Journal International d'Archéologie Numismatique.* Athens, 1898–  
*N.C.* *Numismatic Chronicle.* London, 1839–  
*Pauly, R.E.* Pauly-Wissowa, *Real-Encyclopädie der classischen Altertumswissenschaft.* Stuttgart, 1893–  
*T.* J. Svoronos, *Trésor de la Numismatique Grecque ancienne, Les Monnaies d'Athènes.* Munich, 1923.  
*Z.f.N.* *Zeitschrift für Numismatik.* Berlin, 1874–

## NUMISMATIC

- Aes Grave, das Schwergeld Roms und Mittelitaliens.* E. J. Haeberlin. Frankfurt, 1910.  
*American Journal of Numismatics.* New York, 1913–  
*Antike Gewichtsnormen und Münzfüsse.* O. Viedebant. Berlin, 1923.  
*Antike Münzen Nordgriechenlands.* Ed. F. Imhoof-Blumer. Berlin, 1898–  
*Athenatypen auf Griechischen Münzen.* W. Lermann. Munich, 1900.  
*B.M.C. Coins of the Roman Empire (i).* H. Mattingly. London, 1923.  
*Beschreibung der Antiken Münzen.* Kgl. Museen zu Berlin. 1888–  
*Catalogue of the Warren Collection.* See *Griechische Münzen d. Samml. Warren.*  
*Coinage of Boeotia.* B. V. Head. London, 1881.  
*Coinages of Western Europe.* C. F. Keary. London, 1879.  
*Coins of Ancient Sicily.* G. F. Hill. London, 1903.  
*Coin Types.* G. Macdonald. Glasgow, 1905.  
*Corolla Numismatica.* Numismatic Essays in Honour of B. V. Head. Oxford, 1906.  
*Description de Médailles Antiques.* E. Mionnet. Paris, 1806, etc.  
*Geschichte des Römischen Münzwesens.* Th. Mommsen. Berlin, 1860.  
*Griechische Münzen.* F. Imhoof-Blumer. Munich, 1890.  
*Griechische Münzen der Sammlung Warren.* K. Regling. Berlin, 1906.  
*Griechische und Römische Metrologie.* F. Hulsch. Berlin, 1882.  
*History of Ancient Coinage.* P. Gardner. Oxford, 1918.  
*Médailles Impériales.* H. Cohen. Paris, 1880–1892.  
*Monnaies Antiques de l'Italie.* A. Sambon. Paris, 1903.

- Monnaies d'Athènes.* E. Beulé. Paris, 1858.  
*Monnaies Consulaires.* E. Babelon. Paris, 1885.  
*Monnaies Grecques.* F. Imhoof-Blumer. Paris and Leipsic, 1883.  
*Nomisma, Untersuchungen auf dem Gebiete der antiken Münzkunde.* Berlin, 1907—  
*Origin of Metallic Currency and Weight Standards.* W. Ridgeway. Cambridge, 1892.  
*Revue Numismatique française.* Paris, 1836—  
*Rois de Syrie.* E. Babelon. Paris, 1890.  
*Syracuse.* Comte A. du Chastel. London, 1896.  
*The Temple Coins of Olympia.* C. T. Seltman. Cambridge, 1921.

## GENERAL

- Acropolis of Athens.* M. D'Ooge. London and New York, 1908.  
*Ancient Bronze Implements.* J. Evans. London, 1881.  
*Ancient Hist. of Near East.* H. R. Hall. London, 1919.  
*Archaische Kunst in Griechenland und Rom.* E. Schmidt. Leipzig, 1922.  
*The Argive Heraeum.* C. Walston. New York, 1902.  
*Aristoteles und Athen.* U. von Wilamowitz Möllendorf. Berlin, 1893.  
*Aristotle's Constitution of Athens*<sup>2</sup>. Edited by Sir J. E. Sandys. London, 1912.  
*Attische Genealogie.* J. Toepffer. Berlin, 1889.  
*Auserlesene Vasenbilder.* E. Gerhard. Berlin, 1840—58.  
*British Museum Catalogue of Vases.* London, 1893—  
*British Museum Guide to the Antiquities of the Early Iron Age.* London, 1905.  
*British Museum Guide to Greek and Roman Life.* London, 1908.  
*Burg von Athen.* M. Schede. Berlin, 1922.  
*Catalogue of Greek Vases in the Ashmolean Museum.* P. Gardner. Oxford, 1893.  
*Catalogue of Greek Vases in the Fitzwilliam Museum.* E. A. Gardner. Cambridge, 1897.  
*Commentary on Herodotus.* W. W. How and J. Wells. Oxford, 1912.  
*Commentary on Pausanias.* J. G. Frazer. London, 1913.  
*Companion to Greek Studies*<sup>3</sup>. Cambridge, 1916.  
*Companion to Latin Studies*<sup>4</sup>. Cambridge, 1910.  
*De Atheniensium Pompis Sacris.* E. Pfuhl. Berlin, 1900.  
*De Cei Insulae Rebus.* E. Pridik. Berlin, 1892.  
*Delphos und Melaine.* Winckelmannsfest. Panofka. Berlin, 1849.  
*Description de Vases Peints.* H. de A. de Luynes. Paris, 1840.  
*Dictionnaire des Antiquités grecques et romaines.* C. Daremberg and E. Saglio. Paris, 1873—1919.  
*Early Age of Greece* (i). W. Ridgeway. Cambridge, 1901.  
*Élite de Monuments Céramographiques.* C. Lenormant and J. de Witte. Paris, 1837—61.  
*Etruskische und Campanische Vasenbilder.* E. Gerhard. Berlin, 1840.  
*Feste der Stadt Athen.* Th. Mommsen. Berlin, 1898.  
*Funde aus Naukratis.* Prinz. Berlin, 1908.  
*Glossary of Aramaic Inscription.* S. A. Cook. Cambridge, 1898.  
*Golden Bough*, ed. 3. J. G. Frazer. London, 1911—15.  
*Greece*<sup>4</sup>. K. Baedeker. Leipzig, 1909.  
*Greek Historical Inscriptions.* E. L. Hicks and G. F. Hill. Oxford, 1901.  
*Greek Oligarchies.* L. Whibley. London, 1896.  
*Griechische Gewichte.* E. Pernice. Berlin, 1894.

- Handbook of Attic Red-figure Vases.* J. C. Hoppin. Harvard, 1919.  
*Handbuch der klassischen Altertumswissenschaft.* I. Müller. Vol. v. O. Gruppe. Munich, 1906.  
*Histoire de l'Art dans l'Antiquité.* G. Perrot et C. Chipiez. Paris, 1882-  
*History of Ancient Pottery.* H. B. Walters. London, 1905.  
*History of Greece*<sup>2</sup>. J. B. Bury. London, 1917.  
*Imagines Inscriptionum Graecarum*<sup>3</sup>. H. Roehl. Berlin, 1907.  
*Kleine Schriften.* A. Furtwängler. Berlin.  
*Lexikon der Griechischen und Römischen Mythologie.* W. H. Roscher. Leipzig, 1884-  
*Life in Ancient Egypt.* Erman (transl. by H. M. Tirard). London, 1894.  
*Manners and Customs of the Ancient Egyptians.* Sir J. G. Wilkinson. London, 1878.  
*On Panathenaic Vases.* P. O. Bröndsted. London, 1832.  
*Origin of Tyranny.* P. N. Ure. Cambridge, 1922.  
*Palace of Minos at Knossos* (i). Sir A. J. Evans. London, 1921.  
*Panathenäische Preisamphoren.* G. von Brauchitsch. Leipzig, 1910.  
*Scythians and Greeks.* E. H. Minns. Cambridge, 1913.  
*Storia degli antichi Popoli Italiani.* G. Micali. Florence, 1832.  
*Studies in Herodotus.* J. Wells. Oxford, 1923.  
*Tyrrhenische Amphoren.* H. Thiersch. Berlin, 1899.  
*Vases Grecques du Musée de Madrid.* G. Leroux. Paris, 1912.  
*Zeus* (i). A. B. Cook. Cambridge, 1914.

## PERIODICALS

- Annali del Istituto di Corrispondenza Archeologica.* Rome, 1829-85.  
*Archäologische Zeitung.* Berlin, 1843-85.  
*Ἐφημερίς Ἀρχαιολογική.* Athens, 1883-  
*Harvard Studies* (xiii), 1902. "The Shield-devices of the Greeks," by G. Chase.  
*Jahrbuch des Kais. deutschen Archäologischen Instituts.* Berlin, 1886-  
*Journal of the Royal Asiatic Society.* London, 1827-  
*Monumenti Inediti dell' Istituto.* Rome, 1829-  
*Neue Jahrbücher für Philologie und Pädagogik.* Leipzig, 1855-97.  
*Πρακτικὰ τῆς ἐν Ἀθήναις ἀρχαιολογικῆς ἐταιρείας.* Athens, 1872-  
*Revue Archéologique.* Paris, 1844-  
*Rheinisches Museum für Philologie.* Bonn, 1827-  
*Wiener Vorlegeblätter für Archäologische Übungen.* Vienna, 1869-91.

## INTRODUCTION

ATHENS, whether in her history, literature or art compels the interest and admiration of mankind more than does any other city of ancient Hellas; but, in spite of all that has been written on the subject, her early coinage has received scant justice from historians, scholars or archaeologists. True, there is no branch of ancient numismatics which has occasioned more controversy than the coinage of Athens before the Persian Wars. Theory has been advanced against theory, conjecture has combated conjecture, while the fields of scientific research have lain fallow.

Charles II on a memorable occasion troubled the *savants* of his day by asking why a dead gold-fish dropped into a brimful bowl displaced water, while a live fish did not displace it. For long the wisecracs theorized before they put the experiment to the test and discovered that the king's hypothesis was only an idle joke. And it seems time now to abandon theorizing and to examine the Athenian coins themselves with that close attention to detail which modern scientific numismatics demand.

A careful study of the coins generally known as *Wappenmünzen*, or "heraldic coins," has supplied the key that unlocks the whole problem of the seventh and sixth century coinage of Athens. By reason of a uniformity of weight<sup>1</sup> and fabric these pieces have been generally grouped together, although no satisfactory explanation of their varied devices<sup>2</sup> has as yet been proposed. The following table gives a summary of the obverse types:

Device	Didrachm	Drachm	Fractions	Device	Didrachm	Drachm	Fractions
Amphora	—		—	Chariot wheel with stays	—	—	—
Triskeles	—	—		Hindpart of horse	—	—	
Forepart of bridled horse	—	—	—	Chariot wheel, plain	—	—	—
Beetle	—		—	Owl	—		—
Astragalos	—			Bull's head	—		—
Cart-wheel	—			Gorgoneion	—		—
Bull	—			Human eye			—
Bridled horse	—			Bent leg			—

It is not, however, the obverse device but "the other side of the medal" which supplies the key, though that other side is merely an incuse square divided by two raised diagonal lines—an incuse which was impressed by means of a punch striking downwards upon the upper side of the silver "blank" as it lay upon the anvil. From a study of the incuse impressions<sup>3</sup> I have ascertained the following facts:

<sup>1</sup> The so-called "Euboic" weight. Head, *H.N.*<sup>2</sup>, p. xlvi; but cf. § 86 ff. below.

<sup>2</sup> Plates I, II, III, IV.

<sup>3</sup> I have ascertained that the old heavy pre-Solonian amphora coins (§ 5) do not share punch-dies with any other contemporary heavy pieces like B.T.II, i, Pl. LXI, 21, 25, Pl. LXII, 1, 4, 16, 17. Consequently none of the latter can be of Athenian mintage.

- (i) Coins with the amphora and coins with the triskeles were impressed with the same punch-die on their reverses;
- (ii) Coins with the forepart of a horse to left, coins with the beetle and coins with the astragalos shared the same punch-die;
- (iii) Coins with the first type of chariot wheel and coins with the hindpart of a horse shared the same punch-die;
- (iv) Coins with the owl and coins with the bull's head were stamped with the same reverse punch-die;
- (v) Coins with the bull's head, those with the gorgoneion and those with the second type of wheel<sup>1</sup> were impressed on their reverses with the same punch-die.

In fact the "heraldic" coins can be arranged *seriatim* from first to last by a careful study of die-sequences, and from this discovery emerges the first salient fact. They all come from one and the same mint.

That fact once established there can be no doubt that the mint is Athens, and that the "heraldic" coins are the money issued under the regime of the old Eupatrid families.

In subsequent chapters devoted to these coins I shall hope to assign some of the heraldic types to their proper families, but here it seems best to mention an important factor, hitherto overlooked, which proves these "heraldic" pieces to be Athenian. Every one of the devices stamped upon these coins appears as a shield-sign on some early Athenian vase<sup>2</sup>.

Now it must not be thought that vase-painters have copied coins, nor that die-engravers have copied vases. Rather both coins and vases had a common prototype in the devices or charges of the noble families of Athens. For the existence of these family badges there is ample evidence in literature<sup>3</sup>, and the clear conclusion is that the mint-masters of the old Athenian oligarchy placed their family devices upon the coins, while they and their retainers had these same charges painted upon the shields which were familiar sights in the streets of Athens<sup>4</sup>. It was the very familiarity of these same shield devices which induced the Athenian vase-painter to adorn the shields of hoplites, of heroes and of the patron goddess of Athens herself with badges well-known to every citizen—a proceeding entirely consistent with that naïf homeliness which is so characteristic of sixth century Hellas.

Inevitably, since the heraldic coins can be shown to be the money issued by

<sup>1</sup> The wheel type, of course, links classes iii and v.

<sup>2</sup> Full details are given below, Chapters III to VI. On sixth cent. B.F. Athenian vases the following coin-devices occur as shield-signs: amphora, triskeles, forepart of a horse, astragalos, waggon-wheel, bull, whole horse, chariot-wheel, hindpart of a horse, owl, bull's head, gorgoneion, human eye, bent leg. The beetle occurs on a R.F. vase of sixth cent. date.

<sup>3</sup> Aeschylus, *Sept. c. Theb.* 387 ff., is the *locus classicus* for shield-signs. For references to ancestral crests upon shields, cf. Pausanias, v, 25, 9 (the crest of Idomeneus); Plutarch, *v. Alcib.* xvi, 2 (cf. § 16 below); and especially Schol. in Aristoph. *Lysistr.* 664 ff., reading the essential emendations λευκόποδες, λευκόν, of which more below, § 13.

<sup>4</sup> Cf. Thucyd. vi, 58 (writing of the sixth cent. B.C.) μετὰ γὰρ ἀσπίδος καὶ δόρατος εἰώθησαν [Sc. οἱ Ἀθηναῖοι] τὰς πομπὰς ποιεῖν.

the Eupatridae in Athens, there must be consigned to the scrap-heap a hypothesis which Time has raised to the rank almost of an axiom. As the heraldic coins are all Athenian *there are no early incuse coins of Euboea*. Chalcis and Eretria coined no silver before the second half of the sixth century B.C.<sup>1</sup>

If, however, Euboea only followed Athens in the art of coinage, whence came the name of the Euboïc talent on which the Athenian coins, all but the earliest, were based? That problem has to be faced and a solution is suggested in a later chapter<sup>2</sup>, in which the two great monetary standards of Hellas, the Pheidonian and the Euboïc, are considered. There it will be suggested that the Euboïc standard dates back to the Mycenaean or Bronze Age, that it originated from the ratio of gold to copper and derived its name seemingly from Euboea—the chief copper producing region of Greece. The Pheidonian standard, on the other hand, belonged to the Iron Age, originated from the ratio of silver to iron, and its introduction as a monetary system was ultimately due to the exploitation of the iron mines of Peloponnesus.

The most celebrated coins of ancient times, the “Laurian owls,” which proved to be the *fons et origo* of Athenian power in the classical period, were the invention of Peisistratus. The study of this money enables us to trace the vicissitudes of his reign and the organization by which he supplied his treasury, and new light is thrown upon the supreme ability of this most brilliant of all Athenian statesmen.

In the following pages I hope to reveal in outline something of the supreme value which ancient coins have as a commentary upon the life, history, politics and religion of Athens—a value which is inherent in the coinage of most Hellenic States. If there has in the past been a tendency to under-estimate the importance of numismatics, that tendency is fortunately on the wane, for coins properly studied are the Scholia of history and archaeology.

<sup>1</sup> Historically it is not surprising to find these cities without a silver coinage in the early sixth cent., for in the end of the preceding century both had been reduced by their war over the Lelantine Plain to the status of “Second-class Powers,” cf. Hdt. v, 99, 1; How and Wells, *Comm. on Hdt.* ii, p. 58. We should scarcely in any case look for an early silver coinage in Euboea, which was famed for its copper mines, and there is good reason for believing that a heavy copper currency, akin to the primitive Central Italian *Aes Formatum*, was in use in the island from early times, cf. J. Svoronos, *J.I.A.N.* ix, 1906, p. 168 ff., Pl. III. The actual silver coinage of Chalcis and Eretria began after 550 B.C. For the types of the former city see B.T.II, i, Pl. XXXI, 1 to 6, and of the latter *l.c.* Pl. XXXII, 1 to 13. The coins on Pl. XXXI, 7 to 17 are Athenian, as will become evident later. Cf. § 103 for Chalcis and Eretria.

<sup>2</sup> Ch. xv.

## NOTE

THE system of numeration employed on the Plates, in the following text, and in the catalogue at the end of the volume is as follows:

Both dies of Didrachms, Tetradrachms, Decadrachms and of Electrum coins are numbered separately.

Each reverse or *punch-die*<sup>1</sup> is marked **P<sub>1</sub>**, **P<sub>2</sub>**, **P<sub>3</sub>**...**P<sub>50</sub>**, etc.

Each obverse or *anvil-die* is marked **A<sub>1</sub>**, **A<sub>2</sub>**, **A<sub>3</sub>**...**A<sub>50</sub>**, etc.

Each die-combination, or coin, has in the catalogue a definite number: thus **P<sub>1</sub>A<sub>1</sub>** is No. 1, **A<sub>34</sub>P<sub>35</sub>** is No. 47. Where several specimens of a die-combination exist they are lettered *a*, *b*, *c*, etc., in the catalogue, and the specimen illustrated on the Plate has the Plate's number placed opposite it in the margin.

Fractions are numbered on the Plates in Greek letters, *α*, *β*, *γ*...

Non-Attic issues in ordinary numerals 1, 2, 3, etc.

It cannot be too sharply emphasized that the whole arrangement worked out in the following pages rests upon die-sequences. Each Group A, B, C, etc., is compact; the order within each Group is approximately fixed by the sequence of dies, and artistic development makes any alteration in the order of the Groups impossible; that is to say D could not come before B, nor E before C.

In Group J and in the Chersonesian coinage (Group Q) the issues were so small that no help can be gained from die-sequences. Here, however, the argument rests on metrological considerations which supply the key to place, time and circumstances of issue.

<sup>1</sup> For the best explanation of the use of ancient dies cf. Hill in *N.C.* 1922, p. i ff.

## CHAPTER I

ἔκοψε δὲ [ὁ Θησεύς] νόμισμα βοῦν ἐγχαράξας.

PLUTARCH, *v. Thes.* 25.

§ 1. The wealth which primitive races over all Europe and the greater part of Asia first began to acquire was wealth in the shape of cattle. Abraham was rich in flocks and herds, "a vast number of cattle" was noted by Caesar<sup>1</sup> as the property of the ancient Britons, the wandering hordes of Gauls who entered Italy drove their great herds with them<sup>2</sup>, and in Homer most values are expressed in oxen<sup>3</sup>; and so it is found that in primitive Athens, as elsewhere; there was once a certain classification in men's minds which linked together the old mark of wealth and the new, cow-units and money-units, cattle and currency.

A transition between cattle and currency there must have been when men equated cows and lumps of metal, and thus arose the tradition which hints at some connection between the earliest Athenian money and the type of an ox or cow, a tradition too persistent to be ignored<sup>4</sup>.

Around the name of Theseus tales of love and war, romantic and fanciful at times, grew up in after generations, but in spite of these stories he can be treated as a myth no longer. Like Arthur and Charlemagne he was a power in his age<sup>5</sup>. Over Argolis as well as Attica his rule perhaps extended in the last Minoan Epoch, and to him in later ages was ascribed the oldest Athenian money. Is there any "ox-money" belonging to the Minoan or sub-Minoan ages which can reasonably be regarded as the basis of the "Theseus and ox-type" tradition?

§ 2. It would seem that there is, and that the problem is solved by a remarkable series of copper and iron ingots of very early date published by Monsieur Svoronos<sup>6</sup> and discovered in Cyprus, Crete, Sardinia, Mycenae and in the sea off Euboean Cyme. Not fully realizing their significance, Svoronos proposed to identify these with axes, which at times may have served as a kind of currency<sup>7</sup>, but these copper ingots bear no resemblance whatever to axes<sup>8</sup>. They appear on various Egyptian monuments of which Fig. 1 is an example.

<sup>1</sup> *B.G.* v, 12.

<sup>2</sup> Polyb. ii, 18.

<sup>3</sup> *Il.* vi, 236; ii, 449. *Od.* i, 431.

<sup>4</sup> Cf. the *Onomasticon*, ix, 61, of Pollux, who hints at some association between the ox-type and the coinage of both Athens and Delos. The tradition in Philochorus, *ap. Schol.* in Aristoph. *Aves*, 1106, concerning "bull-coins" has perhaps another origin; see below, § 20.

<sup>5</sup> As has been demonstrated by K. T. Frost in *J.H.S.* 1913, p. 194. Cf. also Sir W. Ridgeway, *Early Age of Greece*, p. 151 ff.

<sup>6</sup> *J.I.A.N.* ix, 1906, p. 153 ff. and Pls. II to V. Those found in Crete are dealt with in detail by Sir A. Evans in *Corolla Num.* 1906, p. 355 ff. They were found at Hagia Triada, Tyliossos and Mochlos (not in Phaestos).

<sup>7</sup> *Iliad*, xxiii, 850-1, 882-3. Cf. Six in *Rev. Num.* 1883, p. 260 f.

<sup>8</sup> Comparable is a tin ingot (weighing 79 kilogr.) of kindred shape dredged up in Falmouth Harbour; J. Evans, *Ancient Bronze Implements*, p. 426, fig. 514. Cf. Diodor. v, 22, on the British trade in tin ingots.

On this wall-painting one may see how "Keftiu<sup>1</sup>," and on another painting Syrians, used to bring such ingots across the great sea to Egypt as presents or as tribute to Thothmes III<sup>2</sup>, carrying them, not as axes on hafts, but shoulder high, as weights of sixty odd pounds would be carried. As Svoronos rightly supposed these great ingots are talents<sup>3</sup> of iron and talents of copper, and this supposition has been made into something like a certainty by a tablet from the Palace of Knossos, published by Sir Arthur Evans<sup>4</sup>, bearing pictographs of an ingot and a balance as well as numeral signs indicating 60 and  $52\frac{1}{2}$ . Sir Arthur



FIG. 1. Egyptian wall-painting; Cretans carrying ingots, vessels, etc.

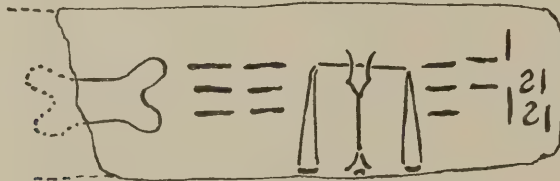


FIG. 2. Tablet from Knossos.

has explained this in a convincing manner as follows: "It would appear then that 60 ingots of bronze were found in this case to amount to  $52\frac{1}{2}$  ingots of another system, which we may reasonably suppose to be the gold standard. The fact that this latter figure is preceded by a balance, the Greek *talanton*, shows that whatever may have been its equivalent term in the language of

<sup>1</sup> I.e. Cretans, cf. H. R. Hall in *B.S.A.* viii, 1901-2, p. 157 ff. and in *Ancient Hist. of Near East*, 1919, p. 292.

<sup>2</sup> B.C. 1501 to 1447, i.e. in the Second Late Minoan period. Our illustration is from J. G. Wilkinson's *Manners and Customs of the Ancient Egyptians*, 1878, i, p. 38, Pl. II a.

<sup>3</sup> *J.I.A.N.* l.c. p. 172. Their length ranges from 72 to 34 centimetres; cf. the table setting out their weights, dimensions and the characters stamped and incised upon them, l.c. p. 171.

<sup>4</sup> *Corolla Num.* p. 361, fig. 14. I am indebted to Sir Arthur Evans for permission to reproduce the illustration.

Minoan Crete, we have here to do with  $52\frac{1}{2}$  talents—in all probability small gold talents analogous to the gold talents of Homer. Perhaps the bronze ingots (or talents) were supposed to be each of the value of a gold unit but they were found to be one-eighth short<sup>1</sup>....”

But Sir William Ridgeway has shown that the Homeric and pre-Homeric gold talent was a small lump of some 8.42 to 8.75 grammes (130 to 135 grains), and that this talent was an “ox-unit<sup>2</sup>.” Thus it is clear that the Cretan ingots, and very probable that the iron ingots of Sardinia and the copper ingots of Cyprus and Hellas were the local equivalents in base metal of the universal gold talent<sup>3</sup>. Gold had a fixed value, but iron or copper varied in value according to its rarity; the first was so easy to transfer from land to land, but the baser metals soon made a heavy ship-load. Thus it appears that in Cyprus, where copper abounded, 37,000 grammes of copper were given for a gold talent; in Argolis, where the metal was scarcer, only 23,600 grammes weight were given.

Not a few of the ingots bear marks, engraved or stamped while the metal was still hot, of which some have recently been interpreted as meaning “purified” or “fine” (copper)<sup>4</sup>. We are not here concerned with palaeographic conjectures, nor with the possible meaning of such syllabic signs; but it is worth noting that Dr R. Eisler, who advances these ingenious explanations, believes all the heavy ingots to be talents of copper.

§ 3. But to return to Theseus and the ox; these copper ingots, of which one

<sup>1</sup> *L.c.* Sir Arthur proceeds (p. 363), from the assumption that copper to gold was 1600 : 1, to suppose that the gold talent meant may have had the value of 2 *kedets* of 9.05 g. (140 grains) each. But copper must have been cheap, gold dear in those days. It is much more probable that the bronze ingots of Crete equal 1 *kedet* each, which comes near the probable weight (8.75 g. : 135 grains) of 1 Homeric talent. In that case in Minoan Crete copper to gold was 3200 : 1, a more probable equation. Such an equation may be paralleled at a later date, cf. O. Viedebant, *Antike Gewichtsnormen u. Münzfüsse*, 1923, p. 135, where the ratio of copper to gold is given as 2250 : 1; also *L.c.* p. 123, where in Umbria the three metals, copper, silver, gold are shown to have been in proportionate value as 4500 : 15 : 1.

<sup>2</sup> *Origin of Currency*, ch. vi.

<sup>3</sup> They cannot be too heavy for this as a comparison with the Central Italian copper currency will show. Haebler, *Aes Grave*, p. 36, gives the “average weight” of the Libral As at 267.83 g. This means that 2678.3 g. of bronze would go to make the equivalent of a silver “denarius.” If gold had then possessed 12 times the value of silver, it would have required  $2678.3 \times 12 = 32,139.6$  g. of copper as the equivalent of a little gold coin of the weight of a denarius, had such a gold coin existed. The prehistoric ingots representing talents range from 37,094 to 23,625 g. There is yet another bronze ingot, up to the present unpublished, in the Athenian Numismatic Museum. It scales 19,160 g., but has, like the Euboean specimens, suffered somewhat from the effects of sea-water, having been found in the sea off Attalia in Pamphylia by divers together with another ingot in the Berlin Collection. The ingot was acquired by the Athenian Museum in October, 1913. For further details regarding the weights of some of these ingots, cf. § 88 below.

<sup>4</sup> R. Eisler, “The Cadmeian Alphabet,” *Journ. R. Asiatic Soc.* London, Jan. 1923, p. 33 ff. His metrological data, based upon the complications of the Lehmann-Haupt School, prove little, since the whole field of Metrology requires fresh investigation (cf. O. Viedebant, *Ant. Gewichtsnormen u. Münzfüsse*). Some of the arguments seem to rest upon slender suppositions, as for instance, when on p. 48 Eisler claims that the sign  $\mp$ , stamped upon our Mycenaean ingot (Fig. 3, below), “is most easily explained as  $\equiv$ , Hebrew Samekh, Greek  $\sigma\acute{\iota}$ ... This may very well be the Phoenician trade-mark of Sillu— $\Sigma\acute{o}\lambda\omicron\upsilon$ .” (The italics are mine.) But, if such it be, samekh or  $\Xi$ , whether Semitic or Greek, whether syllable or letter, may stand for almost anything.

at least has been found in Argolis<sup>1</sup>—a district linked with the traditions of Theseus—are contemporary with his epoch and are “the price of an ox” in copper. But they are more than the mere price of an ox; as far as portability and convenience allows they are “ox-shaped.”

Convenience would scarcely admit of the metal being cast in the actual shape of a bull or cow. But a glance at the illustration (Figs. 3 and 4) shows that this Mycenaean ingot<sup>2</sup>, like the others, is cast in the shape of an ox-hide, dried



FIG. 3. Copper ingot from Mycenae, obverse.

and stretched. The obverse roughly represents a hairy hide, the reverse the raw inside of a skin with its edges curling inward. Neck and tail are not shown because for practical purposes they are not needed, but the roughened surface of the obverse which represents the hairy side of the skin<sup>3</sup> is even indicated on the

<sup>1</sup> The ingot was found below the Palace at Mycenae on the west, just outside the Western Portal, hence it probably belonged to the Palace. Mr Wace, to whom I am indebted for this information, considers that this ingot should perhaps therefore be classed as Late Helladic III, i.e. as of the fourteenth century B.C.

<sup>2</sup> I have myself handled and examined the Mycenaean specimen (Figs. 3 and 4) in Athens and the Cypriote ingot in the British Museum. The “reverse” side of the latter has the same appearance as the “reverse” (Fig. 4) of the former. In all probability the copper was cast in roughened moulds of “ox-hide” shape, the roughness designed to mimic a hairy hide; while the natural shrinkage of the cooling metal produced on the “reverse” the semblance of the contracting skin. The ox-hide shapes of the Sardinian specimens (Svoronos, *l.c.* pp. 162–164) are equally obvious, while the pieces from Crete and the Aegean Sea (Pl. III) represent hides from which much of the leg-skin has been cut away. An ox-hide figures as one of the pictographs stamped upon the Phaistos Disk, cf. Evans, *The Palace of Minos at Knossos*, i, 1921, p. 652.

<sup>3</sup> I find that R. Forrer, *Jahrb. f. Lothr. Geschichte*, xviii, 1906, p. 24, has come independently to a similar conclusion, for he compares these ingots to the hides of animals. His suggestion that they

Egyptian wall-paintings, as, for example, upon the ox-ingot carried by the foremost Cretan stalwart depicted in Fig. 1 above<sup>1</sup>.

With the picture of this two-and-a-half foot copper talent before us it is possible to form a clearer vision of that time in the world's history when the transition from cattle to currency was taking place. The prehistoric copper and iron ingots were shaped as ox-hides because they were the price of an ox, being the base metal equivalents of the "Homeric" gold talent or ox-unit, and it



FIG. 4. Copper ingot from Mycenae, reverse.

must have been practical too that this metallic currency should suggest by its shape the ox or cow of which it was the normal price<sup>2</sup>.

Since these ingots were current before, during, and probably after, the legendary epoch to which Theseus is referred, and since one has been found at Mycenae, others off the coast of Euboea, it may be presumed that they were once in use in Attica as much as in the Argolid. Thus these ox-hide copper bricks, the price of an ox, may be the concrete facts behind the later story that Theseus struck money and stamped an ox upon it.

are a possible reminiscence of skin-money is scarcely worthy of acceptance, as it is always dangerous to seek parallels between the customs of primitive peoples of the Near East and those of modern savages.

<sup>1</sup> Others in Wilkinson, *l.c.* p. 38, Pls. II *a*, II *b*.

<sup>2</sup> This seems to be what Sir W. Ridgeway (*l.c.* p. 317) calls "a distinct proof of the influence on the Greek mind of the same principle which has impelled other peoples to imitate in metal the older object of barter which a metal currency is replacing."

## CHAPTER II

ἦν δὲ ὁ ἀρχαῖος χαρακτήρ διδραχμον.

ARISTOT. *Ath. Pol.* 10.

§ 4. In the generations which followed the epoch of Theseus the twilight of the Dark Ages crept slowly over Hellas covering it with a dense mist which one strives in vain to pierce, but presently the mists begin to grow thinner and landmarks one by one come slowly into view. Symbolical of this, to my mind, is the manuscript, tattered and torn though it be, of Aristotle's book on the Constitution of Athens. As one reads the opening sentences odd fragments begin to form a blurred picture of seventh century Athens, a picture which grows gradually clearer as the powerful character of Solon comes into view.

Considering Solon primarily as a financier account must first be taken of the testimony both of Androtion<sup>1</sup> and of Aristotle<sup>2</sup> concerning his financial operations, and in these accounts one point stands out clearly and incontestably—the point that Solon did change the monetary standard in the year (594 B.C.) of his Archonship and legislation. All those, apparently, who have discussed the knotty problem of Solon's reform of the currency have allowed this point to elude them, for it has been generally assumed that Aeginetan "turtle" didrachms<sup>3</sup> were the currency of Athens before 594 B.C., and that Solon in that year began a coinage on the so-called Euboic system. In no possible way could this have been treated as a change<sup>4</sup> in the coinage; it would have been the first introduction of a new coinage.

As Solon changed the standard there is no escape from the conclusion that there was an Athenian coinage of Pheidonian weight before the reform was effected, for a simple calculation shows that, as he made 100, instead of 70 or 73<sup>5</sup>, drachms total one *mina*, he was changing over from the heavy Pheidonian to the lighter "Attic" silver standard. Perhaps it is because they have tended to study one side of the medal only that numismatists have so far failed to identify the pre-Solonian coinage of Attica.

<sup>1</sup> Plut. *v. Solon.* 15.

<sup>2</sup> *Ath. Pol.* 10.

<sup>3</sup> This misconception has been based upon a statement of Pollux (*Onom.* ix, 76), who mentions that the ancient coins which the Athenians spoke of as "fat drachms" were Aeginetan "turtles"; but he does not refer to any particular period, nor does the context show that they were ever used in Athens at all as regular currency.

<sup>4</sup> Though the word "change" is not used by Aristotle or Androtion the whole context implies it, and has been so taken by the late Sir J. E. Sandys, *Aristot. Constitution of Athens*<sup>2</sup>, p. 38 note on 10 § 1.

<sup>5</sup> ἡ μνᾶ πρότερον ἔχουσα σταθμὸν εβδομήκοντα δραχμᾶς ἀνεπληρώθη ταῖς ἑκατόν. Aristot. *Ath. Pol.* 10. For a clear account of the reform cf. Sandys, *l.c.* p. 39ff. Cf. also *H.N.*<sup>2</sup>, p. 367.

## § 5.

## GROUP A

Ca. 610 B.C. (or earlier) to 595 B.C.

Didrachm Punch-dies	6	Coins	10
Didrachm Anvil-dies	5	Number of didrachms recorded	23

There exists a group of didrachms of Pheidonian weight (Plate I P1A1 to P6A5, Catalogue nos. 1 to 10)<sup>1</sup> for which no "home" has as yet been found. They have been "lodged temporarily" first in Cean Carthaea<sup>2</sup> and later in

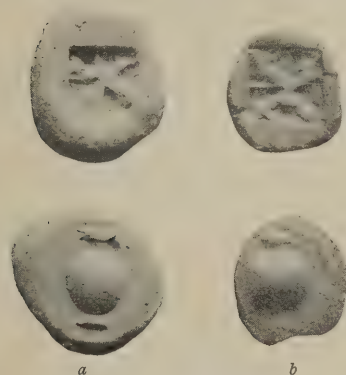







FIG. 5. *a*, Pre-Solonian;  
*b*, Solonian didrachm.

Andros<sup>3</sup>, but a careful study of their reverse incuse squares proves them to be the first Athenian coinage. In the following chapter it will be shown that the first coin extant struck under Solon's Archonship (Pl. I P7A6) has for its type an Amphora of "Tyrrhenian" shape<sup>4</sup> enclosed in a linear circle, and that the punch stamped onto the reverse of this coin was cross-cut with lines in this pattern  (Fig. 5 *b*), the later punches employed for the coins of the Eupatridae<sup>5</sup> being marked thus . Now the Athenian didrachms of Pheidonian weight can be arranged in a perfect die-sequence, in which it appears that the oldest punch extant was cross-cut thus

, a later one with a double cross , while the last of all (probably to be dated 596/5 B.C.) is marked  (Fig. 5 *a*)<sup>6</sup>, in a pattern corresponding exactly with the first Solonian coin of 594 B.C.

I have also taken into account the dimensions of the square punches which were hammered on to these coins. The heads of the pre-Solonian punches struck an incuse which varied from 9 to 11 millimetres square, the latest but one (die P5) measuring 11 millimetres. The incuse of the first Solonian didrachm of "Attic" weight (no. 11, Pl. I P7) likewise measures 11 millimetres square. Save for the fact that the Amphorae on the earlier pieces are clumsier in shape, the design, workmanship and mint-technique are identical in both series; the earlier might simply be termed "fat", the later "thin" didrachms.

The early obols, the types of which are identical with the types of the didrachms, likewise afford conclusive proof that these coins are Athenian. They

<sup>1</sup> For the explanation of the system of numeration employed on the Plates see above, "NOTE" before P. 1.

<sup>2</sup> Imhoof, *Griech. Münz.* p. 537. B.M.C. *Crete, etc.* p. 90.

<sup>3</sup> Paschales in *J.I.A.N.* i, 1898, p. 299. Head, *H.N.*<sup>2</sup>, p. 482, refused to accept the attribution as certain. It is merely founded on conjecture.

<sup>4</sup> Walters, *Hist. Ancient Pottery*, i, p. 324. H. Thiersch, *Tyrrhenische Amphoren*, 1899.

<sup>5</sup> See Introduction and § 13 ff. below.

<sup>6</sup> Of the coins here depicted Fig. 5 *a* = No. 10 *a* of Catalogue (P6A5) and Fig. 5 *b* = No. 11 *a* of Catalogue (P7A6).

<sup>7</sup> Pollux, *Onom.* ix, 76.

fall into two distinct series; the first of 1.10 to 0.97 grammes (17 to 15 grains), giving a didrachm of 13.22 to 11.66 grammes (204 to 180 grains); the second of 0.70 to 0.58 grammes (10.8 to 9 grains), giving a didrachm of about 8.42 to 7 grammes (130 to 108 grains)<sup>1</sup>. Their general appearance and fabric are identical; and it is inadmissible, while regarding the heavier as obols, to treat the lighter as  $\frac{3}{4}$  obols of Pheidonian weight<sup>2</sup>, for so minute a distinction of weight without any distinction of type would have made marketing absurdly difficult<sup>3</sup>. Clearly the former (Pl. IV  $\iota$ ) are Pheidonian obols, the latter Attic-weight obols issued immediately after Solon's reform (Pl. IV  $\kappa$ ). No other state but Athens is known to have made this change of standard in the early sixth century, while it seems that *ces pièces sont communes à Athènes*<sup>4</sup>. In fact they, like their multiples the didrachms with the Amphora, are Athenian coins.

§ 6. Since then the numismatic evidence of dies and mint-technique stamps the heavy "Amphora Coins" as the pre-Solonian money of Athens, it may be worth considering what the obverse type really is, why it may have been selected, under whose authority and for what commerce in particular it was issued, and for how long it may have been current.

Already by about 600 B.C. the Athenian potters were displaying an industry which must have made them competitors with the potters of Corinth. In distant Etruria as well as in Hellas there has been found a class of vases to which has been given the name "Tyrrhenian Amphorae," and which are now known to be Athenian in origin, the precursors of pots painted in the true black-figure style. Thiersch in his monograph dates them to about 600 B.C. and their special characteristics are a bulgy ovoid shape and the raised collar at the junction of body and neck.



FIG. 6. Tyrrhenian amphora.

The outline of a typical specimen (Fig. 6)<sup>5</sup> proves that the collared amphorae on the coins are intended for pictures of similar vases, and the dates of the coins and the vases must be identical. It is merely clumsiness on the engraver's part which has made him join the upper ends of the handles to the underside of the lip instead of to the neck immediately below it. Such amphorae were employed largely for the export of oil, and Plutarch has preserved a record of Solon's law on the subject. "Of the products of the soil Solon allowed oil only to be sold abroad, but forbade the exportation of the others; and if any did so export, the Archon was to pronounce curses upon them, or else himself pay one hundred drachmae into the public treasury. His first table is the one which contains this law<sup>6</sup>."

<sup>1</sup> In both series, as in all ancient "small change," the fractional currency tends to be on the light side; naturally enough, for it was rarely submitted to the test of the balance in the way that larger coins must constantly have been when more important transactions were on foot.

<sup>2</sup> As in B.T.II, i, Col. 1277, No. 1874.

<sup>3</sup> At Syracuse there were two small coins, the litra and the obol, which approximated closely the one to the other in size and weight. But they were carefully distinguished by a difference of type, the litra having a cuttle-fish, the obol a wheel upon its reverse.

<sup>4</sup> B.T.II, i, Col. 710, note 2.

<sup>5</sup> Thiersch. *l.c.* Pl. II, fig. 1. Reduced from an outline drawing.

<sup>6</sup> Plut. *v. Sol.* 24.

Years before the age of Solon the cultivation of olives must have been by far the most important Attic industry, for the olive grows slowly, and the trade was a flourishing one long before the dawn of the sixth century. It seems unnecessary to claim that he encouraged the growth of olives and the export of the oil in this law<sup>1</sup>, since the staple trade needed no egging on. He merely forbade other exports except the chief product of the state, which in those days fulfilled the admirable functions of butter, soap and margarine<sup>2</sup>. The landed gentry, whom Plutarch and Aristotle<sup>3</sup> term "those of the Plain," must have lived largely by their olive-yards, and doubtless possessed all the farmer's ability to drive a hard bargain with "those of the Sea-shore"<sup>4</sup>—the merchants and rich traders who exported the oil. The "gentry" were conservatives, the merchants reformers.

The oil-amphora in which the state's chief export was carried abroad was as natural, as appropriate a device for the coins used by the Athenian merchants as was the Silphium plant<sup>5</sup> for the coins of the early traders of Cyrene. Our knowledge of the conditions of the time is too slight for us to determine whether these coins issued from an official civic mint, or whether they were currency coined for the convenience of their trade by some company<sup>6</sup> of Attic merchants acting as agents for the state, but the continuity of mint-technique mentioned above<sup>7</sup> inclines one to regard them as the products of an official mint. Keen traders these early Athenians were and the prominence given to trade appears in the fact that Solon's trade-law was inscribed on the first of his "tables"<sup>8</sup>. As a trader<sup>9</sup> himself Solon perhaps shipped the highly-prized oil to foreign lands, for at the end of his Archonship "he made his ownership of a vessel an excuse for going abroad"<sup>10</sup> and "set off on a journey to Egypt with the combined objects of trade and travel"<sup>11</sup>.

Luxury and rich food as well as a most laudable love of personal cleanliness were among the outstanding characteristics of the Ancient Egyptians, but their land and climate was unsuited to extensive cultivation of the "golden olive"<sup>12</sup>. By far the best market for oil must have been the Delta, and southward to Egypt many of the oil-cargoes<sup>13</sup> from Hellas and the Isles must have been carried. Was Solon, with his interest in the oil-trade, one of those who traded profitably on the Nile?

<sup>1</sup> Ure, *Origin of Tyranny*, p. 34.

<sup>2</sup> Cf. Daremberg, Saglio, *Dict. d. Antiq.* iv, p. 162 ff. *Olea*.

<sup>3</sup> *v. Sol.* 13; *Ath. Pol.* 13, 4.

<sup>4</sup> *ll.c.*

<sup>5</sup> Or the Silphium fruit. Cf. B.T.II, i, Pl. LXIII.

<sup>6</sup> A *κοινωνία* such as is mentioned in Aristot. *Eth. Nicom.* 1160 a, 10 ff.

<sup>7</sup> § 5.

<sup>8</sup> Plut. *v. Sol.* 24.

<sup>9</sup> A cynic might regard the prominence of the law as indicating more than a mere academic interest on Solon's part. P. N. Ure, *l.c.* p. 35, tries to minimise the merchant in Solon; but the tales of his trading which survive, in spite of the poor opinion which fourth century Greeks had of merchants, show how very commercial he really was.

<sup>10</sup> Plut. *l.c.* 25.

<sup>11</sup> Aristot. *l.c.* 11, 1.

<sup>12</sup> Pindar, *Ol.* xi, 13.

<sup>13</sup> Cf. the import of "much oil of the harbour" in Egyptian texts; Erman (transl. Tirard), *Life in Ancient Egypt*, 1894, p. 516.

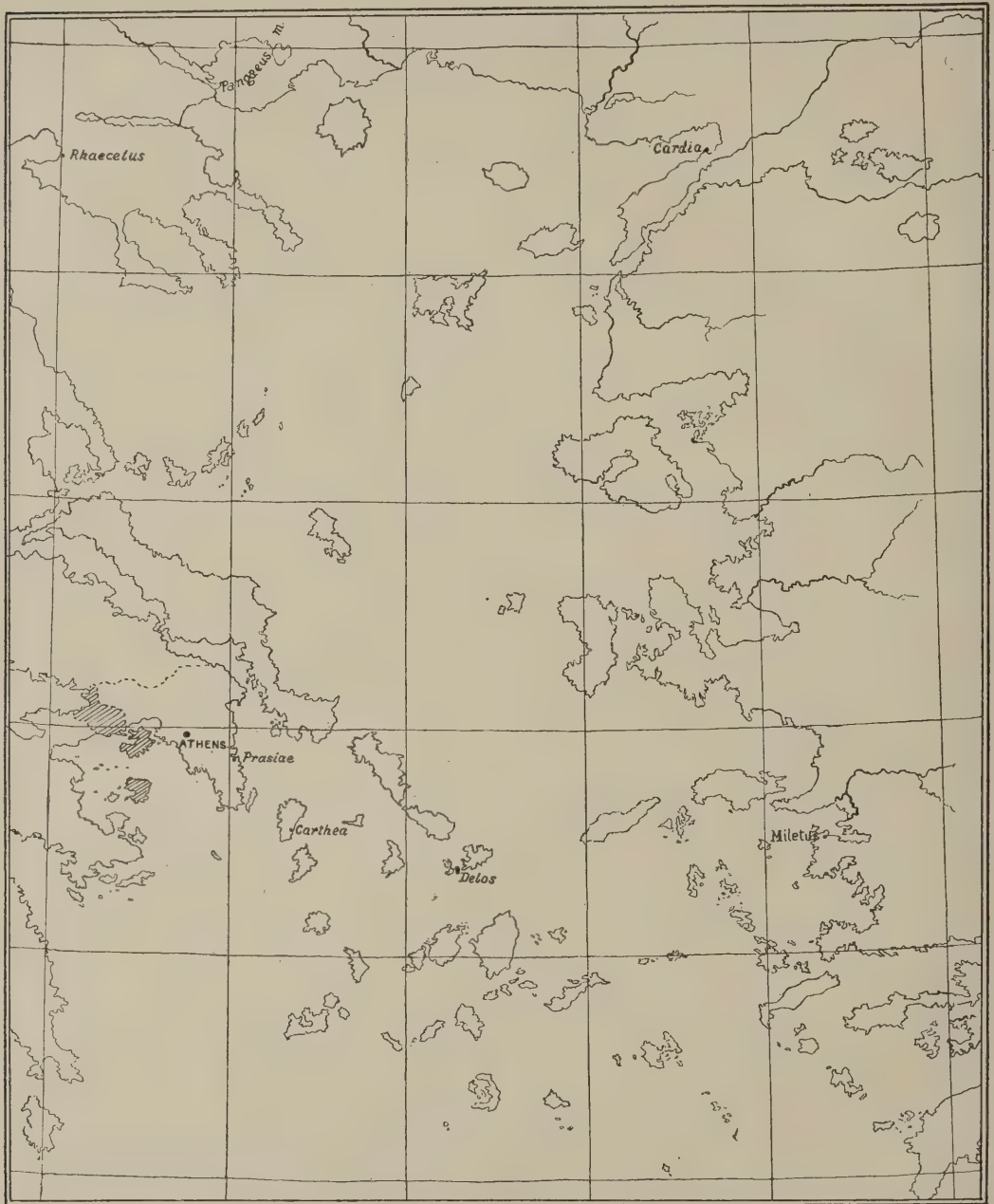


FIG. 7. The Aegean Sea.

§ 7. This south-borne trade from the Attic coast must have been exposed to many risks in those days. Megara was definitely hostile and in possession of the whole of Salamis, Aegina was ill-disposed at all times<sup>1</sup>; while the Athenian "navy," even if it was more than the "number of fishing boats and one triakonter" in Plutarch's story<sup>2</sup>, was entirely negligible. Yet there was Athenian sea-borne trade carried in Athenian merchantmen. It seems almost inconceivable that these vessels could have sailed from the open bay of Phalerum, since, before ever they reached Cape Sunium (see Fig. 7) some Megarian or Aeginetan privateer would have swooped down upon them and taken an easy prize. One needs but to take one's stand upon the Acropolis of Athens and to look southward across the sea. Slightly to the right lies Salamis, so close that you would not think it an island but rather part of the long Aegalius range.



FIG. 8. The bay of Prasias; looking north.

No wonder the citadel was fortified most heavily on its southern side by the rough Pelasgic walls, since the Megarians of Salamis might well have surprised it by a sudden raid. And as you look south over the water strangely near looms Aegina across the bay of Phalerum, and you wonder that the Athenians endured so long to see in hostile hands the island which Pericles termed "the eyesore of Piraeus." But Piraeus, even in the sixth century, was as yet neither town nor harbour; and, if Phalerum was impossible as a port, where, in the seventh century, was the port of Athens?

From Athens eastward there runs the old road<sup>3</sup>—passing close by the prehistoric sites of Spata and Vrouva—to the bay of Prasias (Fig. 8), the best harbour on the eastern coast of Attica<sup>4</sup>. The age of the town that once occupied

<sup>1</sup> Ure, *l.c.* ch. vi, and his appendices B and C.

<sup>2</sup> *v. Sol.* 9.

<sup>3</sup> I walked over part of this road in the spring of 1923. From Athens to Spata round the north of Hymettus is a walk of about 3 hours (by a short cut over a shoulder of the mountain about 2½), from Spata to the bay of Prasias about 1½ hours would suffice.

<sup>4</sup> Frazer, *Pausanias*, ii, p. 403. The illustration is from a photo I took early in 1923 of the bay looking north. On the right is the acropolis hill called Coronē.

the southern side of the harbour is shown by the tombs of Mycenaean period which have been excavated there<sup>1</sup>, and mythology tells the same tale of the town's early date in recording the story of Erysichthon<sup>2</sup>, whose traditional tomb there is mentioned by Pausanias<sup>3</sup>. It seems clear that the sacred embassy, or *Theoria*, which went annually from Athens to Delos by the ship which, according to belief, was the very one in which Theseus had returned triumphant from Knossos<sup>4</sup>, set sail from Prasiae. As evidence there is the casual reference of Pausanias that Erysichthon "died on the voyage as he was returning from Delos after the sacred embassy" and was buried at Prasiae, and combined therewith the interesting tale which gives us the route by which the first fruits of the Hyperboreans came to Delos. From Central Europe they came down to the Scythians, perhaps down the river Borysthenes to Olbia<sup>5</sup>, thence to Sinope on the southern shore of the Euxine. The Sinopeans passed them on through the Hellespont, sending them, not by a direct route, such as by Lemnos, Scyros and Andros, to Apollo's island home, but rather diverting the first fruits from the beaten track to Attic Prasiae. This curious detour is quite unexplained save on the assumption that the Athenian *Theoria* sailed from Prasiae<sup>6</sup> and had the duty of placing the offerings in Apollo's shrine.

Thus Prasiae, long after it had been eclipsed as a port by Phalerum<sup>7</sup> and Piraeus, retained in ritual the memory of the days when it had been the chief harbour of the Attic coast. And it seems, indeed, as though in the seventh century B.C. Prasiae must still have been the port of departure for the Athenian sea-borne trade, because the strategic positions and hostility of Megara and Aegina made Phalerum entirely impossible.

§ 8. Picture the merchantman putting out from Prasiae and rounding the northern promontory of Ceos in comparative safety, never having come in sight of Salamis or Aegina; down the eastern shore of Ceos the vessel sails until she puts in at Carthaea. Much of the political and economic life of Ceos was intimately bound up with the life of Attica. It will not do to discredit lightly<sup>8</sup> the truth of the statement made by Herodotus and repeated by Thucydides, that the Ceans were "an Ionian race derived from Athens<sup>9</sup>." Like many another community they were of mixed stock, but the old Attic element must

<sup>1</sup> Staïs in Πρακτικὰ τῆς Ἀρχ. Ἐταιρ. 1894, p. 21.

<sup>2</sup> Roscher, *Lex.* i, p. 1383. Cf. Phanodemos, *F.H.G.* i, p. 366, 1. <sup>3</sup> i, 31, 2.

<sup>4</sup> Plut. *v. Thes.* 23. The Marathonian Tetrapolis used also to send a *Theoria* to Delos; Philochorus *ap. Schol.* in Soph. *Oedip. in Col.* 1047. *F.H.G.* i, p. 411, 158.

<sup>5</sup> See § 107 below.

<sup>6</sup> The departure of the sacred embassy from Prasiae has been questioned (Frazer, *l.c.* ii, p. 406) but on no good grounds. It is supported by Roscher, *l.c.* and by E. Pfuhl, *de Athen. Pompis Sacris*, Berlin, 1900, p. 106.

<sup>7</sup> This does not, of course, mean that Phalerum may not have been the port of Athens in prehistoric times before Aegina became a sea-power and Megara an enemy. Cf. Paus. i, 2 and Frazer, *l.c.* ii, p. 11 f.

<sup>8</sup> As Pridik does; *de Cei Insulae Rebus* (Diss. Dorpat.). Berlin, 1892.

<sup>9</sup> ἔθνος Ἴωνικὸν ἀπὸ Ἀθηνέων, Hdt. viii, 46; Thuc. vii, 57, 4. Compare likewise Schol. in Dionys. *Perieg.* 525 (*Geog. Gr. Min.* ii, p. 450): ταύτας τὰς Κυκλάδας ἐπέκησαν οἱ Ἀθηναῖοι, καὶ ἠγγήσαντο τῶν μὲν εἰς Κέων Θερσιδάμας, κ.τ.λ.

have been strong, for its influence was apparent in names<sup>1</sup> and sacred cults<sup>2</sup>. By the fifth century we find Athens and Ceos connected perhaps more intimately than any other states with holy Delos<sup>3</sup>, and when one reflects that a bare dozen miles of water separate the two, and that strong bonds of religion were reinforced by stronger bonds of mutual trade it will occasion no surprise to find the earliest coins of the chief Cean city strongly influenced by the pre-Solonian currency of her mother-city, Athens.

The oldest extant coin of Carthaea, a didrachm of Pheidonian weight (Pl. XXIV, 1), has as its obverse type an amphora; but wine, not oil, was the chief Cean export, and so the type, differing from the oil-jar device of Athens, is a tall pointed wine-amphora without handles. There still exists a treaty of the fourth century B.C. between the peoples of Athens and Carthaea<sup>4</sup> specifically renewing an older treaty which guaranteed to the Athenians the monopoly of the fine red earth, or ruddle, for which the island was famous in those days. How old the original treaty was there is no means of ascertaining, but it should be noted that about 600 B.C. Attic pottery of the fine clay from Koliai<sup>5</sup> had begun to appear, and Cean ruddle was a necessary ingredient if the pots were to have the bright red-orange colour which was so greatly admired. In the products of the potters' factories Athenians exported their oil, Ceans their wine, and the first stamped their coins with the picture of an oil-jar, the second placed a tapering wine-amphora upon their money. This first Carthaeian coin possibly comes from the Santorin Find<sup>6</sup>, in which a single didrachm with an amphora was recorded as found in the company of many island pieces of Pheidonian weight of which the majority were Aeginetan "turtles."

The coins of Athens and Carthaea must have circulated equally in either state, being struck on the same standard, up to 594 B.C., when Solon, reducing the coinage from the Pheidonian to the older "Attic" standard, marked the change by altering the type and placed the amphora within the circle of a shield<sup>7</sup>. The people of Carthaea did not reform their standard, looking less as

<sup>1</sup> Names of demes in Ceos, Κόπρος, Προβαλυθούς, Φηγῶες (thus Pridik, *l.c.*) correspond to the Attic demes Κόπρος, Προβάλυθος, Φηγῶς: *I.G.* XII, fasc. 5, 544. See also Pauly, *R.E.* xi, 1, 188, 43, for a certain Megacles as founder of Carthaea.

<sup>2</sup> Zeus, Athena, Apollo, Dionysos and in all probability Hephaistos, were among the chief deities in Ceos. Pridik, *l.c.* p. 132ff., p. 140.

<sup>3</sup> Pindar, *Paeon*, iv, for the Ceans to Delos; *Paeon*, v, for the Athenians to Delos. The Ceans had a banqueting room in Delos, Hdt. iv, 35.

<sup>4</sup> B.C. 360-350; *I.G.* II, 1, 546; Hicks, Hill, *Gr. Hist. Inscr.* No. 137. Coresia and Iulis in Ceos made identical treaties with Athens at the same time. For the Cean ruddle (μίλτος) cf. Theophrastus, *de lap.* 51 to 53.

<sup>5</sup> Suidas s.v. Κωλιάδος κεραμῆες. The mixing of ruddle (Lat. *rubrica*) with clay is first ascribed to Butades the Sicyonian (Pliny, *H.N.* xxxv, 152), who must be dated at least as early as the seventh century B.C. Cf. Pauly, *R.E.* iii, 1, 1079, 40. Walters, *Hist. Ancient Pottery*, i, p. 205.

<sup>6</sup> W. Wroth, *N.C.* 1884, p. 270, quoting Borrell's list of the Find: "1 Plain vase *without handles*" (the italics are mine). I am indebted to Dr Galster, Curator of the Royal Cabinet in Copenhagen (where the didrachm—illustrated Pl. XXIV, 1—now is), who writes that the coin was acquired in 1846. He adds: "It is very possible that this specimen really is from the Santorin Find."

<sup>7</sup> See § 12 below.

Athenians did for trade with Egypt and the West, because perhaps they sold their wine chiefly in the Aegean and Peloponnese; but they too marked the occasion by an alteration in their coin types, for they now added a dolphin to the picture, placing it beside the amphora. A sequence of their later didrachms and fractions is shown on Pl. XXIV, 2 to 9, and the latest of these larger coins has within the depressions of the reverse incuse the letters ΚΑΡ, first syllable of the city's name. The earliest in date of these coins must be the half drachmae (Pl. XXIV, 4, 5 to 7), three of which are struck from the same pair of dies. The amphora on these is Athenian in shape showing the influence of the Attic on the Carthaeian mint; but the dolphin, which gradually became filled in on this die, marks the issue as of Cean origin<sup>1</sup>.

§ 9. It is difficult to estimate how long before 594 B.C. the Athenians may have begun to issue coins. For the didrachms six punch-dies and five anvil-dies have been recorded; and, had coins of the fourth<sup>2</sup>, instead of those of the end of the seventh century B.C., been under consideration, it might have been possible to estimate with some accuracy how long a period these covered. I have shown elsewhere<sup>3</sup> that at the chief Olympian mint in a prosperous period 25 punch-dies were in use over 20 years, while in the same mint during a subsequent period of commercial depression only nine punch-dies covered a period of eleven years<sup>4</sup>. Now Athenian commerce in the years before Solon's reform was of little account, and the economic distress so vividly pictured by Aristotle and Plutarch must have depressed trade to no small extent. It is therefore probably not too much to allow some fifteen years for the employment of six punch-dies, especially when one perceives the bad state into which such a punch as ΠΙ was allowed to get before it was finally replaced by a new one. Tradition said<sup>5</sup> that in the "Laws" of Draco (621 B.C.?) fines were still expressed in cattle, and it is in any case probable that coined money was only introduced in Athens a few years after his legendary date.

So far our researches have shown that before the days of the Solonian legislation Athens, or the Athenian merchants, issued a coinage on the Pheidonian standard, conforming to the weight and character of the money current in the seventh century in Peloponnesus and some Aegean isles—money of a kind which was with great probability first struck by Pheidon of Argos as master of

<sup>1</sup> 5, 6, 7 are in London, Jameson collection and Berlin. Observation of the gradual filling in of the punch shows 5 to be the first, 7 the last to be struck. On the obverse die the dolphin, clear on 5, was half-filled in (with adhering silver or dirt) when 6 was struck, and all but obliterated when 7 came from the die. The Paris specimen, B.T.II, i, Pl. LX, 2, is in the same state as 7 in the Berlin collection, the dolphin being all but filled in.

<sup>2</sup> Cf. Newell's admirable calculation of the number of dies used per annum at Alexandria ad Issum. *Amer. Journ. Num.* liii (1919), ii, p. 41.

<sup>3</sup> *Temple Coins of Olympia*, Cambridge, 1921, and *Nomisma*, viii.

<sup>4</sup> *l.c.* pp. 21, 37, 38, 43. As to the proportion of anvil-dies in Attic mints in later years see § 85.

<sup>5</sup> Pollux, *Onom.* ix, 61. But see Sandys, *Aristot. Constit. of Athens*<sup>2</sup>, 1912, p. 18, col. 1. The whole passage, *Ath. Pol.* 4, 3, ἡ δὲ τάξις to 23, νόμον is almost certainly an anachronistic insertion.

Aegina<sup>1</sup>. Sir William Ridgeway has pointed out that "silver coins unless they weighed 135 grains (8.75 grammes) are not described as silver staters, but are regularly termed didrachms<sup>2</sup>." The sentence quoted at the head of this chapter proves to be a fresh example of this rule, for Aristotle, after describing the reform in the currency adds the significant words, "whereas the primitive type of coin was a didrachm." These early Athenian coins of Pheidonian weight appear to support anew the interpretation<sup>3</sup> which regards *didrachmon* in this passage as a reference to a heavy coin.

There is no means of knowing to what ultimate source Aristotle<sup>4</sup> owed his information, but the truthfulness and excellence of the source is proved by the existence of these same Athenian coins of pre-Solonian date, "the primitive type of coin that was a (Pheidonian) didrachm."

<sup>1</sup> Strong arguments in support of the Pheidonian origin of the Aeginetan money have been recently advanced by P. N. Ure, *Origin of Tyranny*, ch. vi. Cf. also § 92 ff. below.

<sup>2</sup> *Origin of Currency*, p. 307. The rule, however, has occasional exceptions.

<sup>3</sup> Sandys, *Aristot. Constit. of Athens*<sup>2</sup>, p. 41, col. 1. ἀρχαῖος, α, ον in other passages of the *Ath. Pol.* refers to pre-Solonian objects or events. Cf. 3, 1; 8, 2.

<sup>4</sup> F. E. Adcock in *Klio*, xii, 1912, p. 1 ff. shows that Androtion's *Atthis* is the source of much in the *Ath. Pol.*; but he regards the 10th chapter as a "polemic against Androtion," and suggests (p. 5) that it may give us "the results of research by Aristotle." The suggestion is, to say the least, attractive when we note Aristotle's interest in coinage generally (*Pol.* 1257a, 35 ff.), and particularly as regards the money of Agrigentum, Himera, Rhegium, Tarentum and Tenedos (*ap.* Pollux, *Onom.* iv, 174; ix, 80; v, 75; ix, 80; and *ap.* Steph. Byz. *s.v.* Τένεδος). Cf. also Nissen in *Rhein. Mus.* 1894, who sees traces of Aristotle's interest in contemporary coinage. He was probably the first scientific numismatist.

## CHAPTER III

ἀλλ' ἄγετε Λευκόποδες...  
νῦν δεῖ νῦν ἀνηβῆσαι πάλιν...

ARISTOPH. *Lysistr.* 664.

§ 10. "Since the many were in slavery to the few<sup>1</sup> the people rose against the upper class. The strife was bitter, and for long they were opposed to one another, until at last, by common agreement, they chose Solon to be mediator and Archon, and committed the whole constitution into his hands<sup>2</sup>." The account which Aristotle gives of the miseries of Attic farmers—miseries bred from the changed economic conditions which current coin brought in its train—the poignant tales of mortgaged farms, enslaved children and men transported who forgot the use of Attic speech<sup>3</sup>—all is so vivid that it is easy to realize how Solon was ever afterwards looked upon as the greatest liberator of the Athenian people.

Later democratic tradition made of Solon the champion and the founder of democracy, but, when there have been cleared away such accretions as may have been added by later writers to the story<sup>4</sup>, the personality of Solon still stands out as that of a truly great man. Though of noble descent<sup>5</sup> he was a trader in an age of merchant princes, a man whose trade could only prosper if faction ceased at home, a man of the world whose disinterestedness made him entirely suited to his task.

"Before his legislation he carried through his cancellation of the debts, and after it the augmentation in the standards of weights and measures, and of the currency<sup>6</sup>." The order is significant and logical. The crying needs of the enslaved people came first, then a code of law to establish order at home, and last a far-sighted reform that would open the way to the world-markets and to prosperity for Athens. This last must now be our main consideration.

Two points of importance must be made clear. In the first place a pre-Solonian Attic coinage existed<sup>7</sup>, and it is therefore obvious that those scholars are at fault who claim that no alteration took place in the coin-standard<sup>8</sup>. This Solon did change from the Pheidonian to another system.

Secondly it cannot be claimed that Solon's new standard coins were drachms, and that in a moment of national stress he resorted to a standard heavier than the one previously in use<sup>9</sup>. Every historical parallel shows that the threat of bankruptcy is met by a debasement of currency or by some kindred measure

<sup>1</sup> "By reason of the hardness of the money-lenders." Plut. *v. Sol.* xiii, 3.

<sup>2</sup> *Ath. Pol.* 5.

<sup>3</sup> Solon, *Fragm.* 36 (Bergk).

<sup>4</sup> Cf. Adcock in *Klio*, xii, 1912, p. 1 ff.

<sup>5</sup> He belonged to the family of the Medontidae, Plut. *v. Sol.* i. Toepffer, *Att. Genealogie*, 1889, p. 234<sup>1</sup>.

<sup>6</sup> *Ath. Pol.* 10.

<sup>7</sup> § 5 above.

<sup>8</sup> For a bibliography of the literature of scholars and numismatists see *H.N.*<sup>2</sup>, p. 365.

<sup>9</sup> As is claimed by Head, *H.N.*<sup>2</sup>, p. 366.

and not by the converse method. Besides, any other supposition ignores the neat parallelism of Aristotle's sentences:

And after that (Solon carried through) the increase

- (a) of weights and measures, and (b) of the currency.  
 (a) { for under him the measures were made larger than those of Pheidon<sup>1</sup>, and (b) { the *mina* which previously contained 70 was filled out so as to contain 100 drachms.

The words "increase of currency" can refer only to the increase in the bulk of the coinage, which automatically came from a reduction in the weight of its units<sup>2</sup>. Solon introduced not a heavier but a lighter standard<sup>3</sup>.

§ 11. What was this standard, new to the coinage of Athens, which was to facilitate Athenian commerce in such a marked degree? It was not a Euboic

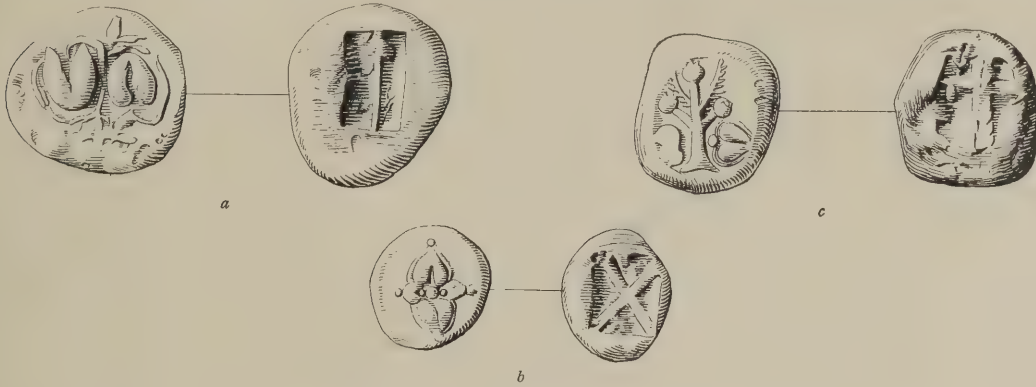


FIG. 9 a, b, c. Early coins of Cyrene.

coin standard, for Euboea had as yet no coinage that can be identified<sup>4</sup>, but it was a standard the same as that already in use at Corinth<sup>5</sup>; and it is likely that the very motives which caused the Corinthians to adopt it prompted Solon to resort to a system which had also the advantages of a kind of emergency debasement.

<sup>1</sup> The raising of the market weights is of course part and parcel of the same emergency legislation. A man got more in weight for a lesser sum of money.

<sup>2</sup> We have already seen (§ 9) that the following sentence, "whereas the primitive type of coin was a didrachm," must refer to the pre-Solonian money with the amphora stamped upon it.

<sup>3</sup> No valid support can be gained by those who suppose an increase of standard from the weight found in the Persian débris on the Acropolis (scaling about ten tetradrachms) and inscribed ΔΕΚΑ-ΣΤΑΤΕΡΟ[Ν] (Pernice, *Griech. Gewichte*, 1894, p. 82 and Plate, fig. 2; *J.H.S.* 1893, p. 128, Pl. VII, 54). This seems to belong to the Peisistratic age, and, when Peisistratus introduced the tetradrachm as the principal unit of currency, the tetradrachm became the *στανήρ*, or "standard coin" of Athens. In any case the specimen in question is almost certainly a market and not a coin weight. Cf. O. Viedebantt, *Antike Gewichtsnormen u. Münzfüsse*, 1923, p. 39-40 footnote.

<sup>4</sup> See Introduction, p. xix.

<sup>5</sup> B.M.C. *Corinth*, etc. p. 1, 1; Pl. I, 1. B.T.II, 1, Nos. 1147-9, 1151, Pl. XXXVI, 1, 3. *Z.f.N.* xxii, 1900, p. 235 f., 14-21, Pl. VIII, 3, 4. It is not improbable that Cypselus initiated the Corinthian coinage.

There can be little doubt that this system was, as Professor P. Gardner in his most recent book<sup>1</sup> has made clear, the system on which were struck the earliest coins of Cyrene (Fig. 9)<sup>2</sup>. The merchants of that State had first coined on the standard most acceptable in Naucratis<sup>3</sup>, where they meant to do the bulk of their trade; the merchants of Corinth were not slow to follow, and Naucratis—proof of this—has yielded up plentiful remains of Corinthian ware<sup>4</sup>; the merchant Solon with his eye on the Delta followed the wise precedent of Corinth and Cyrene, and in the Athenian sherds and pots found there<sup>5</sup> in our day we read the tale of Attic trade in Egypt.

After all this "Cyrenaic" standard was no real novelty in Hellas, for it approximated closely to the old Homeric gold ox-unit estimated at some 8.75 grammes (135 grains)<sup>6</sup>. The Pheidonian standard had another origin<sup>7</sup>, and this system Solon abandoned in 594 B.C. adopting the standard, henceforward to be known as "Attic," which Corinth had borrowed from Cyrene, and thence had passed on westwards to Sicily, South Italy and Etruria. Southward to Egypt, westward to Etruria<sup>8</sup>—to lands where Attic money was acceptable and later famous<sup>9</sup>—the merchantmen carried the rich vases from Athenian potteries and the amphorae containing the precious olive oil.

### GROUP B

594 B.C. to 561 B.C.

Didrachm punch-dies	24	Coins	32
Didrachm anvil-dies	23	Number of didrachms recorded	45

### § 12.

#### GROUP B i

594 B.C. to ca. 590 B.C.

Official Badge: Amphora on a Shield

Pl. I, P7A6 to P9A7 (Catalogue Nos. 11 to 13)

<sup>1</sup> *Hist. of Ancient Coinage*, 1918, p. 219 ff. But this system was not, as he claims, the Egyptian *Kedet* (*Kât* or *Kite*) with its tenfold multiple the *Deben*, for the *Kedet* weighed about 9.0 g. (139 grains). For details of the standards see the metrological chapter below, § 86 ff.

<sup>2</sup> a. Paris: 17.21 g. (265.6). B.T.II, i, 1973. Pl. LXIII, 1.

b. London: 8.62 g. (133.1). *l.c.* 1979. Pl. LXIII, 4.

c. Paris: 17.10 g. (264.0). *l.c.* 1985. Pl. LXIII, 8.

a and b Silphium seeds, c, Silphium plant and seed.

<sup>3</sup> See § 97 and § 86 ff. for a discussion of the whole metrological question.

<sup>4</sup> Prinz, *Funde aus Naucratis*, 1908, p. 73 ff.

<sup>5</sup> Prinz, *l.c.* p. 75 ff. Fragments of thirteen different Athenian vases and very many *Kleinmeister* Attic cups were found on the site.

<sup>6</sup> Sir W. Ridgeway, *Origin of Currency*, p. 153.

<sup>7</sup> The discussion of which must be postponed, cf. § 92 ff. below.

<sup>8</sup> Prinz, *l.c.* p. 80, points out that although Athens had no factory of her own at Naucratis she, nevertheless, succeeded during the sixth century in getting a firm footing there for the sale of her goods. So many Attic vases have been found in Etruria that *savants* of the eighteenth century believed them to be Etruscan.

<sup>9</sup> Hoards containing Athenian coins have been found in Egypt; see Appendix, Finds Nos. IV, V. In the west the most important is the Taranto Find (Appendix, No. VIII). Attic tetradrachms frequently turn up in Sicily.

The amphora remained the type—a type which may now be called the Civic badge—on the Athenian coinage for some little while after Solon's reform of the currency, and the coins themselves betray no alteration in fabric or technique, save that being lighter in weight they are a little thinner than the older pieces. Didrachms (Pl. I, P7A6 to P9A7) and obols (Pl. IV, κ, λ) continued to be

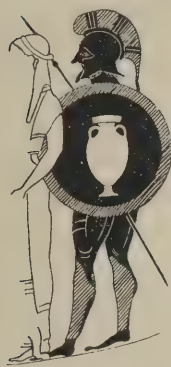


FIG. 10. Warrior from an amphora in Munich.

issued, and the latter at first were in every respect save weight similar to those of the Pheidonian standard<sup>1</sup>. But in the type of the standard coin a significant alteration was made. Though he was not, as the Athenians later liked to think, the founder of the Democracy, Solon did first instil into the people of Athens the civic sense, for to him was due the quaint law which disfranchised that citizen who took neither side in party strife<sup>2</sup>. Solon, therefore, raised the coin-type of the amphora to civic dignity by presenting it in the guise of a coat-of-arms carved within the circle of a shield. The love of "heraldry" was strong in the sixth century as is manifest from the prominence given on Black Figure (B.F.) vases to shields and their devices, while on Red Figure (R.F.) vases of the fifth century they are far less frequent. Aeschylus, champion of the older generation, reflects this love of heraldic symbols<sup>3</sup> in

the long passage describing the blazons of the different heroes in the *Seven against Thebes*<sup>4</sup>; but Aristophanes, younger in years, gibed at

Fosses and Scamander-beds, and bloody targes flashing  
With gryphon-eagles bronze-embossed<sup>5</sup>,

which seemed mere extravagances of the herald's art. The sixth century, however, set great store by the badge of the individual, for Solon himself enacted a law that a gem-engraver must not keep the impression of any ring he sold<sup>6</sup>, so important was the private badge; and, like the individual citizen, the city must have her device displayed upon a shield<sup>7</sup>. Thus it was that vase-painters depicted the amphora of Athens borne as a badge upon the shields of Athenian hoplites (Fig. 10)<sup>8</sup>. This city-badge of a shield with an amphora upon it was confined to the didrachm, but after a year or two it affected the obol also, which presently

<sup>1</sup> For the heavy "Pheidonian" obols, see § 5, p. 8 above.

<sup>2</sup> *Ath. Pol.* 8, 5. *Plut. v. Sol.* 20.

<sup>3</sup> Amphiaraios in *Sept. c. Theb.* was remarkable for having no badge; σῆμα δ' οὐκ ἐπὶ κέκλω, an exceptional characteristic. Mr A. D. Nock calls my attention to the fact that, like the three that follow, this line was probably applied by the Athenians to Aristeides. Cf. *Plut. v. Arist.* 3, 4.

<sup>4</sup> 374 ff.

<sup>5</sup> *Ranae*, 928, transl. Gilbert Murray. Cf. also Euripides, *Phoen.* 1106 ff., who with admirable fooling parodies the extravagant heraldry of Aeschylus' seven champions.

<sup>6</sup> *Diog. Laert. v. Sol.* 9, the purpose being to prevent the forgery of a signature. (N<sup>1</sup>)

<sup>7</sup> The badge being here the picture of the chief export of the state justifies both Sir W. Ridgeway's doctrine of the commercial origin of early types and Dr G. Macdonald's doctrine of their heraldic origin.

<sup>8</sup> The illustration is from a "Tyrrhenian" amphora in Munich, *Élite d. Monum. Céramograph.* i, p. 202, Pl. LX. Another B.F. amphora in Munich (730) shows the amphora on the shields of two warriors.

appeared bearing, as a diminutive companion to the big jar, a little *olpé* within the circle<sup>1</sup> (Pl. IV, λ).

There are records of two didrachm anvil-dies (Pl. I A6, A7) with amphorae and of three punch-dies belonging to them (P7 to P9), and one may guess that as soon as Solon's new coinage began to appear in 594 B.C. the mint was required to work hard in the production of money struck on the new Attic system. Hence it is not surprising to find that obols (Pl. IV, κ) of this new issue are common, and the didrachms that are still extant must have been issued within a space of three or four years at most.

## § 13.

## GROUP B ii

Ca. 590 B.C.

Official Badge: Triskeles on Shield  
Pl. I, P9A8 (Catalogue No. 14)

Before Solon was ever elected Archon and legislator the Alcmaeonidae had been banished from Athens<sup>2</sup>, according to one report after Solon had induced them to submit to trial for the pollution incurred by the murder of the Cylonian conspirators in the previous century. Evidently the clan's presence was regarded by him as undesirable in Athens, for his thirteenth table<sup>3</sup> contained a decree which ran: "As many of the disfranchised as were made such before the Archonship of Solon shall be restored to their rights and franchise, except such as were condemned...on charges of murder...and were in exile when this law was published<sup>4</sup>." After Solon left Athens on his travels, "for four years," says Aristotle<sup>5</sup>, "the city lived in peace, but in the fifth year after Solon's Government they were unable to elect an Archon on account of their dissensions." "The people were again divided into factions while Solon was away, those of the Plain being headed by Lycurgus, those of the Shore by Megacles son of Alcmaeon<sup>6</sup>." The obvious fact is that soon after Solon's departure the Alcmaeonidae were back in Athens, and that this was so is proved in a most striking manner by the coins.

During his years of exile Alcmaeon himself, the head of the clan, had not been idle. Having settled probably in Phocis he entered his horses for the 47th Olympiad

<sup>1</sup> Walters, *Hist. Ancient Pottery*, i, p. 178, fig. 46. The little coin with the *olpé* was assigned erroneously by Dr Head to Astyra in Caria, B.M.C. *Caria*, Pl. X, 2. On asking to see the coin in the British Museum I found that Mr E. S. G. Robinson had anticipated my discovery that it belongs to the didrachms under discussion and had already removed it from "Caria" to "Uncertain of Euboea."

<sup>2</sup> Plut. *v. Sol.* 12.

<sup>3</sup> The *κύρβεις*, or tables, were rectangular wooden tablets on which the laws were inscribed; cf. Schol. in Aristoph. *Aves*, 1354. Daremberg, Saglio, *Dict. d. Antiq.* i, 589 s.v. Axones.

<sup>4</sup> *v. Sol.* 19. Wilamowitz, *Aristot. u. Athen*, i, p. 17, regards the law as deliberately framed to leave a loophole for the Alcmaeonids' return, while excluding other exiles. For our purpose it is immaterial whether they returned to Athens in 593 or 591 B.C. It is clear that they were back there before 590 B.C.

<sup>5</sup> *Ath. Pol.* 13.

<sup>6</sup> Plut. *l.c.* 29.

and won the Chariot-race in 592 B.C.<sup>1</sup> He was the first Athenian to win this honour for Athens, and it is likely that this, as well as intrigue, helped to pave the way for the family's return. We next find him mentioned as head of the Athenian forces in the Sacred War of the Amphictions against Crisa<sup>2</sup> about 590 B.C., "for," says Plutarch<sup>3</sup>, "in the records of Delphi as commander of the Athenians the name of Alcmaeon is inscribed." Having been exiled by rival nobles the Alcmaeonidae, once they were back in Athens, naturally sought revenge against the landowners—a revenge for which they could best find opportunity by joining the rich merchant-party of the Shore. Perhaps while Megacles headed the faction at home his father commanded the Athenian contingent at Delphi, for it is obvious that the close friendship between the clan and holy Pytho, a friendship productive of much in the future, was already established.

Fortunately it is known what were the arms—or at least one of the coats-of-arms—which the Alcmaeonidae bore in the sixth century B.C., for Aristophanes has preserved a reference to them. In a passage of the *Lysistrata*, where the old men in chorus try to hearten one another by appealing to memories of the past, they exclaim:

Come now *Leukopodes*<sup>4</sup> ("Whitefeet" or "Whitelegs"), now 'tis our duty, who went to Leipsydrion in the days when we still were men—now 'tis our duty to grow young once more<sup>5</sup>;

and on this the scholiast gives an illuminating commentary which runs as follows: "Whitelegs<sup>6</sup>, on account of their having a white badge upon their shields; Aristophanes means the people now known as Alcmaeonidae; for they, when they were fighting the tyrant Hippias and the Peisistratidae (i.e. in 513 B.C., or earlier), fortified Leipsydrion." Hesychius<sup>7</sup> adds to our information by the remark that *Leukopodes* "means the Alcmaeonidae because they had white feet," and gives *Laispodias*<sup>8</sup> as a nickname for Alcmaeon himself perhaps because he had crooked legs. Thus from Aristophanes and the Scholia it is possible to gather the clear information that the *Episemon*, or device, on the shields of the Alcmaeonidae was a design of bent white legs or of a white leg. It is remarkable how frequently this badge, whose popularity had survived to

<sup>1</sup> Hdt. vi, 125. Cf. Pauly, *R.E.* i, 1559, 42 ff.

<sup>2</sup> Bury, *Hist. of Greece*, p. 862 (note on p. 159) suggests that Alcmaeon may have been Polemarch.

<sup>3</sup> *v. Sol.* II.

<sup>4</sup> The MSS. read *λυκόποδες*, which is impossible on account of the metre, and all modern editors correct to *λευκόποδες*.

<sup>5</sup> *Lysistr.* 664 ff. and Schol. *ad loc.* Suidas copies the latter word for word. Emended the commentary runs: *τινὲς δὲ λευκόποδας διὰ τὸ ἔχειν ἐπὶ τῶν ἀσπίδων ἐπίσημον λευκόν· ὁ δὲ Ἀριστοφάνης ἔφη τοὺς νῦν λεγομένους Ἀλκμαιωνίδας· οὗτοι γὰρ πόλεμον ἀράμενοι πρὸς Ἰππίαν τὸν τύραννον καὶ τοὺς Πεισιστρατίδας ἐτείχισαν τὸ Λειψύδριον.*

<sup>6</sup> Cf. Liddell and Scott, *Lexicon*, *s.v.* *πούς*; "the foot from the ankle downwards. . . but also *the leg with the foot.*" Cf. *Ant. Pal.* 6, 126, where in the last line the *triskeles* upon a shield is referred to as the *triple feet*: *φεύγε τρισσοῖς τὸν ταχὺν ἄνδρα ποσίν.*

<sup>7</sup> *s.v.* *Λυκόποδες (sic)*. I am indebted to Mr A. B. Cook for calling my attention to an instructive paper *de Crure albo in Clipeis Vasorum Graecorum*, by C. Goettling, Jena, 1855.

<sup>8</sup> *s.v.* Compare the coins of L. Cornelius Lentulus CRUS (Babelon, *Monn. Consul.* i, p. 425) with a *triskeles*; and those of P. Furius CRASSIPES (*l.c.* p. 526) with a club-foot as badge.

the days of Aristophanes, appears on Attic B.F. vases of the sixth century (Fig. 11)<sup>1</sup>.

Beside these vase paintings must now be set the Athenian coinage, which can be dated almost exactly to 590 B.C. The arms of the Alcmaeonids appear both upon a didrachm (Pl. I P9A8) which shares a punch-die with the last of the Solonian amphorae (Pl. I A7 and Fig. 12)<sup>2</sup>, and upon a drachm (Pl. IV,  $\beta$ ). At a later date and under different circumstances an Alcmaeonid issued electrum coins and silver diobols, too small to accommodate the larger design on which



FIG. 11. Athena. Amphora in the British Museum.



FIG. 12. Early Eupatrid didrachms.

appeared the single leg (Pl. XIV, A204 and  $\alpha$ )<sup>3</sup>. History makes clear the power of the clan in civic politics during these years, and the coins illustrate this to perfection, for it was some member of the family who boldly displaced the civic Amphora-badge from the shield on the Athenian coins to make way for the arms of his own house.

<sup>1</sup> Fig. 11 is from an amphora in the British Museum, illustrated by Gerhard, *Auserl. Vasenb.* iii, Pl. CCXLVI; Dr Chase in a monograph on "The Shield-devices of the Greeks" (*Harvard Studies*, xiii, 1902, p. 126) has recorded fifteen Attic B.F. vases with the triskeles device; but others, including the example figured here, two B.F. amphorae and one B.F. vase in the Naples collection (the last with a device of a triskeles and three dots) may be added to his list. I have further noted a fine early Panathenaic amphora in the Museum at Nauplia (No. 1) on which Athena carries a shield with triskeles device. For the device of a bent leg see § 62 below.

<sup>2</sup> The coins in Fig. 12 are Catalogue Nos. 13 and 14.

<sup>3</sup> Cf. § 62.

## CHAPTER IV

οἱ δ' εἶχον δύναμιν καὶ χρήμασιν ἦσαν ἀγῆστοί.

SOLON, *Fragm.* 5.

§ 14. The constitution of Solon, which had removed the absolute power of the nobles, left them their personal influence, for Attica must have been divided among the Eupatrid families who commanded the adherence of dependants of all the lower classes. Thus it came about that the "Plain" and the "Shore" were ranged against each other under the leadership of rival "Houses," for "it was not a war of Nobles against Commons, but a war of factions, each of which had noble leaders and included all classes of the population<sup>1</sup>."

It is not improbable that the types of the coins, could they be read aright, would tell which factions were at certain dates in the ascendant, and for how long a period they were predominant. After Solon's retirement the city was still torn by divisions. Twice the people were unable to choose an Archon on account of their dissensions; and when in 582 B.C. they had elected Damasias he clung to the Archonship for two years and two months until he was forcibly expelled from office<sup>2</sup>.

The connection of the Alcmaeonid triskeles-coins with the first of these party fights, which took place in 590 B.C., has been established and it seems that the succeeding coins confirm the accounts of faction fights in which first one party and then the other seized the administrative power. Coinage is apt to be scarcer in times of civil discord than when stable government prevails; thus few specimens have survived of the coins which were minted between 590 and 570 B.C.

§ 15. From the abundance or scarcity of types, as well as from a study of the dies, certain inferences can be drawn. The minor official, or officials<sup>3</sup>, in charge of the mint must have owed their position to the leaders of the party—"Plain" or "Shore"—which was in power; and from 590 B.C. onwards the officials issued coins with the badges of their patrons. Sometimes the official might keep his post, but under a new patron of the same political party, whereupon the official would continue to coin with the badge either of his first or of his second patron. But if the balance of parties changed, if the "Plain" went out of power and the "Shore" faction seized the government, then the mint-official of the old party would almost certainly lose his post<sup>4</sup>, and be replaced by a new man serving a new patron. Then the issue of coins with the badges of

<sup>1</sup> L. Whibley, *Greek Oligarchies*, 1896, p. 99.

<sup>2</sup> *Ath. Pol.* 13.

<sup>3</sup> Perhaps the *Κωλακρέται*, cf. Pauly, *R.E.* xi, 1068 and Hesych., Suidas, *s.v.*; also Schol. in Aristoph. *Aves*, 1541. About the duration of the office nothing is known, but they may have held it for longer than a year. They continued to act as treasurers down to 403 B.C.

<sup>4</sup> As happens to officials now in Greece when a political turnover takes place.

hated opponents would quickly cease; new dies would be cut with the arms of the great man of the day who was patron of the new mint-official. Thus it is that the constant change of types between the years 590 and 570 B.C. reflects the constant fluctuations of government in those years of which we have a record in Aristotle's history of the period.

## § 16.

## GROUP B iii

Ca. 589 B.C. to ca. 579 B.C.

Official Badges: forepart of a horse on shield;  
beetle;  
astragalos on shield;  
cartwheel.

Pl. I, P10A9, to Pl. II, P15A16 (Catalogue Nos. 15 to 23)



FIG. 13. Hoplite on a vase by Amasis, in Paris.

The forepart of a horse (Fig. 13)<sup>1</sup> occurs as a shield sign on various Athenian vases, which, though obviously later in date than the coins under consideration, preserve the tradition of the shield device at Athens. It must be borne in mind that there were two chief factors which dictated the selection of a coat-of-arms among Athenians of the sixth and fifth centuries. Normally a man would inherit his father's badge; but alternatively his own deeds or fortunes, sometimes a mere personal caprice, governed the selection of his coat-of-arms. The classic instance of the last is Alcibiades who "had a golden shield made for himself bearing, *not the badge of his forebears*, but an Eros armed with a thunderbolt. The reputable men of the city looked on this procedure with disgust and indignation<sup>2</sup>." Obviously the normal procedure was that of bearing ancestral devices, a custom which accounts for the appearance of badges on vases of later date than the coins; for the vase-painter merely filled in the blank space on the shield he had drawn with some device with which his eyes were familiar in the streets of Athens.

Four punch-dies are recorded in this series (Pl. I, P10 to P13) and five anvil-dies (A9 to A13); the latter engraved with a crudely drawn half-horse which is obviously earlier in date than the better drawn beast on the coins issued some twelve years later (Pl. I, A19 to Pl. II, A22). Of the triskeles coins which preceded the half-horse coins only one didrachm and one fraction survive, and the didrachm used a punch-die made originally for an amphora obverse<sup>3</sup>. We

<sup>1</sup> Our figure is from a vase by Amasis in Paris; de Luynes, *Vases*, Pl. I. Chase, *Harv. Stud.* xiii, 1902, p. 102, cites foreparts of horses as devices on two Attic B.F., and on one Attic R.F., vases.

<sup>2</sup> Plut. *v. Alcib.* 16. Cf. also Athenaeus, 534 E. The maintenance of a clan or family coat-of-arms is vouched for by other Greek monuments and especially by the Heracleian Tables, *C.I.G.* iii, p. 709. On this subject the most important contribution has been made by J. Brandis in *Z.f.N.* i, 1874, p. 43, *Beiträge zur griechischen Wappenkunde*.

<sup>3</sup> Cf. fig. 12 above.

may therefore perhaps conclude that the triskeles type lasted for no more than a year and was followed by the half-horse type<sup>1</sup> which may have had some two to four years' duration.

§ 17. The last of the punch-dies belonging to this type was used both with the beetle and with the astragalos anvil-dies (Fig. 14)<sup>2</sup>, from which one may

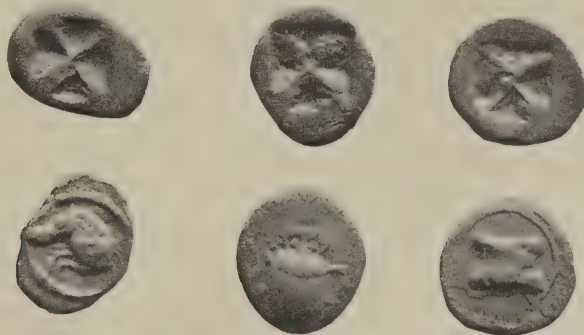


FIG. 14. Early Eupatrid didrachms.



FIG. 15. Hoplite; vase by Hischylos in the British Museum.



FIG. 16. Fragments of a Panathenaic amphora.

suppose that the beetle die was only in service for a very brief period<sup>3</sup>. On a vase by the potter Hischylos (Fig. 15)<sup>4</sup>, who combines B.F. and R.F. methods (ca. 520–500 B.C.)<sup>5</sup>, there is a beetle borne as a shield sign by a racing hoplite.

<sup>1</sup> The half-obol figured on Pl. IV,  $\chi$  may belong to this issue as does the drachma—Pl. IV,  $\gamma$ . The latter is *not*, as Six (*N.C.* 1895, p. 184, note 44) claims: "Surfrappé sur une hémidrachme à la roue." I have ascertained that this is not the case from a study of the coin itself in the Athenian Numismatic Museum.

<sup>2</sup> The three specimens in Fig. 14 are Nos. 19, 20, 21 *a* of the Catalogue.

<sup>3</sup> On the other hand a number of obols are known with the beetle (Pl. IV,  $\mu$ ) and none with the astragalos.

<sup>4</sup> Brit. Mus. E6. *Cat. Vases*, iii, Pl. I.

<sup>5</sup> Walters, *Hist. Anc. Pottery*, i, p. 420.

The astragalos (Pl. I, A15) is a device more suited, on account of its shape, to plastic than to pictorial treatment; but one instance of its appearance as a shield sign there seems to be, and that upon an early Panathenaic amphora. No more than a few fragments of this vase survive (Fig. 16)<sup>1</sup>, but sufficient to enable us to reconstruct the second racing hoplite who bears upon his shield a device which can be no other than a large knuckle-bone.

It is hardly possible to arrive at any certain conclusion regarding the significance of these devices. The forepart of a horse, like the later equine types, is equally appropriate to various Athenian noble families whether they trace their descent from Poseidon, from Erechtheus<sup>2</sup> or from the horseman Nestor<sup>3</sup>. The scarab or scaraboid was in the sixth century the normal shape for engraved stones used as seals, and it is likely that the religious veneration in which the Egyptians held<sup>4</sup> the mystic insect caused the Hellenes to value it as a prophylactic emblem. As a magistrate's symbol it occurs on coins of Abdera<sup>5</sup> and on the famous tetradrachm of Aetna<sup>6</sup>. *Kantharos* was the usual Greek name for the insect, and this name was later a familiar one at Athens, for a comic poet Kantharos won the prize there in 422 B.C.<sup>7</sup> Conceivably, then, an earlier Kantharos bore a scarab as his crest.

§ 18. Equally obscure is the badge of an astragalos upon the shield. It has been conjectured<sup>8</sup> that divination by astragaloi<sup>9</sup> was practised at the temple of Athena Sciras near Phalerum<sup>10</sup>, and if this temple was linked with the Sciroporia—the annual festival of Athena Sciras, Demeter and Korē—in which the priest and priestess of Erechtheus and Athena Polias were the chief figures, then the astragalos might be conceived of as a symbol of some member of the Eteobutadae, the clan in which these priestly offices were hereditary<sup>11</sup>. If we but had the clue to it there is, however, in all probability some simpler explanation of the badge, which occurs also as a type on coins of Cyprian Paphos<sup>12</sup>, and beside the head of Athena on coins of Selge in Pisidia<sup>13</sup>.

§ 19. Next in the sequence comes the didrachm with the cartwheel (Pl. I, P15A16), a badge which appears as a shield device, seen in profile, on an Attic B.F. vase by Nikosthenes (Fig. 17)<sup>14</sup>. Though this cross-bar wheel—evolved from the primitive block wheel—was of early origin it survived for long after the spoked wheel had come into general use for chariots, but it was never used

<sup>1</sup> Figured in *B.S.A.* xvi, 1909-10, Pl. XIII. The surviving sherds are shaded in our illustration.

<sup>2</sup> The first "horseman." Cf. Roscher, *Lex.* i, 1297, 30.

<sup>3</sup> *Iliad passim*. Toepffer, *Att. Geneal.* 1889, Alcmaeonids, Paconids, Peisistratids, Medontids, etc.

<sup>4</sup> Hdt. iii, 28, tells of the scarab mark upon the tongue of the bull Apis.

<sup>5</sup> B.M.C. *Thrace*, p. 67, 23.

<sup>6</sup> Hill, *Coins of Ancient Sicily*, Pl. IV, 13.

<sup>7</sup> Pauly, *R.E.* x, 1884, 47.

<sup>8</sup> Beulé, *Monn. d'Athènes*, Paris, 1858, p. 22.

<sup>9</sup> Pauly, *R.E.* s.v. Ἀστραγαλομαντεία, ii, 1793.

<sup>10</sup> Pollux, *Onom.* ix, 96. *Et. Mag.* 717, 30.

<sup>11</sup> Lycurgus, leader of the "Plain," belonged to this clan. Toepffer, *Att. Genealog.* p. 119 f.

<sup>12</sup> B.M.C. *Cyprus*, Pl. VII, 1-3. The Astragalos as a symbol is likewise found on coins of Idalium, *l.c.* Pl. V, 9-16, and at Abdera and Aenus, cf. *d. Antik. Münz. N. Griechenl.* II, i, (i), Index III.

<sup>13</sup> B.M.C. *Lycia, etc.* Pl. XXXIX, 7, 8.

<sup>14</sup> In the Louvre. *Wien. Vorlegebl.* 1890-1, Pl. V, 1b. Our figure shows a "full-face" reconstruction to the left of the actual vase-picture.

for anything but the country cart<sup>1</sup>. If the later wheels of Group B (Pl. II, A24 to A28) are in any sense "shorthand" for a chariot<sup>2</sup>, then this wheel is by analogy "shorthand" for the country farmer's cart, and might be the badge of some well-to-do farmer raised to high political office. During this period the farmers came into prominence for a short time under the following circumstances. After the ejection of the Archon Damasias the number of the archons was raised temporarily from nine to ten, of whom five were to be Eupatridae, three men of the agricultural party and two of the labour party<sup>3</sup>. From Aristotle's words it is probable that this "coalition" lasted only for a year, its main object having been the expulsion of Damasias from power. Opposing parties



FIG. 17. Warrior from a vase by Nikosthenes.

combined their forces because the archon was aiming at the establishment of a tyranny<sup>4</sup>. It seems a curious coincidence that at some time within this period the agricultural party secured three posts among the archons, and that the wheel of an agricultural vehicle appears on the coinage. The cross-bar wheel appears under ox-carts on coins of the Derrones<sup>5</sup>, and as a reverse type on those of some Paeonian tribes<sup>6</sup>; it further occurs on a didrachm of Melos<sup>7</sup>, and on certain Etruscan silver coins<sup>8</sup>. No obols with this type seem to be known in the Athenian Series, and it is perhaps to this whole period of faction and unsettled government that one should assign some of the little unclassified pieces (Pl. IV, φ, ζζ, €€) of Attic weight and fabric which have a leaf, or an apple, or a frog for type, and which cannot be placed definitely at present for lack of larger units with the same types.

§ 20.

GROUP B iv

Ca. 580 B.C.

Official Badge: Bull to left

Pl. I, P16A17 and Fig. 18 (Catalogue No. 24)

To this period probably it is safest to assign one of the most interesting of all the Eupatrid didrachms; this is the recently discovered piece, with the type of

<sup>1</sup> Cf. H. L. Lorimer, *J.H.S.* 1903, p. 132 ff., on *The Country Cart of Ancient Greece*. On the reverse of the Burgon amphora, Brit. Mus. B. 130, the oldest Panathenaic amphora extant, is a two-horse country cart with a cross-bar wheel. v. Brauchitsch, *Die Panathen. Preisamphoren*, 1910, p. 6 f.

<sup>2</sup> As they probably are; see ch. v, § 23 below.

<sup>3</sup> *Ath. Pol.* 13. The two inferior parties are termed *ἀγροικοί* and *δημιουργοί*.

<sup>4</sup> Sidgwick, *Class. Rev.* viii, 1894, p. 333 f. regarded Damasias as a noble aiming at the *Tyrannis*; Schoeffer, Pauly, *R.E.* iv, 2037, as a man acting for himself and independent of parties.

<sup>5</sup> *J.I.A.N.* xix, 1919, Pls. I, II. *H.N.*<sup>2</sup>, p. 202, fig. 120.

<sup>6</sup> Ichnaeans, *J.I.A.N. l.c.* Pl. IV, 13; *H.N.*<sup>2</sup>, p. 199; B.T.II, i, Pl. XLIX. Tyntenoi, *J.I.A.N. l.c.* Pl. IV, 20; *H.N.*<sup>2</sup>, *l.c.*; B.T.II, *l.c.*

<sup>7</sup> *Rev. Num.* 1909, Pl. V, 5; B.T.II, iii, Pl. CCXLI, 13.

<sup>8</sup> See below, § 106.

a bull (Fig. 18 and Pl. I, P16A17)<sup>1</sup>, which must either have preceded or followed closely upon the didrachms with the device of a whole or a half horse.



FIG. 18. Early Eupatrid didrachm.

on Attic pottery. Upon one early R.F. vase (Fig. 19)<sup>2</sup> the shield sign is indeed almost a facsimile of the coin-type.



FIG. 19. Hoplite. Vase in the British Museum.

Now since this coin is, like the later pieces with the bull's head<sup>3</sup>, clearly of Athenian issue, one cannot but bring it into relation with the well-known statement of Philochorus about Athenian money. That writer, after stating that the coins of his time were tetradrachms with the types of an owl and the head of Athena, added the information that the coins in use "before (the 'owls') were didrachms, and had the type of a bull<sup>4</sup>." Possibly Philochorus, who was *Hieroskopos* at Athens in 306 B.C., may have seen such coins as ours among temple treasures<sup>5</sup>; possibly he may have seen early "ox" or "cow coins" of other states<sup>6</sup> and mistaken them for Athenian. On the other hand he may have based his statement on tradition which now proves to be correct. His description of reverse and obverse of the later tetradrachms tallies with the actual coins; and, though too much stress must not be laid upon an omission, it should be noted that only one type is mentioned for his bull-didrachm. From this one could at any rate presume that he is referring to coins, like this Athenian piece, without a reverse type. Clearly

<sup>1</sup> In the dimensions of the incuse and in the width of the intersecting bands on the reverse the coin corresponds with the pieces which have for type the cross-bar wheel, the horse and the forepart of a horse (P15A16 to P19A22). The punch-die produced an incuse of 10.5 × (approx.) 10 mm. (cf. Catalogue, No. 25). The weight of the coin (in my collection), which has suffered from corrosion and a flaking of silver from off the edge, is 7.74 g. (119.5 grains). Even so it is heavier than several didrachms recorded in the Catalogue.

<sup>2</sup> A vase in the Brit. Mus. Our figure is taken from *Ann. d. Inst.* 1875, Pl. FG. Chase, *Harv. Stud.* xiii, 1902, p. 98, cites five Attic R.F. vases with this device, while on p. 99 he mentions three Athenian B.F. vases with the forepart of a bull.

<sup>3</sup> See below, § 34.

<sup>4</sup> Philochorus *ap. Schol.* in Aristoph. *Aves*, 1106, ἡ γλαυξ ἐπὶ χαράγματος ἦν τετραδράχμων, ὡς Φιλόχορος· ἐκλήθη δὲ τὸ νόμισμα τὸ τετραδράχμων τότε [ἡ] γλαυξ. ἦν γὰρ ἡ γλαυξ ἐπίσημον καὶ πρόσωπον Ἀθηναίων, τῶν προτέρων διδράχμων ὄντων, ἐπίσημον δὲ βοῦν ἔχόντων. *F.H.G.* i, p. 410, 154.

<sup>5</sup> Cf. C. Gilbert in *Neue Jahrb. f. Philolog.* Leipsic, 1896, p. 541.

<sup>6</sup> Such as coins of Corcyra, B.M.C. *Thessaly, etc.* Pl. XXI, 1; Eretria, B.M.C. *Central Greece*, Pl. XXIII, 1-6; Chalcidice, *J.I.A.N.* 1919, Pl. XVIII.

the Atthidographer's statement is verified by fact, though the type itself is no echo of prehistoric days when cows and oxen were the units of barter.

The bull device simply takes its place amid the many other heraldic devices on the Eupatrid money. Such is the plain but unromantic explanation of the bull as a type upon Athenian coinage.

§ 21.

GROUP B v

Ca. 579 B.C. to ca. 572 B.C.

Official Badges: horse to left on shield;  
forepart of bridled horse to right.

Pl. I, P<sub>17</sub>A<sub>18</sub> to Pl. II, P<sub>19</sub>A<sub>22</sub> (Catalogue Nos. 25 to 30)

These types belong together, for they share a punch-die (P<sub>17</sub>); and the horses are obviously somewhat later in date than those on the didrachms struck



FIG. 20. Shield on a vase by Euphronios, in Perugia.



FIG. 21. Figure from a vase at Northwick Park.

some twelve years earlier (Pl. I, A<sub>9</sub> to A<sub>13</sub>). In Fig. 13 above is depicted the forepart of a horse displayed as a shield sign; and the horse with hogged mane standing upon a groundline, as on the coin, is best illustrated from two R.F. Attic vases (Figs. 20, 21)<sup>1</sup>, each of which shows only half of the shield drawn in perspective, but each of which depicts a shield whereon the badge is a standing horse. On a fine B.F. amphora in the Fitzwilliam Museum at Cambridge (Fig. 22) Athena herself bears the whole horse as her device.

This device was equally appropriate to the Medontid, Paeonid or Peisistratid<sup>2</sup> families; but M. Six<sup>3</sup>, though he dated the coins under consideration rather

<sup>1</sup> Fig. 20 is from a vase by Euphronios (*flor.* 510 B.C.) in Perugia publ. Gerhard, *Auserl. Vasenb.* iii, Pl. 226. Fig. 21 is from a vase, in the Northwick Park collection, which I am able to publish by the kindness of its owner Captain E. G. Spencer Churchill. Besides these Chase, *Harv. Stud.* xiii, 1902, p. 108 f. mentions one horse-device on an Attic B.F. and fourteen on Attic R.F. vases. The vase from which Fig. 22 is taken was formerly in the Hope collection.

<sup>2</sup> § 17, p. 26, note 3.

<sup>3</sup> *N.C.* 1895, p. 181.

later, believed that these pieces were issued under Peisistratid influence, claiming that for the father of Hippias and Hipparchus—and he might have added “as well as for the son of Hippocrates<sup>1</sup>”—the horse is almost *un type parlant*<sup>2</sup>. There is some reason to think that by this period Peisistratus was one of the rising men in the party of the “Shore.” His enmity towards the family of Miltiades and Cimon of the Philaid clan, which supported the landed interests, was probably the outcome of political antagonism; while his friendship with the elderly Solon, who had by now returned<sup>3</sup>, and the energetic trade policy which he pursued in after years as tyrant are proofs of his sympathies with the mercantile party. As yet Peisistratus was a supporter of Megacles and the merchants; as yet he had not formed that third party of his own, which was only a step to raise him to the throne. By 570 B.C. he was already a great man in Athens, for in that year, perhaps as Polemarch<sup>4</sup>, he captured Nisaea, the port of Megara, and Salamis. Later generations of Athenians,



FIG. 22. Athena; amphora in the Fitzwilliam Museum.

to whom the great tyrant's name was odious and who idolized the memory of Solon, ignored the inconsistencies involved and gave to the old man the credit of the campaign, but more impartial historians of other States denied him the leadership in the war<sup>5</sup>. That Solon, by a stirring poem “of one hundred very beautiful verses<sup>6</sup>” inspired the war no one will question. But it is now clear<sup>7</sup> that the strategy and tactics of his younger contemporary Peisistratus won for Athens the island which was essential to Athenian trade. Only now could the port of Phalerum be used in comparative safety, and probably from this time onwards the old harbour of Prasiae<sup>8</sup> began to decline.

The Athenians showed their perception of the decisive nature of this event in a characteristic manner; they instituted an annual ceremony of a semi-religious type in which they re-enacted<sup>9</sup> the stratagem by which the island was captured. “An Athenian ship would approach the island in silence at first, and then those on board would make an onset with shouts and cries, and *one man in armour* would leap out with a shout of triumph and run to the cliff of Scira-

<sup>1</sup> Hdt. i, 59. The Peisistratidae traced their descent from the “horseman Nestor.”

<sup>2</sup> It is instructive to compare the forepart of the horse (Pl. II, A20) with the horse of Troilus on the François Vase by Klitias and Ergotimos (ca. 600–550 B.C.). Both beasts have bridles decorated in identical fashion with three disks (“horses' money”). For the head of the horse drawn by Klitias cf. A. B. Cook in *J.H.S.* xxxvii, 1917, p. 120, fig. 3.

<sup>3</sup> Plut. *v. Sol.* 1.

<sup>4</sup> Or Strategos, as is held by Wilamowitz, *Arist. u. Athen*, i, p. 269.

<sup>5</sup> E.g. Daimachus of Plataea *ap. Plut. Comp. Sol. et Publ.* 4.

<sup>6</sup> Plut. *v. Sol.* 8.

<sup>7</sup> Since the brilliant work of Wilamowitz on the subject, *l.c.* i, p. 267 f.

<sup>8</sup> Cf. § 7 above. The risk of Aeginetan interference with Athenian craft was still great.

<sup>9</sup> Plut. *l.c.* 9, uses the word *δρώμενον*.

dion." Now there exists a kylix by the potter Hieron<sup>1</sup> which E. Petersen has cleverly identified as depicting this same commemorative ceremony<sup>2</sup>. We see the procession of Athenians running forward with gesticulations and shouts (Fig. 23), their festal attire, and the burning altar alike, denoting the solemnity of the "act," and at their head the *one man in armour* who has already reached



FIG. 23. Kylix by Hieron from Vulci.

the cliff Sciradion and begins to mount it. But there is one point which may have a significance hitherto overlooked. The single armed man bears a shield on which the device is the forepart of a horse.

Does the single armed actor represent Peisistratus the polemarch or strategos

<sup>1</sup> *Floruit ca. 490 B.C.* The kylix was found at Vulci.

<sup>2</sup> *Jahrb. d. K. deutsch. arch. Inst.* xxxii, 1917, p. 137.

of the original episode? If M. Six was right in claiming this badge as the device of Peisistratus<sup>1</sup>, it would seem that he does.

As far as the coins are concerned it is not unlikely that they appeared a few years before Peisistratus won Salamis for Athens, at a time when he held some civil post in the government<sup>2</sup>. Fractions are represented by a plated drachm with the forepart of a horse (Pl. XXIII, 4)<sup>3</sup>, and perhaps by the half and quarter obols with eyes (Pl. IV,  $\psi$ ,  $\omega$ ). The eye appears as a shield sign on B.F. vases (Fig. 24)<sup>4</sup>; and the little coins might well depict a horse's eye as the little billon coins of Lesbos<sup>5</sup> depict the eyes of the young bulls which figure on the larger units.



FIG. 24.  
Hoplite from  
an Attic vase.

About this time there appears the first significant hint at the expansion of Athenian trade which followed on the Solonian monetary reform of twenty years before, for two didrachms of this period, one with the whole horse, the other with the forepart of the animal<sup>6</sup>, formed part of a hoard discovered at Sakha in the Egyptian Delta.

<sup>1</sup> We must not suppose that, when this vase was painted in the first years of the fifth century, the memory of Peisistratus was hated. There was still a strong Peisistratid party in Athens, and his reign was remembered as "a golden age" (*Ath. Pol.* 16, 7: How and Wells, *Comm. on Hdt.* ii, p. 359); consequently his exploit and even his device would be a popular subject for a vase picture.

<sup>2</sup> Perhaps the earlier half horse (Pl. I, A9 to A13) is the badge of some older member of the Peisistratid family.

<sup>3</sup> This plated coin had, of course, a genuine prototype from which the ancient forgery was copied.

<sup>4</sup> From Gerhard, *Auserl. Vasenb.* iii, Pl. 263. Besides this example Chase, *Harv. Stud.* xiii, 1902, p. 105, mentions four eye-devices on Attic B.F. pottery.

<sup>5</sup> Cf. B.T.II, i, Pl. XV, 14, for young bulls' heads; Pl. XV, 2, for eyes of the bulls. For the manner of drawing horses' eyes on Attic B.F. vases cf. *J.H.S.* xxxvii (1917), p. 120, figs. 3, 4. The eye, whether on a coin, shield or vase ranked as a potent *apotropaion*. As to the little Athenian coins with the eye, it is, of course, possible that a didrachm may one day turn up with the type of an eye. In such an event the fractions would have to be associated with the larger coin.

<sup>6</sup> Appendix, Find no. IV.

## CHAPTER V

Κάλλιστον αἱ μεγαλοπόλιες Ἀθῆναι  
 προοίμιον Ἀλκμανιδῶν εὐρυσθενεῖ γενεᾷ  
 κρηπίδ' αἰοιδῶν  
 ἵπποισι βαλέσθαι.

PINDAR, *Pyth.* vii, 1.

§ 22. From the date of their return from exile in the early years of the sixth century down to the age of Cleisthenes the great family of the Alcmaeonidae exercised a most potent influence on Athenian affairs, and it would be surprising indeed if they had not left their mark upon a coinage which records so much of Athenian history and religion. Enquiry has elicited the fact that the triskeles<sup>1</sup>—the coat-of-arms of one member of the clan—appeared on the Athenian money about 590 B.C., and an endeavour must now be made to find some explanation of this badge.

The triskeles on early Alcmaeonid coins has a well defined central disc (Pl. I, A8; Pl. IV, β), and Mr A. B. Cook has shown conclusively that the various forms of the triskeles are simply “zoomorphic transformations of the solar wheel<sup>2</sup>,” a point admirably borne out by an early fifth century coin of Aspendus<sup>3</sup>



FIG. 25. Coin of Aspendus.

on which the triskeles revolves around a small four-spoke wheel (Fig. 25). The central disc is further apparent on some of the shield signs which depict the triskeles (Fig. 11 and Fig. 50 below), while at times, as on the Alcmaeonid didrachm (Pl. I, A8), the feet and knees touching the rim of the shield give the impression that the whole design is a wheel with human legs for spokes. Now this solar wheel, as Mr Cook has shown, is linked most closely with the temple of Apollo at Delphi in the form of the Iynx-wheels<sup>4</sup> which hung from the entablature of the temple, one being actually depicted on a scene showing Orestes seeking sanctuary at Delphi (Fig. 26)<sup>5</sup>.

Of all Athenians the Alcmaeonidae stood in closest relationship to the Delphic Sanctuary. Thither they retired when exiled before 600 B.C.<sup>6</sup>, and once more in 546 B.C.<sup>7</sup>; in its defence Alcmaeon led the Athenian forces in the first Sacred War<sup>8</sup>. When the temple was to be rebuilt about 514 B.C. the wealthy clan obtained the order, exceeded their contract, and built the façade of marble instead of stone<sup>9</sup>; thence they made their first unsuccessful attempt to drive the tyrant Hippias from Athens; and there, as we shall later see<sup>10</sup>, they coined

<sup>1</sup> § 13.

<sup>2</sup> *Zeus*, i, p. 309.

<sup>3</sup> *l.c.* p. 395, fig. 235. B.T.II, i, Pl. XXIII, 12 and 16, both from the same punch-die. I am indebted to Mr Cook for permission to reproduce his illustrations of Figs. 25 and 26.

<sup>4</sup> *l.c.* p. 258ff.

<sup>5</sup> *l.c.* p. 260, fig. 188, from a Cista found at Volterra, now in the Archaeological Museum, Florence.

<sup>6</sup> Hdt. vi, 125.

<sup>7</sup> Hdt. v, 63.

<sup>8</sup> Plut. *v. Sol.* 11.

<sup>9</sup> Hdt. v, 62. Pind. *Pyth.* vii.

<sup>10</sup> §§ 60-62.

money which enabled them to expel the tyrant for ever. Finally Cleisthenes, perhaps the greatest of all the House, placed on an Athenian coin, in token of gratitude, the head of Delphos, mythical founder of the place (Pl. XXII, *αα*)<sup>1</sup>.

To Apollo, whom they championed, then, it was that the Alcmaeonidae owed the triskeles device which earned them the *sobriquet* of *Leukopodes*. From Apollo they borrowed also the triskeles' "other self," the solar wheel which formed their alternative badge<sup>2</sup>.

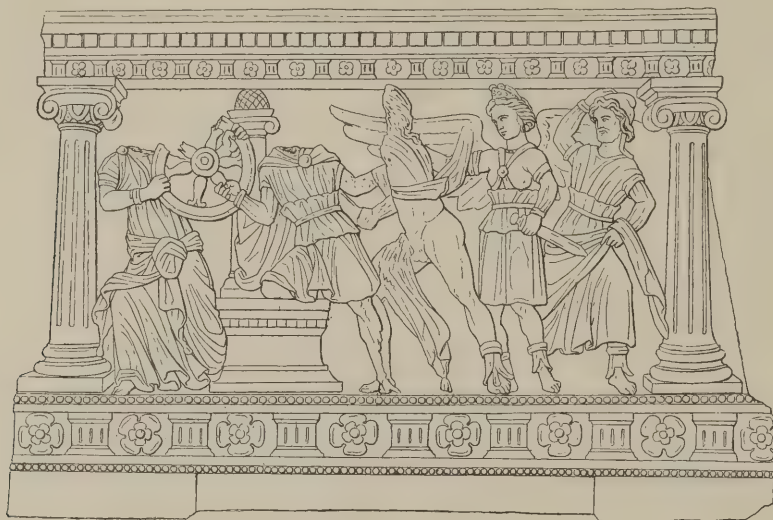


FIG. 26. Cista from Volterra.

§ 23.

GROUP B vi

Ca. 572 B.C. to ca. 561 B.C.

Official Badges: solar wheel;  
wheel;  
hindquarters of horse on shield.

Pl. II, P20A23 to P30A30 (Catalogue Nos. 31 to 42)

Of exceptional interest is the first didrachm (Pl. II, P20A23) to appear with the type of the wheel upon it—the link connecting the triskeles with the ordinary wheel type. Such a wheel could never have served under any vehicle, for the spokes are prolonged into sharp spikes protruding beyond the rim. Rather is it akin to those magic wheels<sup>3</sup> of the Greeks with jagged spikes around their

<sup>1</sup> A unique coin, in the Berlin collection. Cf. § 75.

<sup>2</sup> Instances of alternative crests are not wanting in antiquity. Seleucus I of Syria had two badges: (a) the head of a horned horse; Babelon, *Rois de Syrie*, Pl. II, 9–11 and p. xxiii; (b) an anchor; App. *Syr.* 56. Babelon, *l.c.* Pl. II, 10, 12–14, 16; cf. B.M.C. *Seleucid Kings*, Pl. II, 1–3, 6–9. Augustus had likewise two different crests or signets: (a) the Sphinx; Pliny, *H.N.* xxxvii, i (4), Cohen, *Med. Imp.*<sup>2</sup>, i, p. 67, 31; (b) the head of Alexander the Great; Pliny, *l.c.* Other cases are cited by J. Brandis, *Beitrag zur Griech. Wappenkunde*, *Z.f.N.* i, 1874, p. 46.

<sup>3</sup> This kind of wheel was known as *ρόμβος*, *τροχός* or *τροχίσκος*.

circumferences<sup>1</sup>; and it was only natural that this badge should be quickly modified, and should become (as on Pl. II, A24 to A28) a simple chariot wheel. This modification was not confined to the coinage, for the sacred temple wheel of Delphi itself is depicted (Fig. 26) as that of an ordinary vehicle.

A fine B.F. Attic vase in the Fitzwilliam Museum<sup>2</sup> at Cambridge further illustrates the solar character of the wheel, for on the vase is a hoplite (Fig. 27) who bears as a shield device a design which is a compromise between a stellate sun and a wheel. The religious symbolism of the wheel was probably less clearly understood by the sixth century Hellenes than it is by people who can take a wider view than they of the religions and superstitions of mankind<sup>3</sup>. It was sacred to Apollo and that was enough for uncritical minds, but for the Alcmaeonidae themselves it had a second and more obvious symbolic meaning,



FIG. 27. Hoplite; B.F. vase in the Fitzwilliam Museum.



FIG. 28. Athena from a vase in the British Museum.

in that it was simply "shorthand" for a chariot. Such a chariot wheel occurs as a shield sign (Fig. 28)<sup>4</sup> on various Attic B.F. and early R.F. vases, and on the one illustrated it is of the characteristic older shape, for at the rim, where the spokes join it, there are triangular pieces which give additional strength. Both this and the alternative method of strengthening the wheel are shown on the coins, for on some of them curved stays branch out on either side of each spoke. This type of strengthened wheel is of very early date, for it appears under a chariot on a proto-Attic vase which has about it much of the Dipylon

<sup>1</sup> A. B. Cook, *Zeus*, i, p. 256, fig. 187 a.

<sup>2</sup> *Catal. Vases*, No. 63.

<sup>3</sup> Sir J. Frazer, *Golden Bough*, ed. 3. *Balder*, i, p. 334f.

<sup>4</sup> The illustration is from a vase in the British Museum, *Cat. Vases*, ii, Pl. III, No. B. 134. Cf. Gerhard, *Etrusc. u. Campan. Vasenb.* Pl. I, A5. The inscription runs as follows: ΕΥΦΙΛΕΤΟΣ ΚΑΙΟΣ: Chase, *Harv. Stud.* xiii, 1902, pp. 111, 126, mentions wheels on shields upon B.F. vases in Munich and Berlin, and upon four R.F. vases, to which should be added a R.F. amphora in the Vatican (No. 85) on which is a warrior with the badge of a four-spoke wheel on a circular shield. I am indebted to Mr A. B. Cook for the description made from personal observation. I noted yet another on a B.F. panel amphora in the Palazzo d. Conserv. at Rome (on the shield of a warrior).

style (Fig. 29)<sup>1</sup>. The simple four-spoke wheel without stays is of later date and is generally shown on the chariots of Sicilian tetradrachms<sup>2</sup>. In the sixth century B.C. both types were, of course, still in use, but the die-sequences show that the Alcmaeonid coins with the simple wheel (Pl. III, A46 to A47) were struck later than those now under consideration.

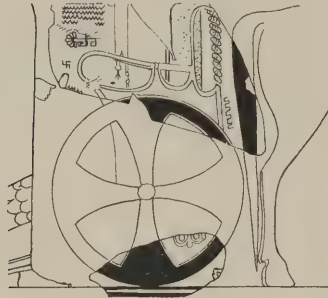


FIG. 29. Fragment of a proto-Attic vase.

This coinage was plentiful, for, in addition to a number of didrachms, many fractions survive—drachmae (Pl. IV,  $\delta$ ,  $\epsilon$ ) which are abundant, obols<sup>3</sup> (Pl. IV,  $\nu$ ,  $\xi$ ), and a hemiobol (Pl. IV,  $\alpha\alpha$ )—all with the older type of chariot wheel.

Among the noble families of Attica several were noted for their love of racing, but none was so far famed as the House of Alcmaeon. It was in honour of Megacles, grandson of the Megacles whose wheel perhaps is on the coins, that Pindar wrote the Seventh Pythian ode recording

Victories at the Isthmus five, and one famous victory at the Olympian festival of Zeus, and two from Cirrha, won by yourselves, Megacles, and by your ancestors<sup>4</sup>.

This list may have been even longer, for another source<sup>5</sup> records that the great Megacles, Peisistratus' contemporary, won three Olympian victories.

Thus the wheel badge of this noble stood both for the sacred symbol of Pythian Apollo, and as a proud boast of the man whose four-horse chariots had gained so many crowns.

§ 24. In the light of the sequence of this coinage we can now get the accounts of Herodotus, Aristotle and Plutarch into better perspective. In the early years after Solon's reforms the faction fights broke out between two parties and two only—the merchants and the landed proprietors. Then came the interlude brought about by the war against Megara ending in the Capture of Salamis. This must have given such advantage to the trading interests that the merchant party would have remained politically predominant but for an unexpected turn of affairs. Peisistratus, who had won Salamis for Athens, left the ranks of the "Shore" faction and formed a third party of his own. It is in Herodotus<sup>6</sup> that the clearest account is presented; "Peisistratus, when the faction strife was on foot between the Athenians of the Shore and of the Plain—the former headed by Megacles son of Alcmaeon, the latter by Lycurgus son of Aristolaïdes—aiming at the sovereign power, formed a third party."

<sup>1</sup> *J.H.S.* xxii, 1902, Pl. III.

<sup>2</sup> Hill, *Coins of Ancient Sicily*, Pl. II, 6; Pl. III, 10, 12, etc.

<sup>3</sup> The obol (Pl. IV,  $\xi$ ) is of exceptional weight, but is nevertheless far too light to be regarded as a diobol.

<sup>4</sup> ἄγοντι δέ με πέντε μὲν Ἴσθμοῦ νίκαί, μία δ' ἐκπρεπῆς Διὸς Ὀλυμπιάς, δύο δ' ἀπὸ Κίρρας. *Pyth.* vii, 13-16.

<sup>5</sup> Schol. ad Aristoph. *Nub.* 64.

<sup>6</sup> i, 59. The accounts in Aristot. *Ath. Pol.* 13 and Plutarch are more confused; in the latter particularly the "three party strife" is dated much too early.

Peisistratus, in fact, must have believed that he could find the means, given a sufficiency of popular support, to outdo even the wealthy House of Alcmaeon. But this will appear in its proper place.

If the merchant party was weakened by the secession of some of its supporters to the "Hill party<sup>1</sup>," as the third faction was called, it may well be that the "Shore" was supplanted for a brief period by the party of the "Plain." At any rate in 566 B.C. we find Hippocleides as Archon, a man who belonged to the clan of the Philaïdae, and who had been the unsuccessful rival of Megacles for the hand of Agariste<sup>2</sup>. Criticism tends to detract from this romance by treating it as a pretty tale reflecting merely the political antagonisms of two famous men. In any case a Philaïd held the Archonship<sup>3</sup>, and to his year it may possibly be right to assign the introduction of a strange new type in the coinage, a shield bearing the hindquarters of a horse.

§ 25. Both in the case of a didrachm (Pl. II, P27A29) and of a drachm (Pl. IV, ζ) this type shares a punch-die with an Alcmaeonid wheel coin, and must therefore be regarded as following immediately after it. The type itself is an extraordinary one, and purely Athenian; for while it occurs on a number of Attic vases (Fig. 30)<sup>4</sup>, it seems unknown as a shield device on any other pottery. The forepart of any beast, lion, bull, horse, goat, or wolf is natural enough as a decorative type and familiar from the



FIG. 30. Athena on a vase in the British Museum.

coinage of various cities. But the hindquarters of an animal make a device as inartistic as it is extraordinary, and these coins cannot be paralleled by any other representation save the appearance upon Attic vases of the identical device.

With a Philaïd holding the Archonship in 566 B.C., this badge might have been employed by some member of his family if not by Hippocleides himself.

Of the badges of the old Athenian families which appeared upon the coinage of Athens, since about 590 B.C., some account has now been given and for a few years longer similar badges were still to appear. Indeed, money devoid of any

<sup>1</sup> Διάκριοι, *Ath. Pol.* 13; *Plut. v. Sol.* 29; ὑπεράκριοι, *Hdt.* i, 59; *Dion. Hal.* i, 13; ἐπάκριοι, *Plut. Moral.* 763 D.

<sup>2</sup> *Hdt.* vi, 129, 130. Hippocleides, having been the most favoured suitor of Agariste, daughter of Cleisthenes, tyrant of Sicyon, by indecorous behaviour danced away his marriage, and Megacles won the lady's hand. The tale is not without a basis in folklore.

<sup>3</sup> In his Archonship the Greater Panathenaia were first instituted. It has been suggested that Peisistratus, though still a private citizen, inspired the idea of this festival. G. v. Brauchitsch, *Die Panath. Preisamphoren*, 1910, p. 77.

<sup>4</sup> Fig. 30 is from a vase in the British Museum (No. 138). Chase, *Harv. Stud.* xiii, 1902, p. 109, cites one R.F. and four B.F. vases, with this shield sign, to which should be added the following: a B.F. amphora in Madrid, G. Leroux, *Vases Gr. du Mus. Madrid* (Paris), 1912, p. 48, Pl. XIII, 71; a large B.F. peliké from Caere in the Villa Giulia Museum, Rome; a kylix in the Vatican (Room 1, Case E) on which the device occurs twice; a B.F. amphora in the National Museum at Athens (No. 448).—The last three I have noted personally. Further, the "hindpart of a dog," *Brit. Mus. Vases*, 571, on a B.F. lekythos is possibly only the badly drawn hindpart of a horse.

pronounced civic characteristics might have continued for centuries at Athens—as in fact it did continue in Cyzicus and Phocaea<sup>1</sup>—but for a sudden fate or fortune which befel the State.

In 561 B.C., in the Archonship of Comias, Peisistratus seized the Acropolis and made himself tyrant of Athens, winning his power mainly by means of his money and stamping a new character upon the money to which he owed his power.

<sup>1</sup> In the electrum coinages of these cities the incuse reverse was never abolished, and the civic badge (tunny at Cyzicus; seal at Phocaea) occupied a subordinate place, the mint official's, or other magistrate's, badge filling the whole field exactly as it does on the Athenian Eupatrid coins of the sixth century.

## CHAPTER VI

γλαυκὲς ὑμᾶς οὔποτ' ἐπιλείψουσι Λαυρειωτικάι.

ARISTOPH. *Aves*, 1106.

§ 26. Later Athenians, who revelled in democracy and enjoyed the privileges of "the great triobol clan<sup>1</sup>," looked back with feelings of real horror to the time when a tyrant had been master of the State. They forgot that to him Athens really owed both her greatness and the "Laurian owls<sup>2</sup>" of which they were proud, and remembered only the harshness of Peisistratus' son Hippias. These same Athenians who almost canonized the merchant Solon heaped execrations upon the name of Peisistratus, the imperial capitalist.

His estates lay near Brauron not far from the mining district of Laureion, and the evidence for the early working of silver<sup>3</sup> in the Laurian district has been convincingly marshalled by Professor Ure<sup>4</sup>. If, as we have seen reason to believe, Peisistratus was at first a supporter of the merchant faction of the Shore he must have seen that Megacles, son of Alcmaeon, owed his power to the length of his purse, and, since the metal lay at his hand, he proceeded to make a purse longer than that of Megacles.

Solon, an old man by now, warned the Athenians against Peisistratus<sup>5</sup>, perceiving the danger to the State of great wealth in the hands of one man. That same currency, in the development of which his own manipulations had played so large a part, was threatening to enslave the Athenians by its very abundance; whereas thirty odd years previously its scarcity had been the cause of their distress.

Solon's denunciations aroused the suspicions of the oligarchs in power and

<sup>1</sup> Aristoph. *Eq.* 255: ὦ γέροντες ἡλιασταὶ, φράτορες τριωβόλου.

<sup>2</sup> Aristoph. *Av.* 1106.

<sup>3</sup> Cf. §§ 52, 103.

<sup>4</sup> There can no longer be any doubt that the Attic mines were worked before the middle of the sixth century B.C. Cf. Ure, *Origin of Tyranny*, p. 46 f. Hardly convincing, however, is that author's equation of the *Diakrioi*, etc. with miners, attractive though his parallel of *Bergleute* may be. It is possible that for his *coup d'État* Peisistratus armed miners as well as discontented mountaineers and villagers, bringing them as a contingent to join the turbulent elements of the city. Hdt. terms the third faction *ὑπεράκριοι* and uses the word *ὑπεράκρια* elsewhere (vi, 20) in a sense that cannot possibly refer to a mining district.

<sup>5</sup> Fragm. 2 (13), 5-7:

αὐτοὶ δὲ φθείρειν μεγάλην πόλιν ἀφραδίῃσιν  
ἄστοι βούλονται χρήμασι πειθόμενοι.  
δήμον θ' ἡγεμόνων ἄδικος νόος, κ.τ.λ.

and after Peisistratus held the tyranny he wrote Fragm. 7 (17), 3-4:

.....εἰς δὲ μονάρχου  
δήμος ἀδρεῖν δουλοσύνην ἔπεσεν.

Mr Adcock points out to me that conceivably these passages may refer to the time of Damasias.

a serious attempt was made on the life of Peisistratus<sup>1</sup>. The popular conqueror of Nisaea and Salamis was granted the protection of a guard of private police armed with truncheons<sup>2</sup>. With this guard he could seize the Acropolis as Cylon seized it nearly a century before, but with no other support he would have failed as did Cylon. Peisistratus had a firmer foundation for his power, for in addition to the reputation of a soldier he possessed a winning manner, a generous nature and enormous wealth.

§ 27. It is conceivable that he began by coining money privately shortly before he won the throne, as he certainly did in the Pangaeian district of Paeonia during his long exile<sup>3</sup>. What was possible in Paeonia was also possible at Brauron or in Laureion, and many a Roman general in later ages coined in the Provinces silver which was gladly accepted in Rome<sup>4</sup>. But Peisistratus was determined to make his money more attractive both in type and quality than the money the Eupatridae issued in Athens.

The Greater Panathenaia had been instituted five years before he seized the reins of government. The national consciousness of the Athenian people was beginning to develop; and the outward manifestation of this growth was an ever-increasing zeal for the worship of Athena, who was the type of the State. As a great ideal the goddess gripped the minds of the people more strongly than old heroes of folk-lore like Erechtheus and Boutēs—more than the fierce inconstant Poseidon had ever done. Athena—Promachos in war, Erganē in peace—was Athens herself; and Peisistratus, knowing his public and their predilections, put himself under the patronage of the goddess. The pride of family had marked the coins of his opponents; he sealed his coinage with a badge that was the pride of the humblest as of the noblest citizen<sup>5</sup>.

So much for the type whose popularity at home was well assured. But sentiment will not by itself make hard cash acceptable abroad, and Peisistratus as capitalist had foreign markets in view, and meant his money to win a wider popularity than the older Athenian money had commanded, extensive though its circulation must have been. With this end in view he created the tetradrachm, a piece double the weight of the older standard coin, and from his time onward the handsome four-drachma-piece became the Athenian silver *Statēr*<sup>6</sup>. Now up till this time it seems as though the older Aeginetan "turtle"

<sup>1</sup> Hdt. i, 59; *Ath. Pol.* 14, 1. As far as I am aware the story that Peisistratus wounded himself and his mules, so as to elicit popular sympathy and thus obtain a body-guard, has passed unquestioned. It appears far more likely that he was actually attacked by his opponents, and made the most of it. His enemies who failed to take his life naturally declared the wounds to have been self-inflicted, wishing both to shield themselves and, later on, to cite yet another example of the tyrant's wicked cunning.

<sup>2</sup> *U.c.*

<sup>3</sup> As is shown in § 40 ff. below.

<sup>4</sup> A few examples will suffice: Q. Caecilius Metellus in Spain; *ca.* 79 B.C.; Babelon, *Monn. Consul.* i, p. 275; Julius Caesar in Gaul and Spain, *l.c.* ii, pp. 10, 15, etc.; Brutus in Asia and Macedon, *l.c.* ii, p. 113 f.; Mark Antony in Gaul (i, p. 169), Bithynia (p. 178), Asia (p. 179, etc.), Cyrenaica (p. 198); Sulla the Dictator in Greece, Asia Minor generally and at Ephesus (*l.c.* p. 405).

<sup>5</sup> Cf. the well-known passage illustrating Athenian pride in the coinage. Aristoph. *Ran.* 718 f.

<sup>6</sup> Cf. the weight referred to above, p. 17, note 3.

had possessed the advantage of being the larger coin. But the Peisistratic coins, now coming on the market as units bigger in bulk than their Aeginetan rivals, apparently struck something of a blow at the Aeginetan trade in Egypt. There is extant a coin, with the Aeginetan badge of a leather-backed turtle as type, which is actually the weight of a Peisistratic tetradrachm<sup>1</sup>. This coin was found in Egypt, and is a valuable commentary upon the Athenian influence in the Delta, which impelled the Aeginetans there to try for a moment the experiment of coining "turtles" of Attic tetradrachm weight.

The Athenian coinage of Peisistratus was the earliest money to be issued with a clear type on both obverse and reverse<sup>2</sup>, and almost the earliest coinage which depicted a human head<sup>3</sup>, while the clear initial letters of the city's name also marked a new departure in ancient mint practice. It seems that this money was not at first intended to replace the old Eupatrid coinage<sup>4</sup>, but only to take a place beside it, exactly as five and a half centuries later the coinage of Augustus issued from his Imperial mint and from the mint at Lugdunum<sup>5</sup> took its place beside the money struck in the Senatorial mint at Rome. Obvious it is that the little mint of Peisistratus was as easily moved from Laureion or Brauron to the Strymon, and thence back to Attica once more, as was the Imperial mint of Augustus from Spain to Sicily or from Sicily to Asia.

§ 28.

### GROUP C

#### THE "IMPERIAL" MINT

Ca. 561 B.C. to 556 B.C.

Tetradrachm anvil-dies	15	Coins . . . . .	22
Tetradrachm punch-dies	21	Number of tetradrachms recorded	25

Types: helmeted head of Athena.

℞: owl, olive-twigg, **ΑΘΕ**.

Pl. II, A<sub>31</sub>P<sub>31</sub> to Pl. III, A<sub>45</sub>P<sub>51</sub> (Catalogue Nos. 43 to 64)<sup>6</sup>

The heads of Athena stamped upon these the earliest coins issued from the "Imperial" mint of Peisistratus are crude indeed, but not more so than other examples of contemporary Attic art, whether pictorial or glyptic. A few years

<sup>1</sup> The coin is in the British Museum, cf. *N.C.* 1922, p. 168, 53, and Cat. Naville, I, 1920 (*Pozzi*), Pl. LI, 1617. A large chisel-cut had partly defaced the coin and shortened its weight by a few grains. Even so its weight is better than that of many tetradrachms of Athenian issue, being 16.83 g. (259.8 grains).

<sup>2</sup> Such primitive pieces as B.T.II, i, Pl. I, 17, 18, cannot be claimed as coins having two types, for the design on the little punch is more in the nature of a countermark.

<sup>3</sup> Only two or three coins with human heads as types can be cited which are definitely older than the first Peisistratic money. These are: B.T.II, i, Pl. III, 9, electrum *tritē*, head of Heracles; *l.c.* Pl. XVIII, 9, silver didrachm of Cnidus (?) with female head; *l.c.* Pl. LXII, 4, didrachm of Naxos (?) with head of Satyr.

<sup>4</sup> The supplementary character of Peisistratus' tetradrachms is shown by the fact that very little—if any—small change corresponding to the early issues exists. The local currency was still supplied by the older coinage. Cf. C. H. Dodd in *J.H.S.* xxviii, 1908, p. 72, who suggests that another tyrant, Anaxilas of Rhegium, opened a new mint.

<sup>5</sup> *N.C.* 1920, pp. 19, 45 ff. H. Mattingly, *B.M.C. Roman Emp.* i, p. xvi and p. cxx.

<sup>6</sup> The anvil-dies are now mentioned before the punch-dies, because the latter, now that they bear a type, wear out far more quickly than anvil-dies.

before the first of these coins (Pl. II, A31P31) was struck there was produced



FIG. 31. *a*, Tetradrachm of Peisistratus, Group C. *b*, Head of Athena from the Burgon amphora.

the earliest known Panathenaic prize amphora<sup>1</sup>, decorated, as all such vases were, with the figure of Athena Promachos. And, since on independent grounds the coin and the vase are found to be nearly contemporary, a comparison of the heads of Athena is worth making. Certainly the vase-painter has produced a profile (Fig. 31)<sup>2</sup> very similar to the one upon the coin; and, had he been called upon to model in relief as well as to draw, we should

have seen lips as thick and an eye as bulging as are found upon the coins.

At this period, while the potters were turning out the first Panathenaic amphorae, while the tyrant's die-sinkers were beginning to engrave the head of Athena for the new coinage, there was



FIG. 32. Head of Heracles in poros-stone from temple on the Acropolis.

probably being built upon the Acropolis one of the latest of the temples decorated with sculptures of poros-stone<sup>3</sup>. The little building had a pediment group which represented the introduction of Heracles to Olympus. This gable group was indeed the earliest which contained a figure of Athena<sup>4</sup> who, standing in the centre, introduced Heracles to Zeus even as Athena introduced Peisistratus to the Athenians<sup>5</sup>. Fragments only survive, but among them the head of Heracles himself (Fig. 32); and this head has a strong resemblance to such a head as that of Athena on our Plate II, A32. Indeed, all the heads in this Group C have a "family likeness" to the contemporary poros-stone sculptures which survive from the pre-Persian buildings of Athens.

Athena's hair on the coins of this issue is crudely depicted by lines or by dots, or by a combination of the two. Her close-fitting Athenian helmet is effectively rendered, and the horse-hair crest is held in a low support, differing from the tall crest-supports represented on most B.F. vases. Limitations of space made the latter unsuitable for the narrow flan of a coin<sup>6</sup>.

§ 29. As an index to the chronological development of the coinage of the Peisistratids the owl is, however, of more importance than the head of Athena. It is engraved upon the punch-die; and the punches, more numerous by far

<sup>1</sup> The "Burgon Amphora" in the British Museum, v. Brauchitsch, *Die Panath. Preisamphoren*, 1910, p. 6 f. and fig. 5. The Greater Panathenaia were said to have been founded in 566 B.C. Cf. p. 37, note 3.

<sup>2</sup> The drawing (taken from *Mon. d. Inst.* x, 1878, Pl. XLVIII, i) has been reversed so as to make comparison with the coins more easy.

<sup>3</sup> The clamps,  $\perp$  and  $\lrcorner$ , in this building are to be assigned, Dr Buschor of the German Archaeol. Inst. in Athens informs me, to the period 560-540 B.C.

<sup>4</sup> The subjects of the gable-group of various earlier temples on the Acropolis represented lions devouring bulls or calves, and exploits of Heracles.

<sup>5</sup> See § 32 below.

<sup>6</sup> There is one exception to this rule, for on a coin issued by Hippias the helmet is equipped with a tall crest-support. Cf. Fig. 45, § 55.

than the anvil-dies, link together the different obverses. As the tetradrachms are arranged by die-sequences it becomes possible to trace a continuous artistic development in the treatment of the owl from the time when Peisistratus became tyrant to the day when the Athenian populace embarked for Salamis and each man on board the fleet received from the Areopagus two silver tetradrachms<sup>1</sup>.

The earliest owl (Pl. II, P<sub>31</sub>) is a quaint bird, standing bolt upright, its tail absurdly short, and having apparently but one leg. On the third die (Pl. II, P<sub>33</sub>) this last defect is remedied and we see the owl more comfortable with two; but throughout this issue the bird retains the upright position, short legs and stubby tail.

Of the letters in the legend **A** and **E** show some variety of shape, but **Θ** does not vary<sup>2</sup>. The forms of letters are of no importance as aids towards a chronological arrangement of the coins issued in Attica before the Persian Wars.

The little twig of olive—perhaps “shorthand” for the sacred tree of Athena on the Acropolis<sup>3</sup>—apart from its symbolism fills a gap, and gives a finish to the whole design.

It is possible that Peisistratus issued a small number of fractional coins with the same types as his tetradrachms, for there are extant two obols and one hemiobol (Pl. IV,  $\sigma$ ,  $\pi$ ,  $\beta\beta$ ) which appear to be contemporary with the large coins of this Group, but the bulk of the fractional currency was at this time still coined in the old Athenian Eupatrid mint.

§ 30. During a period of scarcely more than five years<sup>4</sup> the tyrant's new mint

<sup>1</sup> *Ath. Pol.* 23. Cf. § 83 below.

<sup>2</sup> This *theta* and the wheel *theta*,  $\Theta$ , were both in use during the sixth century B.C. in Athens, and both forms occur upon the famous François Vase.

<sup>3</sup> Cf. P. O. Brøndsted, “On Panathenaic Vases” in *Transactions Roy. Soc. Literature*, ii, pt I, London, 1832, p. 120, for the importance of the sacred olive trees in Attica.

<sup>4</sup> The dating I have adopted for the reigns and exiles of Peisistratus is that of Mr F. E. Adcock as given in his public lectures. This dating appears to me alone consonant with the fixed die-sequence (see above, “NOTE” before p. 1) of the coins. The arrangement is the following:

561 B.C. P. seizes tyranny. “Not long after” (Hdt. i, 60), i.e. in the same year, P. is expelled; he allies himself with Megacles.

560 B.C. P. returns conducted by “Athena herself,” and marries Megacles' daughter. Four years pass, and, no children being born, in

556 B.C. Megacles and Lycurgus combine. P. retires for ten years.

548 B.C. Temple at Delphi burnt; and *because* P. is in exile his enemies have a pretext for pretending that he instigated the deed. (Philochorus *ap.* Schol. in Pind. *Pyth.* vii, 9.)

546 B.C. P. returns finally to Athens. In that or the following year Sardis was taken by Cyrus. Emissaries of Croesus visiting Greece before the fall of Sardis found in 546 B.C. P. ruling in Athens (Hdt. i, 59, and 65).

Further, Hdt. (v, 65) gives 36 years as the reign of P. and his sons, and he is making a point of their *continuous* rule, ἀρξάντες μὲν Ἀθηναίων ἐπ' ἕτερα ἕξ τε καὶ τριήκοντα. Hippias was expelled in 510 B.C.; this therefore confirms 546 B.C. as the date of P.'s final establishment in Athens, and Hdt. must be regarded as our most trustworthy authority. Mr Adcock's restatement and modification of Herschensohn's theory (cf. De Sanctis, *Atthis*<sup>2</sup>, p. 278) is to me entirely convincing and I am indebted to him for what appears to be the only clear solution of a much debated problem. The Herodotean dating alone is confirmed by the coins. For a summary of the many conflicting suggestions for solving this problem—all suggestions which fail to appreciate Hdt.—cf. Sandys, *Aristot. Constit. of Athens*<sup>2</sup>, p. 58.

employed at least fifteen anvil-dies<sup>1</sup>. Peisistratus must therefore have had a very large supply of silver which he was ready to convert into money; and the source whence he drew this wealth must have been Laureion<sup>2</sup>. So great was the stress of work in his mint, so quickly did dies wear out, that the tyrant's engravers seem from the first to have employed, if not invented, a simple aid to quick die-sinking; for it is obvious that most of the dies for Athenian tetradrachms were "hubbed<sup>3</sup>." The process was the following: the engraver carved upon a punch a rough head of Athena *in relief*, and upon a second punch an owl, legless and without plumage, likewise *in relief*; these punches with rough designs in relief are known as "hubs." The die-sinker hammered his Athena-head hub into a number of anvil-dies and then worked in the details, which of course varied in these different sister-dies, with graving tools. In similar wise he hammered his owl-hub into a number of punch-dies, and then with his graver added legs, plumage, olive-twigs and legend, varying the details slightly on these punches. Time and again we can recognize, in this and in subsequent groups, that the same hub has "fathered" a number of dies<sup>4</sup>.

Impressive as the new coins of the Athenian tyrant must have seemed to his contemporaries, his mint did not at first greatly affect the market. Conservative traditions die hard, and the older mint of his rivals was destined to another fifteen years of active life.

<sup>1</sup> See § 28 above. In all the subsequent issues of the Peisistratids and of the Democracy an average of about three obverse (i.e. anvil) dies per annum was used. During the 10 years while Peisistratus was in exile the Eupatrid mint employed fourteen anvil-dies (Catalogue A48 to A61; §§ 33 to 37), i.e. about  $1\frac{1}{2}$  dies per annum. The life of a didrachm die would be at least twice as long as that of the larger tetradrachm die. The proportion is therefore the same.

<sup>2</sup> It is possible that the coins were actually minted in the Laurian district. Cf. § 52 below.

<sup>3</sup> Cf. G. F. Hill in *N.C.* 1922, pp. 19 ff., 37 f. Mr Noe informs me that a kind of hubbing was used for many of the early incuse coins of Magna Graecia, of which he is making a special study. Mr Mattingly of the British Museum is of opinion that the portraits on the dies of Roman Imperial coins were frequently produced in this way.

<sup>4</sup> A pair of coins which afford conclusive proof that dies were hubbed are described in § 48 below.

## CHAPTER VII

*οὐδ' ἀντ' ἑλλάας χρυσέας τε Γοργόνος  
 τρίαῖναν ὀρθὴν στᾶσαν ἐν πόλεως βάθροις.  
 EURIPID, *Fragm. Erechtheus*, 362.*

§ 31. It seems fairly clear that the old Athenian mint, which before the time of Solon's reform had coined "Pheidonian" didrachms and which after 594 B.C. had issued money with heraldic types, was situated in Athens; while Peisistratus opened a new mint outside the city, and in that new mint produced his "Laurian owls." But our present concern must still be with the money of the old Attic Eupatrid mint, which continued to coin actively down to 546 B.C., the year of Peisistratus' final return from his long exile<sup>1</sup>. The continuity of the series is clear from the internal evidence of die-sequences, and confirms the statement of Herodotus<sup>2</sup> that Peisistratus governed without disturbing any of the existing magistracies and without alteration of the laws, but in accordance with the established institutions. The tyrant did not close down the Eupatrid mint.

### GROUP D

560 B.C. to 546 B.C.			
Didrachm punch-dies	16	Coins . . . . .	27
Didrachm anvil-dies	16	Number of didrachms recorded	60

§ 32.

### GROUP Di

560 B.C. to *ca.* 556 B.C.  
 Official Badge: chariot wheel  
 Pl. III, P52A46 to P53A47 (Catalogue Nos. 65 to 67)

In the year in which Peisistratus actually seized the supreme power the institutions of Athens must have received a considerable shock. In spite of this it is impossible to recognize any definite traces of the event on the older Athenian coinage, which may have ceased to appear for a moment in face of the new money—those tetradrachms of Laurian silver which Peisistratus threw upon the market. Scarcely however had the tyrant grasped the reins of government before "after no long interval," in the words of Herodotus, "Megacles and Lycurgus with their partizans being reconciled drove him out...and as his power was not very firmly rooted he lost it<sup>3</sup>." This unnatural alliance between the rival factions was an ephemeral affair, and a fresh quarrel resulted in the defeat of Megacles. He promptly allied himself with Peisistratus, who had retired possibly across Hymettus to his estates at Brauron<sup>4</sup>, and arranged to become the

<sup>1</sup> See p. 43, footnote 4 above for the chronology.

<sup>2</sup> i, 59.

<sup>3</sup> Hdt. i, 60.

<sup>4</sup> In 4½ or 5 hours of steady walking one can easily cover the distance from Athens to Brauron.

tyrant's father-in-law. That all these fluctuations occurred within the space of twelve months seems certain; and it is moreover clearly indicated by the sequence of the coins that their issue suffered no long interruption. A woman named Phyē dressed as Athena<sup>1</sup> drove the tyrant into Athens in a chariot preceded by heralds who announced that the goddess herself was bringing back Peisistratus. The truth of this story, on which Herodotus a century later cast doubts, appears to gain support from a bas-relief recently discovered embedded in part of the wall of Themistocles at Athens. One panel of this relief<sup>2</sup> which must date from the time of Hippias, depicts this very episode (Fig. 33), so it would seem. One almost wishes that Herodotus had spared his criticism of the story and given us instead a picture of the scene which the fathers of his own contemporaries must have witnessed. Imagination conjures up Peisistratus leaving his castle at Brauron near Prasiae, marching with his retainers up the



FIG. 33. Relief on statue-base from the wall of Themistocles in Athens.

rough road until near Paeania<sup>3</sup> he is joined by the fair-haired Phyē who came from that deme. Round Hymettus they move, join the road from Marathon, and enter Athens by its eastern gate. In the chariot stands Phyē as Athena, the Gorgoneion on her shield<sup>4</sup>; beside her Peisistratus, son of Hippocrates, his blazon the forepart of a horse. They are expected, for all has been arranged

<sup>1</sup> It seems impossible to accept Ure's explanation of the Phyē incident (*Origin of Tyranny*, p. 54 ff.) and his argument breaks down completely when he seeks to connect the "Thracian garland seller" of Aristot. (*Ath. Pol.* 14) with the "garland" of olive leaves on Athena's helmet, for these leaves never appeared before 490 B.C. (see § 79). Similarly the coins were not, as far as we know, called *δραχμαὶ Στεφανηφόρον* before the second century B.C. It should be noted that Cleitodemus (or Cleidemus), the earliest Attidographer, calls Phyē the daughter of Socrates, obviously no Thracian, but an Athenian (*F.H.G.* i, p. 364, 24). It is best to accept the story of the girl Phyē dressed up as Athena as a true tale, and as such it has been accepted by Grote, Curtius, Busolt and by How and Wells.

<sup>2</sup> Published in *J.H.S.* xlii, 1922, Pl. VII. It is at least probable that the figure in the chariot is intended not for a charioteer, as described, *l.c.* p. 105, but for Athena who, besides a helmet, wears a shield slung on her back. This shield, shown in profile, is inappropriate to a mere driver.

<sup>3</sup> The modern village of Liópesi.

<sup>4</sup> On the relief here figured Athena has her shield slung on her back.

beforehand. Doubtless in true Greek style they do not arrive at the appointed hour<sup>1</sup>, but doubtless too Megacles did not expect them to do so, and he also is late. But somehow they meet at the eastern gate; the Alcmaeonid shields, awirl with triskeles and wheels, mingle with the shields adorned with horses, and so the procession led by the heralds moves up to the Acropolis. Athena has brought the "New Erechtheus," king<sup>2</sup> of Athens, back to his strong house.

Re-established in the sovereignty, the tyrant kept to his bargain and married the daughter of Megacles; and while Peisistratus continued to issue his "owls," the Alcmaeonid faction, now allied to the tyrant, left its mark upon the money of the old Eupatrid mint, for once again the wheel appears as the badge upon the coinage.

On the first of these wheel-dies (Pl. III, A46) the stays which unite each spoke to the rim are still present, though smaller than on the older Alcmaeonid coins. Two punch and two anvil-dies are recorded<sup>3</sup> for the didrachms; and drachms (Pl. IV,  $\theta$ ) and obols (Pl. IV,  $\rho$ ) were likewise issued. The occurrence of wheels as shield-devices upon vases has been already noted in a preceding chapter<sup>4</sup>.

## § 33.

## GROUP Dii

556 B.C. to ca. 550 B.C.

Official Badges: owl on shield;  
bull's head facing;  
bull's head facing on shield.

Pl. III, P54A48 to Pl. IV, P57A51 (Catalogue Nos. 68 to 73)

For five years perhaps Peisistratus held the tyranny in Athens supported by the Alcmaeonid Megacles. But the tyrant's neglect of his wife led to a permanent breach between the two great men. Once more Megacles joined forces with the leaders of the opposite oligarchic faction, and before any violence could occur in the city Peisistratus retired voluntarily, leaving Attica altogether, and relinquishing even his rich silver mines to the Eupatridae who once more governed Athens.

If they were to retain their power the oligarchs were now bound to emulate the benevolent and constitutional government of Peisistratus and to efface as much as possible their personal antagonisms. Perhaps it was with this end in view that the Eupatrid mint now issued coins bearing badges mainly of a national rather than of a personal character. For it seems that to the years immediately after the tyrant's exile must be assigned the money bearing a shield with the device of Athena's owl. This civic badge occurs on a number of B.F. vases (Fig. 34)<sup>5</sup> as a shield sign borne by Athena, and must be regarded not as a

<sup>1</sup> Cf. Aristoph. *Lysistr.* 56 f.: ἀλλ' ὦ μέλ' ὄψει τοι σφόδρ' αὐτὰς Ἀττικὰς, ἅπαντα δρώσας τοῦ δέοντος ὕστερον. The custom has not changed.

<sup>2</sup> In the *Demoi* of Eupolis Peisistratus was actually called βασιλεύς. Frag. 123, p. 291, Kock.

<sup>3</sup> Nine specimens are on record.

<sup>4</sup> § 23, Fig. 28.

<sup>5</sup> The illustration is from a vase in the Brit. Mus. B. 345. To the others mentioned by Chase, *Harv. Stud.* xiii, 1902, p. 115, should be added a vase in Gerhard, *Etrusk. u. Camp. Vasenb.* Pl. D, 1,

personal but as the national coat-of-arms, which in later times it always was<sup>1</sup>. The records of two didrachm anvil-dies (Pl. III, A48, A50) with this owl-badge are preserved, and obols with the same type (Pl. IV,  $\sigma$ ) were also issued. The design must, of course, have been borrowed from the now popular Peisistratic tetradrachms, but the technique, like the denomination, follows the older tradition of the Eupatrid mint.

§ 34. The employment of personal family badges still survived alongside of the new national badges on the coinage, for there now appears as a coin-type an admirably modelled facing bull's head. That it is contemporary with the



FIG. 34. Athena; vase in the British Museum.



FIG. 35. Hoplite and mercenary from an Attic vase.

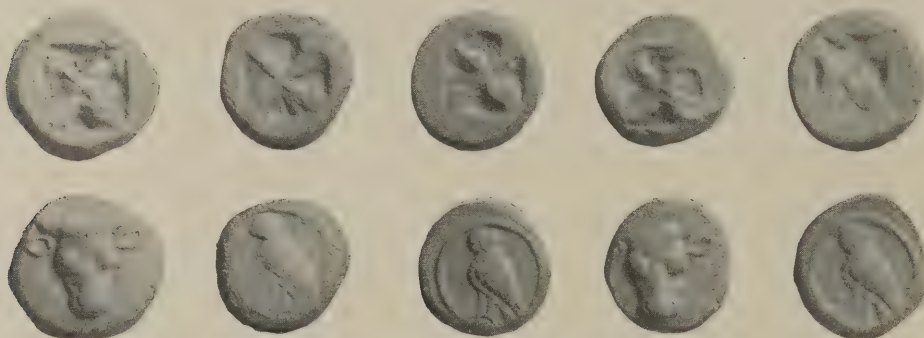


FIG. 36. Later Eupatrid didrachms.

owl-didrachm is certain from the fact that the two share a punch-die. Their issue, moreover, was simultaneous as may be learnt from a close observation of the impressions made by the punch P56 (Fig. 36)<sup>2</sup>. The bull's head appears

and another in *Wien. Vorlegebl.* 1889, Pl. IV, 3b. Chase, *l.c.* cites an owl as shield sign upon a coin of Thebes, *B.M.C. Central Gr.* Pl. XIII, 7. This is an error. The owl in this instance is no "device" but a countermark applied by some city other than Thebes, for it recurs on coins of Olympia, cf. C. T. Seltman, *Temp. Coins Olymp.* p. 5, list of countermarks.

<sup>1</sup> Cf. G. Macdonald, *Coin Types*, p. 60 f.

<sup>2</sup> The deterioration of the punch P56 is shown in Fig. 36, where we can observe how it was used in succession with the bull (A49), the owl (A48), another owl-die (A50), again with the bull (A49) and finally once more with the owl (A50).

also on contemporary obols<sup>1</sup> and half obols within the circle of a shield (Pl. IV, τ, γγ). Next to the Gorgoneion the bull's head is the most frequent of all devices depicted as shield signs upon Athenian vases (Fig. 35)<sup>2</sup>, and there is therefore reason for believing that the badge was a popular one in Athens. As a canting type the bull's head would be suitable for the great clan of the Eteobutadae, the descendants of the mythical "cow-herd" *Boutēs*. It is worth noting that in the period under discussion only four badges occur on the obverses of the Athenian coins; the owl, Gorgoneion, wheel and bull's head. The two first are definitely civic, as contrasted with personal badges; the wheel is, as already pointed out, the device of the one great leading family, the Alcmaeonidae, and it is therefore not unreasonable to regard the other personal badge, the bull's head, as the device of the other leading clan with which the Alcmaeonid faction had allied itself in order to insure the expulsion of Peisistratus. Now the leader of Megacles' new allies and one-time opponents was none other than Lycurgus, son of Aristolaides, who belonged to the ancient clan of the Eteobutadae<sup>3</sup>, a fact which lends considerable support to the suggestion that the bull's head is the device of some member of that great family.

§ 35. On the vase pictures there appear as shield devices the heads of two types of cattle—the Mediterranean beast with twisted horns and the Central European Shorthorn, which were first distinguished in ancient art by Sir William Ridgeway<sup>4</sup>. The former type is depicted in Fig. 35, the latter in Fig. 50 below. The two breeds remained distinct for centuries after Northerners brought the Shorthorn into the Greek peninsula, but from the evidence of numismatic monuments it appears that the distribution of the Shorthorn type was limited to Greece proper, for it can only be recognized on the coins of Thessaly<sup>5</sup>, Phocis<sup>6</sup>, Delphi<sup>7</sup>, Copae in Boeotia<sup>8</sup> and Athens, while in the Peloponnese it appears on coins of Phlius<sup>9</sup> and Cleitor<sup>10</sup>. This breed in fact was confined to the Greek mainland, while on all island coins<sup>11</sup>, including those of Euboea, which depict bulls or cows there are shown the old twisted-horned cattle, which were presumably common on the mainland as well, hence their heads likewise appear as shield signs.

The three extant anvil-dies of the bull's head didrachms (Pl. III, A49; Pl. IV, A51, A58) were used with various punch-dies, which were likewise employed to strike wheel, owl and Gorgoneion coins. Indeed the whole coinage at this period betrays all the marks of haste which we should expect in a mint that was suddenly called upon to cope with a heavy demand. Peisistratus after

<sup>1</sup> The circle of the shield is almost off the flan on Pl. IV, τ.

<sup>2</sup> From a vase figured in Gerhard, *Auserl. Vasenb.* iii, Pl. 215. Cf. the long list in Chase, *Harv. Stud.* xiii, 1902, p. 99 f.

<sup>3</sup> Toepffer, *Att. Geneal.* 1889, p. 122.

<sup>4</sup> *Early Age of Greece*, p. 333.

<sup>5</sup> B.T.II, i, Pl. XLIII, 7, 21, 26.

<sup>6</sup> *l.c.* Pl. XLII, 3-15.

<sup>7</sup> *l.c.* 27.

<sup>8</sup> *l.c.* iii, Pl. CCII, 18.

<sup>9</sup> *l.c.* Pl. CCXVIII, 22.

<sup>10</sup> *l.c.* Pl. CCXXV, 28.

<sup>11</sup> The horns of the cattle on Samian coins appear curved, rather than straight as Sir W. Ridgeway suggests. *Early Age of Greece*, p. 334.

introducing an abundant coinage had retired into exile, and the Eupatrid mint had now to produce money in quantities as plentiful as the tyrant had produced. That it succeeded in this effort is proved by the greater numbers extant in our day of these later Eupatrid coins as contrasted with the scarcity of the earlier pieces.

As it is now possible to prove that the coins with the facing bull's head are Athenian one might perhaps regard them as in part responsible for the statement of Philochorus<sup>1</sup> concerning the bull type on early Athenian didrachms; but only in part. The remarkable coin described in a previous chapter<sup>2</sup>, with the type of a whole bull, is probably mainly responsible for the tradition.

## § 36.

## GROUP D iii

Ca. 550 B.C. to 546 B.C.

Official Badge: Gorgoneion

Pl. IV, P60A54 to P67A61 (Catalogue Nos. 76 to 91)

Of all the shield signs that appear upon Attic vases the Gorgon's head, one of the two official coats-of-arms of Athens, is the most frequent (Fig. 37)<sup>3</sup>, and during the last years of oligarchic government the Gorgoneion seems to have been the principal official badge of the city. It is interesting to note in this connection that in later centuries the Gorgon head, in addition to the owl-badge, was stamped upon such official objects as the dicasts' tickets<sup>4</sup>, and that it occurs as the principal type on copper coins of Athens struck probably in the second century B.C.<sup>5</sup>

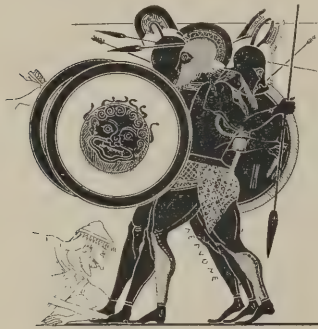


FIG. 37. Geryones. B.F. vase in Paris.

But the Gorgoneion occupied an even more prominent position as the arms of Athens on the Acropolis itself. Pausanias saw on the south wall which faces towards the theatre of Dionysus a great gilded head of the Gorgon Medusa<sup>6</sup>, and the same author mentions elsewhere<sup>7</sup> that it was set up by King Antiochus.

It must not, however, be supposed that the king of Syria was decorating the wall of the Acropolis with a new and imposing dedication by way of self-advertisement. From another passage it is clear that he was merely presenting Athens with a new coat-of-arms to replace the older Gorgon-badger to which Euripides refers. In a surviving fragment of the lost Euripidean play *Erechtheus*<sup>8</sup>

<sup>1</sup> *Ap. Schol. in Aristoph. Aves*, 1106.

<sup>2</sup> § 20.

<sup>3</sup> From a vase in Paris, Gerhard, *Auserl. Vasenb.* ii, Pl. 107. Cf. the long list given by Chase, *Harv. Stud.* xiii, 1902, p. 106 f.

<sup>4</sup> B.M. *Guide Grk. Ro. Life*, 1908, p. 7, fig. 3. Sandys, *Aristot. Constit. of Athens*<sup>2</sup>, frontispiece fig. (1).

<sup>5</sup> B.M.C. *Attica*, Pl. XV, 1.

<sup>6</sup> i, 21, 3.

<sup>7</sup> v, 12, 4.

<sup>8</sup> Eurip. *Fragm.* 362.

the first Athenian king declared: "Eumolpos shall not plant the straight trident<sup>1</sup> upon the Citadel's foundations in place of the olive and the *Golden Gorgoneion* ...and Pallas nowhere be held in honour." The dramatic force of this passage must have been overwhelming, spoken by the old Attic king from the stage of the Dionysiac theatre as he pointed over the heads of the audience to the great gilt gorgon-head whose hideous features warded off evil from the shining walls of Athena's citadel.

§ 37. Six anvil-dies with the Gorgoneion are on record among the didrachms (Pl. IV, A54, 55, 56, 57, 60, 61), and obols are plentiful (Pl. IV, v), while little quarter obols, or tetartemoria (Pl. IV, δδ) were also issued. From the interchange of didrachm punch- and anvil-dies it is possible to gather something of the conditions of the mint shortly before Peisistratus' return. Herodotus<sup>2</sup> declares that the Athenians in the city showed little concern all the time while

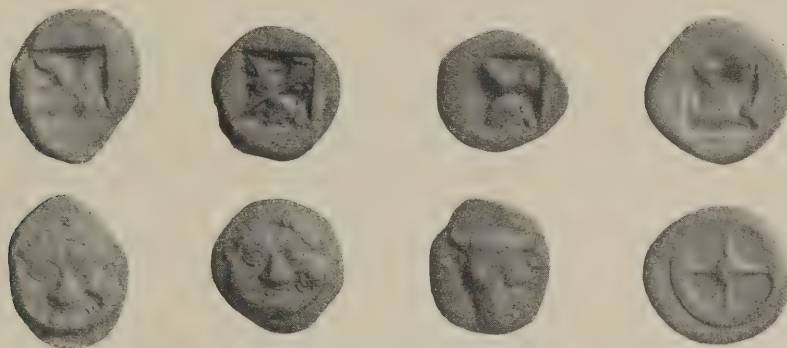


FIG. 38. Later Eupatrid didrachms.

Peisistratus was abroad collecting money; and though this remark may be true in so far as it concerns the populace, it is impossible that the oligarchs remained unmoved by the reports of the ex-tyrant's financial operations among the Paeonian mines. Their money tells a tale of feverish coining, of the indiscriminate use of bulls' heads, Gorgoneia and Alcmaeonid wheels upon the anvil, all stamped with the same hard-worked, and often over-worked, punch (Fig. 38)<sup>3</sup>. And then to the very last of the Eupatrid coins an important addition was made by the introduction of a reverse type. In one of the small triangular compartments of the punch-die there was engraved a little facing panther's

<sup>1</sup> As the Gorgon is Athena's badge so the trident is Poseidon's; compare the coins of Boeotian Haliartus (B.T.II, iii, Pl. CCII, 33) on which the trident is the actual *shield-sign*, exactly as the club of Herakles is the shield-sign on Theban coins (*l.c.* Pl. CC, 9, 12), and as the corn-ear of Demeter is the shield-device at Orchomenos (*l.c.* Pl. CCIII, 15). The Mantineans, who honoured Poseidon, bore tridents as their shield-devices (Schol. in Pind. *Ol.* 11 (10), 83; Bacchyl. 20, 2 Blass<sup>4</sup>; *Fragm.* 2, 2 Kenyon).

<sup>2</sup> i, 62.

<sup>3</sup> Cp. such a series as that depicted in Fig. 38, P62 with A56, 57, 58, 59, where the deterioration of the punch P62 can be observed. I have noted a similar case of feverish coining to meet an emergency in the older of the two Olympian mints, *Temp. Coins Olymp.* p. 55.

head<sup>1</sup>. The obverse of the coin being now reserved for the city's coat-of-arms, it seems as though some official had sought to find a place on the reverse for a private badge, for as such the panther's head appears on Attic vases (Fig. 39)<sup>2</sup>. The issuer of these pieces (Pl. IV, P66A60 to P67A61), the last of the true Eupatrid coins, sought to make a compromise between civic and private badges by the expedient of placing the former on the anvil and the latter upon the punch-die.

§ 38. Our researches have now covered the whole period of the Athenian coinage before the date when the tyranny was firmly rooted and the money of the oligarchic government ceased. The old Pheidonian amphora coins of the Attic merchants gave place, after Solon had debased the coin standard, to coins with a civic badge, an amphora, blazoned upon a shield. With the return of the Alcmaeonidae to power this civic badge was removed to make way for the "three legs," the device of their clan. As one party succeeded the other in the government so badge succeeded badge. Even when Peisistratus, having won the throne, issued his new money from his own "Imperial" mint, the older Eupatrid money continued, bearing the device, perhaps, of the tyrant's father-in-law Megacles. Finally, when Peisistratus withdrew, the old coinage, now more



FIG. 39. Hoplite from an Attic vase.

plentiful than ever, influenced by the tyrant's money began to abandon private badges for the civic crests of Athens—the Gorgoneion and the owl. Thus the cycle was completed and the coinage that began with the city arms of an oil-amphora ended with the city's badge of the golden Gorgoneion.

<sup>1</sup> The Gorgon-die, A60, occurs both with the plain punch and with a panther's head-punch (P64, P66).

<sup>2</sup> The illustration is from Gerhard, *Auserl. Vasenb.* iv, Pl. 258. Chase, *Harv. Stud.* xiii, 1902, p. 115, cites eighteen examples on Attic B.F. vases. In many cases other badges accompany the beast's head. A discussion of the possible significance of this device must be left for a later chapter, § 68.

§ 39.

CHART OF THE EUPATRID COINAGE

COIN TYPES <sup>1</sup> of GROUPS B and D	B.C.	HISTORIC EVENTS
Amphora	594	Solonian legislation
Triskeles Forepart of horse	590 589	Faction. Alcmaeon commanding Athenian army
Beetle Astragalos	586	Faction
	582	Damasias Archon
	581	" "
Cartwheel } Bull } Horse } Forepart of horse	580 578 577	
Wheel	572	
	570	Peisistratus takes Nisaea and Salamis
Hindpart of horse	566	Hippocleides Archon. Greater Panathenaia founded
Wheel	561 560	Peisistratus tyrant: later retires to hills. ["Imperial" Mint opened] ,, returns, allied with Megacles
Owl Bull's head	556	Peisistratus withdraws to Thrace. ["Imperial" Mint transferred to Thrace]
Gorgoneion	550	
	548	Delphic temple burnt down
Mint closed	546	Peisistratus returns: firmly established. ["Imperial" Mint returns to Attica]

<sup>1</sup> Dated approximately.

## CHAPTER VIII

χρήματα, χρηματ' ἀνὴρ, ὃς φᾶ  
κτεάνων θ' ἅμα λειφθεὶς καὶ φίλων.

PINDAR, *Isthm.* ii, 11.

§ 40. The fortunes of Peisistratus, after the estrangement between himself and Megacles had taken place and the tyrant had voluntarily retired from Attica, are our next concern. The more study is devoted to the character of the man as mirrored in his actions the more a conviction grows that he was probably the greatest statesman whom Athens ever produced. He has often been compared with Augustus, but Augustus, like Alexander the Great, built upon foundations laid by a brilliant predecessor. Peisistratus not only laid the foundations but built the city also, and to him, more than to any other, Athens owed her greatness and power.

It is characteristic of the man's farsightedness that when the odds were for a time overwhelming he should withdraw from the country and bide his time rather than risk all on a single throw. With his family and a body of followers he left the city in 556 B.C.<sup>1</sup>, and, after visiting Eretria<sup>2</sup>, sailed for the Gulf of Therma<sup>3</sup>. Here at Rhaecelus he settled for a brief period only and moved thence to the Pangaean district<sup>4</sup>. The silver mines of Mount Pangaion had probably been his goal from the time that he left Athens; for his power there had been founded in his silver mines, and by means of silver dug from mines of greater wealth than those of Laureion he meant to regain the throne which he had lost. None better than he understood the truth in the words of the Argive Aristodemus<sup>5</sup> whom Pindar quoted:

"Money, 'tis money makes man," quoth he  
When robbed at once of goods and friends.

Herodotus states that Peisistratus owed his final restoration to revenues partly collected at home and partly drawn from the river Strymon<sup>6</sup> which flows by Mount Pangaion. Now as his withdrawal from Athens had been voluntary he

<sup>1</sup> For the system of dating adopted see above p. 43, note 4.



<sup>2</sup> Aristot. *Ath. Pol.* ed. Sandys<sup>2</sup>, p. 61, note on πάλιν.




<sup>3</sup> Almost half a century later, when Peisistratus' son, Hippias, had been expelled from Athens, King Amyntas of Macedon offered him the city of Anthemus near the same gulf (Hdt. v, 94), but the exiled tyrant refused the gift. Probably experience gained under his father had taught him to know the insecurity of the site. Anthemus lay close to Rhaecelus, whither P. led his followers with a view to founding a colony as the Trojan Aeneas was reported to have done in the self-same place (Lycophr. *Alex.* 1236 and Schol. *ad loc.*) whence it won its other name, Aeneia. These cities were exposed to attacks by land and sea, and at all times were a source of trouble to the Macedonian kings (Thuc. ii, 99). The district was ravaged by Thracian raiders (Thuc. ii, 100). Pausanias, a pretender to the Macedonian throne, made the district his base (Aesch. *de falsa leg.* 23, p. 31, ed. Steph.). Philip II afterwards gave away the district to the Olynthians (Dem. *Phil.* ii). <sup>4</sup> *Ath. Pol.* 15.

<sup>5</sup> Sometimes classed among the Seven Sages. Cf. Alkaios, 49 (Smyth, *Melic Poets*, xxv).

<sup>6</sup> i, 64.

must have had time to take away with him ample funds from his Laurian mines, and he perhaps devoted a portion of this money to the purchase of mining concessions in the Strymonian district<sup>1</sup>. The native coinage of that region is very plentiful, indicating a wealth of silver greater than in any other region of the Eastern Mediterranean. Not only must many cities of Asia and Hellas have purchased their silver from the district, but the various tribes, whom Herodotus comprehends under the name of Paeonians, themselves issued a rude silver currency from an early date in the sixth century<sup>2</sup>. The money of the whole region has a peculiar character of its own betraying an art which combines the qualities of strength and grossness. Human figures and faces are rendered with a grotesque coarseness which is not so much barbarous as undeveloped<sup>3</sup>. It was in this district that Peisistratus proceeded to amass money, employing Paeonian miners to work and Paeonian engravers to produce his coins.

§ 41. As long ago as 1883 Dr Imhoof-Blumer drew attention<sup>4</sup> to a peculiar characteristic of many early coins of the Thracio-Macedonian district—to an extraordinary symbol or letter which occurs in no other district of the ancient world. On coins of the Chalcidice and of the Pangaeian district, of Acanthus, Abdera, Aegae, Lete, Aeneia, the Derrones, Bisaltae, Ichnaeans and Tyntenoi<sup>5</sup> we meet with a thêta-shaped symbol which is rendered  or . This mark Svoronos<sup>6</sup> claims as the sacred badge of the Paeonian sun-god, while Dr Imhoof-Blumer wrote “Il se peut, que ce symbole ait commencé ou qu’il ait fini par représenter simultanément le caractère Thêta, et dans ce cas la lettre a dû nécessairement se rapporter au nom et au sens du symbole<sup>7</sup>.”

This is precisely what happened in the case of the coins of Athenian type which Peisistratus caused to be struck on the banks of the Strymon, for on his coins the  of the legend **A****E** automatically became connected with the sacred symbol of the district, and under the hands of Paeonian die-sinkers the legend came out as **Α****Ε**<sup>8</sup>.

This letter itself—unknown, as we have said, elsewhere—would be enough to mark this money as of Thracio-Macedonian issue. But in addition to this the astonishing coarseness of the heads (Pl. V, A62 to Pl. VI, A87) with their gross features, square-cut jaws and flat, staring eyes can only be paralleled on the coins with crude satyrs, nymphs and centaurs which hail from the self-same

<sup>1</sup> Thucydides the historian later owned mines in the same district (Thuc. iv, 105) and was in consequence an influential person in Thrace.

<sup>2</sup> The abundance and age of this coinage has been recorded by J. Svoronos, *J.I.A.N.* xix, 1919, who is probably partly right in assigning some at least of the very early electrum money to Paeonia. It is however impossible to accept his subsequent attribution of the electrum of the Ionian revolt to the Pangaeian region. Professor P. Gardner’s conclusions in this matter seem indisputable.


<sup>3</sup> *B.T.II*, i, Pls. XLIV to L, LV, LVIII.

<sup>4</sup> *Monn. Gr.* p. 107.

<sup>5</sup> References to coins of Chalcidice down to those of the Ichnaeans appear in Imhoof’s list, *l.c.* For coins of the Tyntenoi with this symbol, cf. Svoronos, *l.c.* Pl. IV, 21.

<sup>6</sup> *l.c.*

<sup>7</sup> *l.c.* p. 108.

<sup>8</sup> Of course inscriptions in which every letter consists of dots (i.e. punched inscriptions) are known; but on these coins **A** and **E** are normal, the thêta only being made up of dots. Three punch-dies occur in the series with the legend **Α****Ε**.

region<sup>1</sup>. The owls too are mere caricatures of the birds on the first coins (Pl. II, P<sub>31</sub> ff.) which Peisistratus struck in Attica. Though the Paeonian thêta on these coins has so far passed unnoticed, they have hitherto proved a puzzle to all numismatists who have sought to classify them; for on the one hand they seemed too coarse to be regarded as examples of Attic Sixth Century Art, on the other hand they are not sufficiently lifeless and debased to be mere "barbarous imitations<sup>2</sup>." The problem is solved once it is realized that they are the products of the coarse die-sinkers of the mining mints of Mount Pangaion.

It seems fairly clear that Peisistratus must have taken with him specimens of his Laurian coinage and employed Paeonian natives to copy them, thus accumulating great stores of Attic tetradrachms which were destined to purchase his way back to Athens. And because they were destined for this object they were struck on the Attic, and not on any local Thracian standard. Because they were to form a war-chest he coined mainly tetradrachms. A very few drachms with the Ⓞ exist (Pl. XXII,  $\alpha$ ,  $\beta$ ,  $\gamma$ )<sup>3</sup>, and I have not identified more than five obols and three half obols (Pl. XXII,  $\delta$ ,  $\epsilon$ ).

## § 42.

## GROUP E

## THE "IMPERIAL" MINT IN P A E O N I A

555 B.C. to 546 B.C.

Tetradrachm anvil-dies	26	Coins	35
Tetradrachm punch-dies	28	Number of tetradrachms recorded	47

Types: helmeted head of Athena.

R: owl, olive-twig, &lt; Ⓞ E,

&lt; Ⓞ E, or (rarely) &lt; Ⓞ E.

Pl. V, A62P68 to Pl. VI, A87P95 (Catalogue Nos. 92 to 127)

By contrast even with the heads of Athena on the earliest tetradrachms of Athens (Group C, § 28 above) the heads on these coins of Thracian issue can only be called atrocious. The goddess is now a negress, now of mongoloid appearance, here her chin slopes back, there she is boldly prognathous. The lips are made by two "jabs" of a tool cutting into the die, while the eye, scraped into the die in its deepest part, stands out on the coin as though it had been fastened on as an after-thought. The hair is cut in rough parallel lines. By some lucky chance an engraver produced one die (Pl. V, A75) with a head which is not repellent, but this was incidental, for the reverse of the coin has an owl and legend of Paeonian type.

The owls are, of course, rough copies of the later birds of Group C, which the engravers of Attica had produced up to 556 B.C. Upright and short-tailed they have, however, sometimes longer legs, while their plumage of lines and

<sup>1</sup> Svoronos, *l.c.* Pl. VI, 19; VII, 8, 9. <sup>2</sup> Real "barbarous imitations" are figured on Pl. XXIII, 14, 15.

<sup>3</sup> Seven specimens are extant; see Catalogue. Dr Hill draws my attention to another point of contact: the object behind the owls on these drachms is less like an olive-leaf than a long-necked bird, being in appearance almost identical with the bird on the horse's tail upon a Thracian coin of the Bisaltæ in *N.C.* 1923, Pl. IX, 3.

dots is cut in the coarsest manner. Apart from the characteristic thēta, already referred to, it should be noted that the alpha invariably lies on its side. It seems as though the Pangaeian engravers, often perhaps illiterate slaves<sup>1</sup>, hardly knew what they were doing when they added the inscription to the die.

§ 43. In this group, as in the older Attic group of Peisistratic coins, one can observe that some, if not all, of the dies were made with hubs, and that variant details were added afterwards. Such punch-dies as P84, P85, and P89, P90, have owls of identical outline and dimensions. But the positions of the letters of the legend and of the olive-twig, as well as of the dots of the birds' plumage vary; for these details were added to the dies later<sup>2</sup>.

History does not relate how long a time Peisistratus spent at Eretria and at Rhaecelus<sup>3</sup> on his way to the Pangaeian Mount; but from the numismatic evidence it is possible to guess that he went to the Strymonian region fairly quickly, for twenty-six anvil-dies of this group are on record, whence arises the conclusion that, if Peisistratus coined as actively in Paeonia as he had done in Attica, minting went on for a period of nearly nine years<sup>4</sup>. Possibly, as he was accumulating a "war-chest" to pay the troops which were to secure his return, the tyrant coined more tetradrachms per annum in the north than he had coined in Attica. If so the conclusion is that the tetradrachms of this group were issued during a period of less than nine years.

§ 44. At the base which he had selected for his preparations Peisistratus could command all the raw material for his expedition; for besides silver there were men in plenty—Thracian mercenaries ready to serve in any adventurous campaign, such as appear in their quaint *tricot* costumes and pointed caps on many an Attic vase (Figs. 35 and 50); and up the Strymon were forests that supplied the timber needed to construct transports.

Early, perhaps, in the year 546 B.C., Peisistratus set out for Eretria where he was joined by a host of allies<sup>5</sup>, and landing at Marathon defeated the oligarchs with ease at Pallēnē. For the second time he entered Athens in triumph. His tyranny was at last irresistibly established<sup>6</sup>.

Megacles and the whole Alcmaeonid clan accompanied by not a few of the other nobles fled the country, and the Alcmaeonidae settled, as they had done nearly half a century before, in Phocis<sup>7</sup>. Peisistratus now closed the old oligarchic mint, for henceforth only "owls" were to be the coin of Athens, though the old Eupatrid pieces naturally continued in use beside them.

<sup>1</sup> Cf. Schol. in Aristoph. *Vesp.* 1007. Slaves worked in the Attic mint in the 5th and 4th cent. B.C.

<sup>2</sup> Examples of heads made from the same hub are more difficult to identify with certainty owing to the poor preservation of most of the coins in this group.

<sup>3</sup> Cf. § 40.

<sup>4</sup> Cf. § 30. In Group C fifteen anvil-dies were used in only five years.

<sup>5</sup> Hdt. i, 61. Aristot. *Ath. Pol.* 15.

<sup>6</sup> Peisistratus regained the tyranny shortly before Sardis and the Lydian kingdom fell to Cyrus the Persian in 545 B.C.; for in the year in which Croesus sent his embassy to Hellas he found that the Athenians were, in the words of Hdt.: "oppressed and dispersed by Peisistratus son of Hippocrates who was at that time reigning in Athens.... Croesus was informed that such was at that time the condition of the Athenians" (Hdt. i, 59 and i, 64, 65). Cf. p. 43, note 4 above.

<sup>7</sup> Their coining activities in Phocis will be recounted later, §§ 60-62.

That large quantities of coins were brought back from Paeonia to Athens by the tyrant is proved by a hoard<sup>1</sup> found buried on the Acropolis among the débris that contained the famous statues of the Korai. Thirty-six tetradrachms—of which all but one or two had the Pangaeian ☉—were buried with one Alcmaeonid wheel drachm<sup>2</sup> and fourteen wheel obols<sup>3</sup>, some of the last being nearly contemporary in date with the tetradrachms of Paeonian issue. It has been suggested that these coins formed part of a monetary dedication in one of the temples which stood on the Acropolis before the Persian Wars<sup>4</sup>.

## § 45.

## GROUP F

## THE "IMPERIAL" MINT IN P A E O N I A

After 546 B.C. to ca. 536 B.C.

Tetradrachm anvil-dies	15	Coins . . . . .	21
Tetradrachm punch-dies	20	Number of tetradrachms recorded	26

Types: helmeted head of Athena.

Ry: owl, olive-twig, < ☉ E,

A ☉ E, A ☉ E or A ☉ E.

Pl. VI, A88P96 to Pl. VII, A102P115 (Catalogue Nos. 128 to 148)

When Peisistratus left Thrace for Athens he did not relinquish his hold upon the valuable mines he owned in the Pangaeian Mount, nor did he cease to issue coins in Paeonia. Naturally the coinage of Laurian owls became henceforward far the more abundant of the two issues, but the coarse products of Thracian die-sinkers continued to appear for some years longer. Therefore, before turning to the coinage which Attica produced immediately after the tyrants' return, it is best to consider his second group of Paeonian coins.

The heads of Athena are at first (Pl. VI, A88 to A90) no better than those of the coins of Group E. But presently, as it were in sympathy with the now active Attic mint, some improvement makes itself visible, possibly because die-sinkers were sent out from the home mint, so that Athena might be portrayed in less offensive fashion. But now this second Paeonian issue was supplied with a mark which distinguished it from the issues of the home mint; for on all but the three first dies the "bowl" of Athena's helmet was decorated with a series of dots (Pl. VI, A91, to Pl. VII, A102). These dots, which vary in number from four to ten, seem to represent decorative bronze studs such as actual helmets sometimes bore. Similar studs, and not bronze olive-leaves, were probably fitted into the helmet of the marble statue of Athena (Fig. 40) which Hippias placed in the centre of the gable-group of the temple he built for the goddess in Athens<sup>5</sup>. Though the marble Athena is some twenty years later in date than the coins, the helmets are in both cases of similar pattern.

<sup>1</sup> Svoronos, *J.I.A.N.* i, 1898, p. 367 ff. Pl. IA'; and T. Pl. 3. Beside the coins mentioned there are described and figured a drachma of Cleisthenic period and a tetradrachm of post-Persian-War issue. These, a careful inspection has convinced me, did not form part of the Find. Cf. Appendix, Find no. VII.

<sup>2</sup> Like Pl. IV, δ.

<sup>3</sup> Like Pl. IV, ν and ρ.

<sup>4</sup> B.T.II, i, p. 739, note 2.

<sup>5</sup> Perrot, Chipiez, *Hist. de l'Art*, viii, p. 557, fig. 281.

The owls of this group are, even more than the heads, influenced by the owls upon the coins of the home mint (Group G i)<sup>1</sup>, though the plumage on the Pangaean pieces is generally much coarser. The legends now show both the dotted Paeonian and the plain Attic thêta, the former predominating. As in the preceding groups, so here, the dies were evidently hubbed<sup>2</sup>.

§ 46. It is not easy to guess why Peisistratus continued coining money in Paeonia. Was it simply because silver was more easily transported in coin than in bar form? Or was it because he was accumulating money in the north preparatory to his attack on Sigeum probably about 535 B.C.<sup>3</sup>? The latter purpose may well have accounted for this continuance of a northern mint<sup>4</sup>; but



FIG. 40. Head of Athena from a temple on the Acropolis.

it is noteworthy that the first coins of this Group F followed close upon the heels of the latest coins of Group E. Furthermore, the composition of the hoard of early owl-coins found upon the Acropolis<sup>5</sup> is as follows<sup>6</sup>:

Group E	(Paeonian mint, 555-546 B.C.)	...	17 pieces.
„ F	( „ „ after 546 „ )	...	4 „
„ G i	(Attic „ „ 546 „ )	...	2 „

<sup>1</sup> Cf. § 48.

<sup>2</sup> As for example in the case of Pl. VII, A98 and A99, which both originated from a common Athena-head hub. See §§ 30, 43.

<sup>3</sup> Hdt. v, 94. See especially How and Wells, *Comm. on Hdt.* ii, p. 56, for a clear account of the two Sigeian wars. Their views are shared by Bury, *Hist. of Greece*<sup>2</sup>, p. 196.

<sup>4</sup> No drachmae or small fractions can be assigned to this group. This lack of small change increases the probability of the theory that this issue was intended to form a "war-chest" for the Sigeian campaign.

<sup>5</sup> Cf. § 44.

<sup>6</sup> Besides the coins enumerated there were thirteen other tetradrachms which have suffered so severely from the effects of fire that they cannot be classified. The impression one gathers from their charred remains is that they are nearly all of Group E.

The two coins of Group G i come very early in the series<sup>1</sup> and the conclusion is that the hoard was deposited soon after 546 B.C.; consequently the coins of Group F were likewise struck not long after that date.

Only fifteen anvil-dies are recorded in the group, and, if the issue covered close on ten years, the rate of mintage must have been comparatively slow<sup>2</sup>—slower than in any other group of Peisistratid coins.

A certain mystery must cling to the Thracian issues of the Athenian tyrant; but it seems clear that he ceased to coin money in Paeonia after he had secured a firm footing on both sides of the Hellespont. The elder Miltiades reigned, with the sanction of Peisistratus, over Chersonese<sup>3</sup>, while after 535 B.C., probably, Peisistratus himself held Sigeum on the Asiatic side with a garrison. Thus the influence of Athens was predominant in the north-eastern Aegean.

<sup>1</sup> Catalogue Nos. 149 *b*, 161 *a*.

<sup>2</sup> But cf. § 48 below on total coinage of Groups F and G i.      <sup>3</sup> §§ 107, 109, 110.

## CHAPTER IX

διώκει τὰ κοινὰ πολιτικῶς μᾶλλον ἢ τυραννικῶς.  
ARISTOT. *Ath. Pol.* 14.

§ 47. The great tyrant was now firmly established as head of the Athenian State, which he proceeded to govern with skill and forbearance. While he strengthened his position by alliances, he aimed rather at increasing the trade, power and prestige of Athens than at self-aggrandisement. Like Pericles a century later he beautified the city with temples, for it was Peisistratus who began the temple of Olympian Zeus<sup>1</sup>, and who built a new temple for Athena Parthenos<sup>2</sup> upon the citadel of Athens, not far from the palace of the tyrants which must have stood where afterwards the Propylaea were erected<sup>3</sup>.

For nineteen years, from the date of his triumphant return until his death in 527 B.C., the money of Peisistratus was issued continuously and in great abundance, for he had now at his disposal both his mines in Paeonia and the rich veins of Laureion. Tetradrachms were still struck in far larger quantities than drachms, obols and quarter-obols. For the foreign trade, which received so great a stimulus under the tyrant's rule, the larger coins were most popular and useful; while for small change, used locally, great quantities of the old Eupatrid money were current, and little small change of fresh mintage was required to meet popular demand, thus the drachmae and smaller denominations of this period prove to be rare<sup>4</sup>.

### GROUP G

#### THE "IMPERIAL" MINT IN ATTICA

546 B.C. to 510 B.C.

§ 48.

#### GROUP Gi

#### UNDER PEISISTRATUS

546 B.C. to 527 B.C.

Tetradrachm anvil-dies	42	Coins . . . . .	64
Tetradrachm punch-dies	53	Number of tetradrachms recorded	76

Types: helmeted head of Athena.

R<sub>γ</sub>: owl, olive-twig, ΑΘΕ.

Pl. VII, A103P116 to Pl. X, A144P168 (Catalogue Nos. 149 to 212)

<sup>1</sup> Vitruv. vii, praef. 15. Arist. *Pol.* v, 11, 1313 b, 22.

<sup>2</sup> Dr Buschor, Director of the German Arch. Institute in Athens, in a course of lectures early in 1923, gave a summary of very convincing arguments for the existence of two pre-Cleisthenic Parthenons on the site of the present building, accounting thus for four Parthenons: (i) Apsidal of Solonian date, (ii) Peisistratid, (iii) Cleisthenic, (iv) Periclean. The so-called "Old Hecatompedon" he believes to have been the pre-Persian Erechtheum. His results are shortly to appear in *Ath. Mitt.*

<sup>3</sup> Hdt. v, 65, implies that the palace was upon the Acropolis.

<sup>4</sup> One drachma (Pl. XXII, ζ), two obols (*ibid.* η), three hemiobols (*ibid.* θ) and one tetartermorion (*ibid.* ι), are recorded.

The art of the coins which the Attic mint turned out immediately after the tyrant's return was typically Ionian, and the heads present a parallel with reliefs of the same date preserved, one in the Acropolis Museum (Fig. 41 *b*), the other (Fig. 41 *d*) in the National Museum at Athens. It cannot be denied that both reliefs and coins<sup>1</sup> have a characteristic charm of their own. The heads are small and the profiles delicately drawn, while from their general appearance it is obvious that the earliest coins of this Group G i are the successors of the coins of Group C (Pls. II, III)<sup>2</sup>, for the Paenonian Groups E and F stand in a separate category.

The girls of sixth-century Athens, who served as unconscious models for the statues of the Korai on the Acropolis and for the heads of the virgin-goddess upon the coinage, dressed their hair in a variety of ways; and varied *coiffures* were in fashion at one and the same period<sup>3</sup>. This can be proved from the coins<sup>4</sup>; but it is useless to attempt an arrangement of these coins by *coiffures* as has recently been done<sup>5</sup>.



FIG. 41. *a, c*, tetradrachms of Peisistratus, Group G i. *b*, relief in the Acropolis Museum. *d*, relief depicting wounded hoplite, Athens.

Classification of the "owl-coins" is indeed only possible by a careful study of die-sequences, and by noting series in which the same hub was used to make a number of dies; while the broad lines of artistic development are not to be traced in the modes of dressing the goddess' hair, but in the progress engravers

<sup>1</sup> The specimens figured are A122 (Fig. 41 *a*) and A129 (Fig. 41 *c*) of the Catalogue. Fig. 41 *b* is from a relief representing Athena, Fig. 41 *d* represents a wounded hoplite. Cf. Perrot, Chipiez, *Hist. de l'Art*, viii, p. 649, fig. 333 and p. 621, fig. 314.

<sup>2</sup> This remark applies to the owls as much as to the heads.

<sup>3</sup> As at Syracuse during the fifth century B.C. Compare A. Du Chastel, *Syracuse*, Spink, London, 1896, Pl. 3, 34 and 36, different *coiffures* linked by the same punch-die; similarly Pl. 4, 43 and 44; Pl. 4, 41 and Pl. 5, 60; Pl. 5, 49 and 50.

<sup>4</sup> For example on the tetradrachm, Pl. VII, A106, Athena wears a fringe, and the owl-die (P119) which goes with this head is also used with the obverse A108 on which Athena has close curls (represented by dots) all over her head. Again the head on the die, Pl. VIII, A120, has a row of tight curls over the forehead, while that of A119 has a regular fringe; but they share between them a punch-die (P134).

<sup>5</sup> By the late Monsieur J. Svoronos in his *Trésor des Monn. d'Athènes*, 1923. How completely he has ignored dies is shown by the following instances: he has separated by a wide interval two pieces from the same obverse die, T. Pl. 2, 39 and T. Pl. 5, 35; again he has illustrated the same specimen twice on Pl. 2 (nos. 19 and 36—our no. 51 *a*) ignoring the fact that it passed, after being cleaned and losing some weight, from the Rhusopoulos to the Jameson Collection.

made in depicting the civic badge of Athens—the owl. The earliest owls of the present Group G i (Pl. VII, P116 ff.) are not unlike the later birds of Group C (Pl. III, P45, etc.) which had been engraved ten years before in the same Attic mint. But their character changes gradually, and the birds become half-fledged owlets rather than owls. Legs are long, claws big, and the head disproportionately large; and these characteristics passed on into the following Group G ii.

It is here that a moment's attention must be given to two coins which afford clear proof that the dies were made from hubs. Evidently it sometimes happened that the hub<sup>1</sup> "double-struck" its die, and when this occurred the die was marred by a permanent double-outline of the face, and all coins struck from that die showed the same double-outline. Now in one case (no. 173 of the Catalogue) (Pl. VIII, A119) two specimens<sup>2</sup> are extant struck from the same die and both show such an identical double-outline, whence it is clear that the coins were not double-struck by their dies, but that the die bore a permanent double-striking due to faulty hubbing.

Forty-two anvil-dies in this issue seem to cover a period of nineteen years. But during a portion of those nineteen years Peisistratus was coining in Paonia as well as in Attica<sup>3</sup>, and in the former place there were recorded the use of fifteen anvil-dies. Thus the total number of anvil-dies used during the period was fifty-seven—once again three per annum<sup>4</sup>.

§ 49. It has been claimed<sup>5</sup> that Peisistratus *with his new money* introduced a coin-standard slightly heavier than that of the money of the older Eupatrid mint, of which the didrachms had weighed some 8.42 grammes (130 grains); but the coins do not entirely support this conjecture. The tyrant did not increase the standard when he first issued his coins in 561 B.C.; but not long after his return in 546 B.C. the standard was improved. The bulk of the Eupatrid didrachms weigh 8.40 to 8.60 grammes<sup>6</sup> (= a drachma of 4.20 to 4.30 grammes), while most of the tetradrachms first issued by Peisistratus (Group C) and of his Paonian Groups E and F weigh 16.80 to 17.20 grammes; the majority of those of Group G i, struck after 546 B.C., however, weigh from 16.8 to 17.40 grammes (= a drachma of 4.20 to 4.35 grammes).

This small but definite rise<sup>7</sup> in the weight-standard is likewise observable in the coinage of Hippias, an increase which may conceivably have been the reflex of political and economic changes which were taking place in Asia Minor.

<sup>1</sup> See § 30 above for an explanation of the hubbing process.

<sup>2</sup> The sale-catalogues in which both specimens figure are cited in our Catalogue below, nos. 119 *a* and *b*.

<sup>3</sup> § 45 f.

<sup>4</sup> Group C showed the same proportion, and part of Group D (Eupatrid mint) a proportion of  $1\frac{1}{2}$  didrachm dies per annum. But the life of a didrachm die must have been double the life of a tetradrachm die, for the former endured fewer and less hard blows of the hammer. Cf. § 30.

<sup>5</sup> Professor P. Gardner, *Hist. Ancient Coinage*, 1918, p. 156; O. Viedebantt, *Antike Gewichtsnormen u. Münzf.* 1923, p. 38.

<sup>6</sup> See the tables of frequency, § 101.

<sup>7</sup> A possible reason for the increase is considered below, § 100.

## § 50.

## GROUP G ii

THE "IMPERIAL" MINT IN ATTICA  
UNDER HIPPIAS

527 B.C. to 510 B.C.

Tetradrachm anvil-dies	40	Coins	71
Tetradrachm punch-dies	62	Number of tetradrachms recorded	85

Types: helmeted head of Athena.

R: owl, olive-twigg,  $\Lambda\Theta E$ .

Pl. X, A145P169 to Pl. XII, A184P230 (Catalogue Nos. 213 to 283)

There is no hard and fast line which divides the coins of Group G ii from those of Group G i; for just as Hippias at first carried on the policy, domestic and foreign, of his father, so he at first made no alteration whatever in the "Imperial" mint which had now nineteen continuous years of tradition behind it. But Hippias differed from Peisistratus in his tastes; for, whereas the father had been a man of action yet gifted with a refined taste, appreciative of Ionian art and the literature which the Eastern Greeks cultivated<sup>1</sup>, the son was prone to favour the art of the Dorians as well as their vices<sup>2</sup>. The Dorising tendency appears both in the sculpture and in the types of heads upon the coinage. The Argive School probably influenced the art of the pedimental sculptures erected in the gable of the enlarged temple Hippias built upon the Acropolis<sup>3</sup>, for in that gable appeared the nude figures of giants against whom the gods were fighting, and nude figures were foreign to the archaic Ionian school of art.

The heads upon the coins in Group G ii are distinctly larger than those of Group G i—often too large for the smallish thick flans of the coins—and the bigger faces are often devoid of that cheerful archaic smile which marked the heads on earlier coins.

The owls of this group have at first the same characteristics<sup>4</sup> as the birds of Group G i, but in the latter years of the tyrant's reign they display a marked improvement. Their heads assume more moderate proportions, legs grow shorter, tails somewhat longer (Pl. XI, P206 ff.), in fact the die-sinkers who worked between 515 and 510 B.C. in the "Imperial" Attic mint came under the influence of the more skilful artists whom Hippias was employing in the new mint which he had opened, probably in Athens itself, and which calls for consideration in its proper place<sup>5</sup>.

Records are available of forty anvil-dies in this Group G ii, while in the new mint, just referred to, coins struck from fourteen anvil-dies survive; thus during

<sup>1</sup> Cicero, *de Orat.* iii, 34; Aelian, *Var. Hist.* xiii, 14; Suidas, *s.v.* Ὀμηρος.

<sup>2</sup> He at least condoned the Dorian vices of his brother and the nobles of the period. Cf. Thuc. vi, 54. The tales of Plutarch, *v. Sol.* 1, are probably the figments of a decadent age which misrepresented even the splendid friendship of Achilles and Patroclus.

<sup>3</sup> Cf. § 45. The head of Athena from the centre of the gable group is shown in Fig. 40 above. The Argive School of Sculpture attained its climax in the production of the figures from the temple of Aphaia in Aegina.

<sup>4</sup> As noted in § 48.

<sup>5</sup> § 54 f. below.

the seventeen years of the younger tyrant's reign a total number of fifty-four anvil-dies are known to have been employed. This points to an average of three anvil-dies per annum, a proportion which, as already noted, is maintained consistently throughout all issues between 561 and 480 B.C.<sup>1</sup>

§ 51. That Hippias coined in two different mints can be ascertained from a careful study of his money; and, while his most "showy" pieces were probably struck in Athens, the bulk of his tetradrachms issued from the mint which his father had established apparently outside the city in competition with the older "Civil" Eupatrid mint. The estates of Peisistratus lay at Brauron. Thence the mining region of Laureion was more easily accessible than it was from Athens. The evidence available points to the fact that the strength of the tyrant had lain in his wealth of silver, and to the probability of his having coined that silver almost at the mine-head, somewhere in Laureiotikē. In support of this probability Monsieur Svoronos<sup>2</sup> advanced some valuable suggestions, and, though I feel compelled to regard with scepticism the conclusions regarding Cabeiric worship at which he was aiming, his arguments *en passant* concerning the Athenian mint are of definite value.

It is well to bear in mind that an ancient mint workshop could be accommodated in any wooden shanty, for the sole properties it required were a clay-built furnace for charcoal, anvils, dies, hammers, tongs, a balance and weights. In considering the evidence for the site of the Attic mint it is necessary to work backwards and to glance first at the later periods.

In the Hellenistic age the mint, from which issued the late Athenian coins of "spread fabric," was apparently situated in Laureiotikē and perhaps at Sunium, for, when the great mining revolt took place in Attica between 104 and 102 B.C., the slaves of Laureion armed and seized the acropolis of Sunium<sup>3</sup> and there issued a series of silver coins of normal type but devoid of ΑΘΕ and without the names of magistrates. Instead these coins bore two monograms which seem to resolve themselves into the words ΛΑΥΡΙΑ Μ[Ε]ΤΑΛΛΑ<sup>4</sup>. When the slaves had been defeated and slaughtered the Athenian people regained control of mines and mint and issued possibly on this occasion certain coins with the significant legend ΑΘΕ[ναίων] Ο ΔΗΜΟΣ<sup>5</sup>.

Now it is likely that the mint, if it was in the Laureiotikē, adjoined the treasury for bar-silver, and this treasury has been identified by Svoronos at Sunium. Built into the uppermost fortification wall which defended the precinct of

<sup>1</sup> Cf. p. 44, note 1 and p. 63, note 4, also p. 88, note 2; § 76, also Table, § 85.

<sup>2</sup> *J.I.A.N.* xvii, 1915, p. 53 ff. and xviii, 1916-7, pp. 109-132. Much in the latter paper is entirely irrelevant to our present consideration.

<sup>3</sup> Poseidonius *ap.* Athen. xi, 272 c-f. *F.H.G.* iii, 264, 35.

<sup>4</sup> *J.I.A.N.* xvii, 1915, p. 60 ff. Svoronos also suggests that the letters and syllables appearing on the "spread" tetradrachms refer to the names of shafts whence had come the silver itself (*l.c.* xviii, 1916-7, p. 119). The names of nineteen of these shafts are known from inscriptions, many more being unknown by name. Of the nineteen shaft-names no less than fourteen appear in abbreviated form on the coins. Five do not appear as far as the published numismatic records go. Twenty-two other abbreviated names, which may correspond to some of the many shafts of which the appellations are unknown, occur upon the coins.

<sup>5</sup> *l.c.* 1915, p. 69.

Poseidon there still stand the lower courses of a strong tower which was cleared out by M. Staïs in 1916<sup>1</sup>. Within was found a bronze pinion-wheel<sup>2</sup>, designed to fit the end of a round shaft and toothed so as to engage in a ratchet. Clearly the tower, of which the foundations are very deep, contained some mechanism designed to facilitate the raising and lowering of heavy weights like bars of silver. But besides this pinion-wheel there was found a number of spherical stone weights, mainly fragmentary. Indeed in the spring of 1923 I discovered several of these fragments still lying upon the ground within the tower. Fortunately three of these balls, preserved in the Athenian National Museum, are still



FIG. 42. Stone weight of 40 minae from Sunium.

unbroken, though centuries in the soil have impaired their surface and caused a certain depreciation in their weight. Owing to some grave oversight Svoronos has cited the weights of these marble balls wrongly in his paper<sup>3</sup> and I found it necessary to have the three perfect specimens weighed afresh. Their correct weights are as follows:

Svoronos' No.	1 (Fig. 42)	inscribed	ΔΔΔΔ ΙΩΙΑ	i.e. 40 minae; 16,100 grammes.
"	"	9 (Fig. 43 <i>b</i> )	"	ΔΠ " 15 " ; 4,400 "
"	"	10 (Fig. 43 <i>a</i> )	"	ΔΠ " 15 " ; 4,500 "

<sup>1</sup> 'Εφ. Ἀρχ. 1917, p. 189. Staïs' explanation of the tower as a granary is disposed of by Svoronos, *l.c.* The latter points out the obvious facts that grain requires a barn not a tower with a deep basement; that grain is not *weighed* by monetary minae, but is measured; that the handling of corn-sacks does not normally require the assistance of machinery.

<sup>2</sup> *J.I.A.N.* xviii, 1916-7, p. 122, figs. 53, 54.

<sup>3</sup> *l.c.* p. 122.

In the long series of magistrates' names which appear upon the second century Athenian money the name of Ζώιλος is familiar as that both of a first and of a third mint magistrate<sup>1</sup>. Here it is repeated upon the stone weight<sup>2</sup>. One mina contained 100 drachmae; 40 minae therefore 4000 drachmae or 1000 tetradrachms. Our weight No. 1 (Fig. 42) inscribed ΔΔΔΔ ΙΩΙΑ thus represents 1000 tetradrachms of 16·1 grammes each, and is therefore, allowing for depreciation, a good approximate coin-weight, since tetradrachms of the second century B.C. weigh about 16·7 grammes.

The two other weights (Fig. 43 *a, b*) bear no name and would seem to be of a rather later age. The better preserved specimen weighs 4500 grammes and is marked ΔΠ or 15 minae. This gives a mina of 300 grammes—a mina in fact



FIG. 43. Stone weights, each of 15 minae, from Sunium.

of late date in use when the Attic drachm had been reduced to the Roman denarius standard, for there is abundant evidence that the full mina of that late period weighed 333·3 grammes<sup>3</sup>.

In Hellenistic times a treasury for bar silver was in the Sunian fortress, and the mint perhaps beside it. But what of classical times? The strong tower to which reference has been made is not of Hellenistic date, for it was built when the Athenians fortified Sunium during the Peloponnesian War in the fifth century B.C.<sup>4</sup>—built from the first, it would seem, as a treasure-house, for there was in all the Laurian district no other place where silver could have been so

<sup>1</sup> B.M.C. *Attica*, p. 56, 413; p. 73, 497. It should, however, be noted that on the coins the name begins with Ζ, on the weight with Ι, consequently the latter might be rather later than the former.

<sup>2</sup> As well as on three other fragmentary weights (Svoronos, *l.c.*). It is clear that we are dealing with coin and not with market weights, for the market mina scaled 138 money drachmae, the silver mina 100 such drachmae.

<sup>3</sup> O. Viedebant, *Antike Gewichtsn. u. Münzf.* 1923, p. 80 ff.

<sup>4</sup> In 413–2 B.C.; Thuc. viii, 4.

safely stored and whence coined money would be so easily carried by sea to Piraeus. The great walls of Sunium were built against the Lacedaemonian invader, for when the Spartans occupied Decelea in 413 B.C. they struck a threefold blow at Athens. They stopped her peasantry from cultivating the soil, they cut off her land communications with Euboea and the north, and they threatened the mining district striking at the very "sinews of war." Slaves deserted the mines in great numbers. The Athenians strove to avert an actual attack upon the district by erecting a long wall on the high ground north of Thoricus; all to no purpose, for Athens lost her silver. A mint set up in the city had first to coin gold from the sacred treasures of Athena<sup>1</sup>, and then in 406-5 B.C. the wretched copper tetradrachms at which Aristophanes jeered<sup>2</sup>:

It has often struck our notice that the course our city runs  
Is the same towards men and money—she has true and worthy sons:  
She has good and ancient silver, she has good and recent gold.  
These are coins untouched with alloys; everywhere their fame is told;  
Not all Hellas holds their equal, not all Barbary far and near,  
Gold or silver, each well minted, tested each and ringing clear.  
Yet we never use them! Others always pass from hand to hand,  
Sorry brass just struck last week and branded with a wretched brand.

As it is likely that the Laurian treasury was at Sunium and the chief Attic mint perhaps beside it in the fifth century, it is worth considering whether a mint and treasury may not in the sixth century B.C. have been at the same place.

§ 52. When the Athenians after Salamis and Plataea returned to their desolated country they naturally endeavoured to re-establish all their old institutions. It is therefore probable that if they placed a mint and treasury at Sunium they did so because these had been at Sunium before the Persian Invasion. If this was the case one must, owing to the continuous sequence of the coins themselves, ascribe to Peisistratus the foundation of the Sunian mint close to the source of his silver. His other mint<sup>3</sup> in Paconia, as already noted, had operated in a mining region. Was he in the Pangaeon Mount following the practice he had initiated in Laureiotikē, a practice which he continued after his return from exile?

Before the Persians destroyed the sanctuaries of Sunium there had stood, upon the lower of the two hills which form the promontory, a temple and temenos of Athena, the goddess under whose special patronage Peisistratus had placed himself. Within this temenos, which contained a small shrine as well as the temple, there was found a beautiful relief of a youth placing a crown upon his head (Fig. 44 *b*)<sup>4</sup>. This relief is not, as Staïs and Svoronos claim<sup>5</sup>, of post-

<sup>1</sup> Cf. A. M. Woodward in *N.C.* 1911, p. 351.

<sup>2</sup> *Ran.* 718 f. The verses are from Professor G. Murray's rendering.

<sup>3</sup> §§ 40 to 43 above.

<sup>4</sup> The relief is in the National Museum at Athens.

<sup>5</sup> *J.I.A.N.* xvii, 1915, p. 58. It is only necessary to compare the profile of the charming head of a youth found in the Persian débris of the Acropolis (our Fig. 44 *a*) (Perrot, Chipiez, *Hist. de l'Art*, viii, Pl. XIV, p. 644) to see that Sunian relief and Athenian head are contemporary. This opinion is held by Mr Wace of the British School in Athens, as also by Dr Buschor of the German Archaeological Institute there.

Persian, but rather of pre-Persian date, and is one of the finest examples of Attic art of the second decade of the fifth century B.C. In the head are drilled nine holes intended to secure a wreath, perhaps of silver<sup>1</sup>, wherewith the youth once crowned himself. This is no mere funeral stele, but a work of art of highest merit once set up within the sacred temenos of Athena, perhaps in or beside the other small shrine, foundations of which are to be seen beside those of the large Ionic temple of Athena.



a



b

FIG. 44. a, Head of youth in the Acropolis Museum. b, The Stephanephoros from Sunium.

It seems indeed well established that the youth is the *Stephanēphoros Hērōs*, the nameless “crown-bearing hero” of the lexicographers, who, as we know from inscriptions, gave his name to the Athenian mint<sup>2</sup>.

<sup>1</sup> Had the wreath been of bronze it is unlikely that it would have been so firmly secured.

<sup>2</sup> *I.G.* II<sup>1</sup>, ii, 466, 27; ii, 467, 30; ii, 467, 40; ii, 468, 24. All contain the phrase ἀπὸ δραχμῶν Στεφανηφόρου. *I.G.* II<sup>1</sup>, ii, 476, 29 ff. runs ἀγέτω δὲ καὶ ἡ μνᾶ ἡ ἐμπορικὴ Στε(φανηφόρου δραχ)μᾶς ἑκατὸν τριάκοντα καὶ ὀκτὼ πρὸς τὰ στάθμια τὰ ἐν τῷ ἀργυροκοπ(είῳ καὶ (ροπή)ν (Στε)φανηφόρου δραχμᾶς δεκαδύο, κ.τ.λ. Antiphon in *Nicod. ap.* Harpocration: Στεφανηφόρον ἡρώων, ὡς εἰοικεν, ἦν ἐν ταῖς Ἀθήναις. Suidas repeats this *s.v.* Στεφανηφόρος. Moschopoulos wrote (twelfth—thirteenth century): Στεφανηφόρος, ὁ στέφανον ἐπιφερόμενος. Καὶ ὄνομα κύριον. Οὐ δὲ ἡρώων, φασίν, ἐν Ἀθήναις ἦν. Note that these Lexicographers qualify their statement by ὡς εἰοικεν and by φασίν. That the heroon was in Athens itself cannot be certainly established. Further “Athens” in such a case may mean “Attica” as e.g. Suidas, *s.v.* Μαραθῶν, τόπος Ἀθήνησιν; and Hesych. *s.v.* Λαύρεια· τὰ Ἀθήνησι χρύσεια (*sic!*) μέταλλα λεγόμενα. But it is not unlikely that shrines of the hero may have existed both at Sunium and in the city of Athens, and that the mint in each place was under his protection.

§ 53. With the help of the foregoing evidence it is now possible briefly to summarize the history of the mints which coined Athenian money.

- ATHENS (i) The pre-Solonian mint must have been in the city, and after Solon's reforms continued as the "Civic" Eupatrid mint down to 546 B.C., when Peisistratus closed it (§§ 5-25, 31-38).
- LAUREIOTIKE (ii) Peisistratus about 561 B.C. opened an "Imperial" mint near the mines, possibly in the precinct of Sunian Athena, where the bar-silver may have been stored, and he perhaps placed his mint under the protection of the local hero Stephanēphoros (§§ 27-30, 52).
- PAEONIA (iii) On his expulsion the tyrant moved this "Imperial" mint to the mines of Mount Pangaion (§§ 40-46); and on his return in 546 B.C. re-established it in its former home. This continued to be the chief Athenian mint under Peisistratus, Hippias and the Democracy set up by Cleisthenes (§§ 47-50, 76, 79); and in or near the shrine of the protecting hero a devotee set up between 490 and 480 B.C. the relief of Stephanēphoros (Fig. 44).
- ATHENS (v) But Hippias about 526 B.C. started a new "Civic" mint, situated probably upon the Acropolis, near his palace, a mint from which issued large coins almost medallic in character. During the brief oligarchy of Isagoras, 510-507 B.C., and under the subsequent democracy this "civic" mint continued the issue of beautiful coins (§§ 54-56, 66-70, 74-75).
- DELPHI (vi) The Eupatrid exiles coined electrum and silver in Phocis shortly before 510 B.C. (§§ 60-63).
- LAUREIOTIKE (vii) The Persians destroyed both the Athenian and the Laurian mint. When  
*and*  
ATHENS the Athenians returned to their country it became clear that the precinct of Poseidon Suniaratos, standing on higher ground than the precinct of Athena, afforded the safest depository for bar-silver in all Laureiotikē. Possibly minting continued there<sup>1</sup>; certainly a strong treasure-house was erected when the defensive wall was built round Sunium in 413-12 B.C. (§ 51).
- ATHENS (viii) A mint, perhaps in the Parthenon itself, coined gold in 407-6 B.C., and a mint in the city of Athens produced copper "money of necessity" in 405 B.C. Perhaps, as the old mint had been under the protection of Stephanēphoros, a shrine of that hero in Athens now accommodated mint and official weights and measures<sup>2</sup>.
- LAUREIOTIKE (ix) The Laurian or Sunian mint may once again have produced the  
*and*  
ATHENS series of coarse fourth century Athenian silver coins. But the gold issue of 339 B.C. would be struck in Athens, as well as the fourth century copper coins<sup>3</sup>.
- LAUREIOTIKE (x) The New Series of "spread" Athenian coins of 229-31 B.C. were probably minted at Sunium, where the treasury stood as is evidenced by the machinery, the weights and the coinage of the slaves' revolt (§ 51).

Thus the Laurian mint founded by Peisistratus seems to have worked, with sundry interruptions, for over five centuries.

<sup>1</sup> Or it may be that a proper Corpus of the fifth century coins of Athens, a Corpus in which they were arranged by die-sequences, would reveal the existence of two contemporary mints at Athens and at Sunium.

<sup>2</sup> Cf. note 2, p. 69.

<sup>3</sup> For this gold see *Z.f.N.* xxi, p. 13 f.; for the bronze, *B.M.C. Attica*, p. 20, No. 209 ff. Further researches alone can decide whether the silver small change of the fifth and fourth centuries was coined at Athens or Sunium, or at both mints.

## CHAPTER X

νόφ δὲ πλοῦτον ἄγει.  
PINDAR, *Pyth.* vi, 47.

§ 54. Athenians who reflected calmly on their past history looked back upon the reign of Peisistratus as “the age of gold<sup>1</sup>,” in exactly the same way as Romans of the first century A.D. looked back upon the reign of Augustus. And, if it is just to compare the great Athenian tyrant with the great Roman *Princeps*, one may with equal force compare Hippias with the emperor Nero. Both princes began their reigns under the happiest auspices; both, through different causes, became tyrannical and overbearing; both were driven from their thrones by the armed forces of rivals. The comparison extends even into the realm of art, of which Hippias like Nero was ever a keen patron. To his reign we must ascribe the use on the acropolis of marble instead of poros-stone for building<sup>2</sup> and the vases produced by the masters of B.F. technique. Moreover, in the sphere of coinage both princes struck the most effective pieces ever issued from their respective mints of Rome and Athens. No Roman money equalled in splendour the sestertii of Nero<sup>3</sup>, and Hippias issued from his civic mint the finest medallion coins that were ever produced in Athens.

A glance first at the coins of Group G ii (Pls. X to XII) and then at those of Group H (Pls. XIII, XIV) is sufficient to bring home the fact that the two groups are the products of different mints, a point noted by some numismatists<sup>4</sup>.

Group G ii has been accounted for as the ordinary issue of Hippias coined probably in Laureiotikē, but Group H is a special issue from dies of the highest artistic merit produced—one is almost driven to the conclusion—for some special occasion or occasions. The tyrant’s interests centred around the Acropolis where he glorified Athena by the erection of a new temple in marble—Athena whose worship reached a climax every fourth year in the celebration of the

<sup>1</sup> Aristot. *Ath. Pol.* 16, 7.

<sup>2</sup> The reconstruction in marble of the temple known as Doerpfeld’s “Hecatompædon” (close to the Erechtheum) with its marble gable-groups and frieze was the work of Hippias, not of Peisistratus.

<sup>3</sup> H. Mattingly, *B.M.C. Roman Emp.* i, Pl. 42, 4, 5, 6; Pl. 48, 1.

<sup>4</sup> They have consequently suggested that our group H was issued by Peisistratus in Eretria. This suggestion, however, rests on a false premise which assumes the coinage of the restored Athenian oligarchs, issued 510 to 507 B.C., to be Eretrian, whereas it is, as will presently appear (§ 65 ff.), of Athenian mintage. There is in any case no evidence that Peisistratus stayed long enough in Eretria to coin a large quantity of money. Cf. Earle Fox in *Corolla Num.* p. 44 f. The credibility of his theory of “anvil-struck,” by contrast with “punch-struck,” coins has been disproved by Hill, *N.C.* 1922, p. 31, note 72.

Greater Panathenaïc festival<sup>1</sup>. Potters and painters put the best of their work into the amphorae, containing the sacred oil, given as prizes in the games; and it seems not unlikely that Hippias called upon the most skilful engravers to prepare dies for a medallic issue of tetradrachms which were put into circulation at the time of the festival. Of his personal interest in the coinage of his time there is, indeed, a written record<sup>2</sup>, and certain peculiarities of these tetradrachms strengthen the supposition that they are in the nature of a Panathenaïc issue.

## § 55.

## GROUP H

## THE "CIVIC" MINT

Between 527 B.C. and 510 B.C.

Tetradrachm anvil-dies	14	Coins . . . . .	22
Tetradrachm punch-dies	20	Number of tetradrachms recorded	38

Types: helmeted head of Athena.

R: owl, olive-twig (or crescent).

ΑΘΕ, ΕΘΑ, ΑΘΕ or ΕΘΑ

Pl. XIII, A185P231 to Pl. XIV, A198P250 (Catalogue Nos. 284 to 305)

In this group it seems desirable to examine a few of the dies in some detail. Considering the anvil-dies first, it should be noted that the two earliest (Pl. XIII, A185, A186) betray modelling and drawing akin to that of the first coins of Group G ii (Pl. X, A145 to A147); eyes and hair, for instance, are depicted in the same manner. Again the later dies of Group H (Pl. XIII, A196; Pl. XIV, A197) are in the same artistic tradition as the last dies of Group G ii (Pl. XII, A181, A182). But in both cases the coins of Group H are far superior in technique and style. The helmets worn by all the Athenas of this group are, like the features, far more carefully and effectively treated than the helmets on contemporary coins from the Laurian mint, and the crests are often completely preserved upon the flans. While A185, A191 and A197 are in this respect remarkable, the most striking coins of all came from the anvil-die A198. The complete design is not preserved upon either of the two extant specimens from this die<sup>3</sup>; but fortunately, since one coin supplies all that is lacking on the other, it is possible from the two to reconstruct the perfect design of the die (Fig. 45). The engraver seems to have come under the influence of the vase-painters of the period, for on this alone of all surviving Athenian silver coins the goddess wears a helmet with a tall crest-support raising the crest above the bowl of the



FIG. 45. Tetradrachm,  
time of Hippias,  
Group H.

<sup>1</sup> Harmodius and Aristogeiton, it seems, added insult to injury by planning their attack upon Hippias and Hipparchus at the time of the festival in 514 B.C. Their conception was indeed typically Greek for they planned to strike the tyrants when their *ἄβρις* as marshals of the procession seemed at its height.

<sup>2</sup> Pseudo-Aristot. *Econom.* 1347<sup>a</sup>, 8. Of this more below, § 58.

<sup>3</sup> Both coins are in the British Museum.

helmet. On B.F. vases Athena is rarely seen with a helmet of any other type than this, but for a coin-die the design was unpractical since the crest would tend to miss the flan altogether when the coin was struck. The pictorial effect of the die is enhanced by the presence of serpents at Athena's shoulders, serpents that are obviously part of the aegis which hangs across her chest (cf. Figs. 28, 30 above).

The influence of Doric art during the reign of Hippias has been mentioned<sup>1</sup>, and by the help of the fine coins of Group H we are now enabled to date some Athenian bas-reliefs with certainty to this reign. In Fig. 46 I have placed side by side a coin from anvil-die A197 (Fig. 46 *a*), a photograph of part of a funeral stele (Fig. 46 *b*)<sup>2</sup> and of the head of one of the epheboi (Fig. 46 *c*) from a statue-base recently discovered in the wall of Themistocles<sup>3</sup>. The two last monuments are both preserved in the National Museum at Athens. There can be little doubt that all three of these heads are products of the same artistic tradition;



FIG. 46. *a*, Tetradrachm of Hippias, Group H. *b*, Relief of athlete, Athens. *c*, Head of athlete on statue-base from the wall of Themistocles.

stele and statue-base must in consequence be regarded as belonging to the latter part of Hippias' reign.

The owls in this Group H are as diverse in appearance as are the heads of Athena. The first noteworthy point is that upon a number of coins they are turned, not to the right but to the left (Pl. XIII, dies P233 to P237, P245), a peculiarity confined to this one group<sup>4</sup>. The birds on the first dies (P231, P232) are reminiscent of the vase-painters' style and bear no resemblance to those on the coins from the Laurian mint; while most of the later owls of the group are more true to life than any owl on sixth century coins, the bird on die P248 being of special merit.

Upon three dies, which bear an owl turned to the left, there is placed behind the bird's head instead of the usual olive-twig a crescent moon, its horns turned

<sup>1</sup> § 50.

<sup>2</sup> Perrot, Chipiez, *Hist. de l'Art*, viii, p. 664, fig. 342. The youth holds a discus upon his left shoulder.

<sup>3</sup> *B.C.H.* 1922, Pl. II and *J.H.S.* 1922, Pl. VI (*a*). The head is that of the second figure from the right.

<sup>4</sup> Two coins on Pl. XXIII, 14 and 15, are no exception to this rule, for they are not Athenian but crude, barbarous imitations.

upward (Pl. XIII, P233 to P235)<sup>1</sup>. All but four punch-dies<sup>2</sup> have the olive-twig either hanging down from an upper corner or sprouting up from the ground (P239, P240, P242, P250). Some of the former (P246 to P248) are branches, rather than twigs, bearing three berries and four leaves. Where the twigs grow below instead of above the owl their position seems occasioned merely by the disposal of the legend which is often placed differently from the legends upon the ordinary Laurian coinage of the time. Four punch-dies have ⊕ instead of the normal ⊙ in their inscriptions, a point which has misled some scholars into regarding these masterpieces of sixth century art as the earliest Athenian coins. Apart from its absurdity such an argument ignores the fact that both ⊙ and ⊕ occur upon the François vase<sup>3</sup>, ⊙ only upon the Burgon amphora<sup>4</sup> and ⊕ in the inscription wherein Hippias' son Peisistratus recorded a dedication to Pythian Apollo<sup>5</sup> about 520 to 510 B.C. Clearly both forms of the letter existed side by side throughout the sixth century.

§ 56. If this coinage is in any sense of a Panathenaïc character there is need for a consideration of the four festivals of the Greater Panathenaia held during the reign of Hippias. These fell in the years 526, 522, 518 and 514 B.C. Now the issues of that tyrant from his Laurian mint (Group G ii) have been classified independently by hub and die sequences. The first and last coins of the civic mint betray in each case the same artistic tradition as the first and last coins of the Laurian<sup>6</sup>. As Hippias succeeded his father in 527 B.C. we must date the first die of Group H (A185) about 526 B.C.; as he lost his throne in 510 B.C. the latest dies of the group (A197, A198) must have been made before that year. Thus it becomes possible to suggest a distribution of the fourteen anvil- and twenty punch-dies of the group between the four festivals, as follows:

Greater Panathenaia of B.C.	Anvils	No.	Punches	No.	Characteristics
526	A185, A186	2	P231, P232	2	Owl r. low relief
522	A187 to A190	4	P233 to P235	3	Owl l. crescent in field
518	A191 to A194	4	P236 to P243	8	Heads in high relief, ⊕ occurs
514	A195 to A198	4	P244 to P250	7	High-water mark of artistic achievement

<sup>1</sup> Since the moon in its third, not in its first, quarter was definitely linked with the Greater Panathenaia, the crescent upon these coins may suggest that the tetradrachms under discussion are part of a festival coinage. Some thirty years later, indeed, the waning moon in its third quarter became a permanent feature of the money of Athens. But this must be considered in a later chapter (§ 79). In the time of Hippias astronomical accuracy, which would demand a crescent placed ☾, gave way to decorative effect, which filled a void in the field of the design by a moon ☽.

<sup>2</sup> The four without twigs are P233 to P235, P236.

<sup>3</sup> First half of the sixth century B.C.

<sup>4</sup> *Ca.* 560 B.C.

<sup>5</sup> Roehl, *Imag. Inscr. Gr.* 1907, p. 72, 21.

<sup>6</sup> As pointed out in § 55.

The coins fall naturally into such a scheme, which may, however, be modified by the future discovery of further dies of the period. As the scheme stands it appears as though the tyrant's experiment of a medallic coinage for the festival of 526 B.C. met with such success that greater numbers of tetradrachms were struck for subsequent festivals. Dr Head claimed that "the connexion of Athenian coin types with the Panathenaea is well known<sup>1</sup>"; and if this cannot be said of all Athenian types, it may perhaps be claimed as true of the sixth century issues of the civic mint of Athens (Groups H and L)<sup>2</sup>.

The dies of Group H seem to have been made from hubs less frequently than those of the "Imperial" mint<sup>3</sup>, though A196 and A197, as well as several punch-dies<sup>4</sup>, appear to have been "fathered" by the same hub.

In one particular the whole of this group is distinguished from the ordinary Peisistratid issues, for the coins are struck upon broad and thinnish flans, and have either flat or bevelled edges surrounding their reverse designs. The mint technique which produced this type of coin has recently been so lucidly explained by Dr Hill<sup>5</sup>, that there is no occasion to repeat his words. It is, however, worth noting that coins of this fabric are confined to a period between 526 and 500 B.C. Handsome though they were in appearance, they proved too expensive in dies which soon fractured under the strain of striking so large a surface of metal. In the "Imperial" mint of the Laurian district coins of this type were never struck<sup>6</sup>.

Five coins of Group H come from the Taranto Hoard<sup>7</sup>, which was buried before 500 B.C., and which contained a large number of the thin, spread-fabric coins of Sybaris, Croton, Poseidonia and Metapontum. The association of coins in this hoard, has perhaps, as pointed out by M. Babelon<sup>8</sup>, a mercantile significance. In any case the handsome appearance of large, thin coins of Magna Graecian cities, such as made their way at times to Athens, possibly suggested to the artificers employed by Hippias the idea of producing coins with a large flan. The earliest coins of these Western Hellenic states must certainly have been anterior in date<sup>9</sup> to the time when Hippias succeeded his father in the tyranny.

Of the "civic" mint at this period there are no drachmae extant, but of smaller fractions there were issued a few obols and half-obols (Pl. XXII,  $\nu$ ,  $\xi$ )

<sup>1</sup> *H.N.*<sup>2</sup>, p. 370.

<sup>2</sup> For Group L cf. § 74 below.

<sup>3</sup> Cf. §§ 30 and 48 for examples of dies from the same hub.

<sup>4</sup> E.g. P231, P232; P238, P239; P243, P249. <sup>5</sup> *N.C.* 1922, p. 30 ff.

<sup>6</sup> It is hardly necessary to point out the most unsatisfactory results obtained by the late M. Svoronos in his attempted arrangement of early Athenian coins (*Trésor des Monn. d'Athènes*, Munich, 1923, Pls. 6, 7, 8 in particular), for his work is based, not upon the study of dies, but upon conjecture. Misled by the crescent he actually dates such pieces as our Pl. XIII, P233 to P235, to 490 B.C. As the result of his hypothetical arrangement he finds himself with a period of 20 years (510-490 B.C.) which are represented by *only five tetradrachm anvil-dies* (Svor. T. Pls. 7, 9, 10, 11 and 12, same die; 13, 14 and 15, same die); i.e. one die to four years! In actual fact, as already indicated, the true proportion was one of about three anvil-dies per annum. § 85 below.

<sup>7</sup> Cf. Appendix, Hoard No. VIII.

<sup>8</sup> *Rev. Num.* 1912, p. 37 ff.

<sup>9</sup> Cf. *H.N.*<sup>2</sup>, pp. 75, 80, 84, 95.

all with the owl turned to left and resembling the tetradrachm A196P245 on Pl. XIII. Perhaps these are all to be dated to the year 514 B.C.

§ 57. Interesting too is an Attic obol (Pl. XXII, π)<sup>1</sup> with Athenian types, but with the olive-twigg replaced by an ear of corn and with the legend ΗΙΠ in place of ΑΘΕ. Monsieur Babelon, who first published the coin, was inclined to assign it to the Thracian Chersonese<sup>2</sup>; but it seems most unlikely that the strained relations which existed between the Philaïd Athenian tyrants of that region and the Peisistratidae would have permitted Miltiades or Stesagoras to place the name of Hippias upon a coin. The fabric of the obol is typically Attic, and it is not unlikely that Hippias opened a mint, which would perhaps coin only small change, at Eleusis<sup>3</sup>. There the ear of corn would be the obvious substitute for the Athenian olive-twigg<sup>4</sup>; and there the tyrant might perhaps place his name upon his money, an act which in the city itself would have given needless offence<sup>5</sup>.

The tyrant may have given the right of issuing small change to certain Attic townships, for beside the Eleusinian obol, if such it is, of Hippias we may place another little coin, a half-obol<sup>6</sup> (Pl. XXII, ρ), which has upon the obverse a female head turned to the left, unhelmeted, and representing perhaps Athena Ergane. On the reverse is an owl to left resembling the bird upon certain Hippian tetradrachms (Pl. XIII, P233 to P236); over its head appear two olive leaves, and before it, in place of the usual ΑΘΕ, is the legend ΜΑ. Next to Athens, Eleusis and Marathon were the most important townships of Attica, and the obol and half-obol just described seem to point to the temporary existence of a local coinage of small denominations in those places. It is possible that a few other Attic towns struck obols at this period, but if so they have not yet appeared.

§ 58. In addition to the Panathenaïc festivals two other historic events had a marked effect on the coinage of Hippias—one event a matter of internal, the other of foreign politics. The former was the murder of the tyrant's brother Hipparchus, probably about 514 B.C.<sup>7</sup> by Harmodius and Aristogeiton; this turned Hippias into a distrusted and embittered man<sup>8</sup>, and the tyranny, hitherto popular with the masses, became hated. The latter event was the conquest of

<sup>1</sup> *Corolla Num.* 1906, p. 1 ff. The coin (Pl. XI, A156) in the McClean Collection, Cambridge, which was described by my father (*N.C.* 1908, p. 278 f.) as having ΠΙ upon it, has nothing but striations that appear like letters. My father now no longer holds to the opinion that the piece bears the tyrant's initials.

<sup>2</sup> *l.c.* p. 7.

<sup>3</sup> The second "Hall of Initiation" at Eleusis was probably built by Peisistratus. Frazer, *Pausanias*, ii, p. 509 (2).

<sup>4</sup> Ears of corn appear on the later bronze coins of Eleusis. Cf. B.M.C. *Attica*, Pl. XX, 1 and 2.

<sup>5</sup> Dion of Syracuse placed his name on his coinage struck at Zacynthus (*H.N.*<sup>2</sup>, p. 430) but not on that of Syracuse. Provincial mints in later ages issued money with inscriptions complimentary to Roman Emperors such as would have been thought in bad taste upon the imperial coinage of Rome.

<sup>6</sup> In the Berlin collection.

<sup>7</sup> *Ath. Pol.* 19; Hdt. v, 55.

<sup>8</sup> *Ath. Pol.* 19.

Thrace by King Darius in 512 B.C.<sup>1</sup> and the removal to Asia by the Great King of the whole Paeonian population, whereby Hippias naturally lost the whole of his Pangaeian revenue.

The two events combined to produce the famous Hippian "reform" of the coinage, which was in actual fact no "reform" at all. The account of the tyrant's tampering with the coinage is given in the pseudo-Aristotelean *Economics* in conjunction with his other expedients for raising money; and these expedients, if ever they were employed, may have been resorted to in consequence of the loss of his Thracian mines. The sentence referring to the coinage runs as follows: "He declared the coinage *current among the Athenians* to be unacceptable (not up to standard, base), and fixing a price for it, ordered it to be brought to him. But after there had been a meeting to consider the striking of a new denomination, he re-issued the same silver<sup>2</sup>."

Here three points require special attention. Hippias is not said to have demonetised all Athenian money, and did not, on mature consideration, tamper with the issues of his own and his father's mints which had already acquired great commercial fame in the Mediterranean. But he did demonetise<sup>3</sup> the ordinary coinage current in Athens, in other words the old Eupatrid money with heraldic types. If this is the case he sought at one blow to rid the markets of coins that tended to be of poor weight<sup>4</sup>, to make a handsome profit by tariffing them below their intrinsic value and to satisfy a strong personal grudge against the noble families by getting rid of their hated coats-of-arms upon the coinage, for there can be little doubt that the murder of his brother had embittered him against all the aristocrats.

In the second place it would seem that the idea of an actual debasement of the coin standard was mooted, and a meeting, presumably of financial advisers, held to consider the issue of a new denomination; but sound finance won the day and Hippias re-issued the same silver on the same standard.

Thirdly, it is needful to bear in mind that the author of the *Economics* does not write "the same coin<sup>5</sup>," but "the same silver"; for the word "silver" at

<sup>1</sup> Hdt. v, 12. Cf. P. N. Ure, *Origin of Tyranny*, p. 58 f. It is probable that Hippias continued to draw silver from Paeonia until 512 B.C. The numismatic evidence (§ 45 f. above) points to a cessation of Athenian coinage in that region after Peisistratus captured Sigeum in ca. 535 B.C., but the tyrants would naturally continue to import bar-silver from their northern mines.

<sup>2</sup> *Econom.* ii, 1347<sup>a</sup>, 8: τό τε νόμισμα τὸ δὴ Ἀθηναίους ἀδόκιμον ἐποίησεν· τάξας δὲ τιμὴν ἐκέλευσε πρὸς αὐτὸν ἀνακομίζεω· συνελθόντων δὲ ἐπὶ (lit. with a view to) τῷ κόψαι ἕτερον χαρακτῆρα, ἐξέδωκε τὸ αὐτὸ ἀργύριον. The author of the second book of the *Economics* perhaps derived his information concerning the financial dealings of Hippias from some early *Atthis*.

<sup>3</sup> The simple method by which a decree of demonetisation came suddenly into force in the Athenian market is well illustrated by a passage in Aristoph. *Eccles.* 815 f., though there must be a touch of burlesque in the instantaneous way in which the bronze coins, there referred to, ceased to be legal tender.

<sup>4</sup> Tended, because there were a greater number of coins below the norm in Groups B and D than in the Groups of Peisistratid coins C, E, F, Gi. Cf. the table of frequency, § 101, Table XI.

<sup>5</sup> As Head, *H.N.*<sup>2</sup>, p. 370, wrongly translates. Gilbert, *Neue Jahrb.* 1896, p. 538, points out that the word must be translated as "silver" here. Dr Hill disagrees with Gilbert and adheres to Head's translation. ἀργύριον is, however, frequently used for ἀργυρος, e.g. Thuc. i, 13, ἀργυρίου ἐπισήμου, and lower ἀσήμου. Cf. Liddell and Scott, *Lex s.v.*

the end of the passage appears to stand in contradistinction to the word "coinage" at the beginning. From the whole account it is to be presumed that Hippias tariffed the old Eupatrid drachms at some such figure as four obols apiece and called them in. Probably the response to his ordinance was not great, but such drachmae as were brought in must have had at least five obols-worth of silver in them<sup>1</sup>, so that, on this supposition, the tyrant's profit would be 25 per cent. or even more. Thus some Eupatrid coins went into the melting-pot and were ultimately recoined into new money made from "the same silver."

§ 59. Elaborate theories have hitherto been built upon interpretations of this passage, the most usual assumption being that the Peisistratic tetradrachms were really "didrachms" struck on a standard double of the normal Attic, and that Hippias called these in as didrachms and re-issued them as tetradrachms. On this assumption the older Solonian and Eupatrid didrachms were of course drachms of the alleged double standard. The improbability of a *rise* in the standard having taken place at a time when bankruptcy threatened Athens has been demonstrated<sup>2</sup>, but there is an objection still more fatal to the "double standard" theory. In actual fact the Eupatrid mint issued didrachms, drachms and obols, with a very few half- and quarter-obols; while the Peisistratid mints, working on parallel lines, issued tetradrachms, drachms, obols, half-obols and quarter-obols. Now on the "double standard" theory these denominations would all have had but half the face value, and we should have had from the two mints, didrachms (Peisistratic), drachms (Eupatrid), hemi-drachms or tri-obols, half-obols, quarter-obols and eighth-obols (from both).

But the ordinary marketing coin, the essential piece, in terms of which the ordinary citizen thought and bought, *the obol*, was apparently never coined at all! This brings the theory of a heavy standard, double of the normal Attic, to something near absurdity. Hippias never altered the names of Athenian coins, never actually issued any new denomination. He may have discussed the idea with his financial advisers, but he ended by simply re-coining some of the same silver, content with the profit he had made upon his fixed tariff of the old Eupatrid money.

<sup>1</sup> Inferior though their weight often was.

<sup>2</sup> Ch. iii, § 10.

## CHAPTER XI

πάσαισι γὰρ πόλιν ἐσι λόγος ὁμιλεῖ  
Ἐρεχθέος ἀστῶν, Ἀπολλων, οἱ τεόν γε δόμον  
Πυθῶνι δία  
θαητὸν ἔτευξαν.

PINDAR, *Pyth.* vii, 9.

§ 60. From the time when the Alcmaeonidae, at the head of the other Athenian exiles<sup>1</sup>, settled in the land of Phocis, there sprang up something very like rivalry between Apollo of Pytho and Apollo of Delos. Since the former was championed by the Athenian exiles it behoved the Athenian tyrant, lest Apollo should prove hostile, to champion the god in his island home<sup>2</sup>. Peisistratus purified a part of this island<sup>3</sup> and, as ruler of the Ionian Mother-city, strove to establish it as the chief centre of Ionian worship. The sixth century coins of Delos afford a significant commentary on the Athenian influence, for of all island coins they alone were struck upon the Attic standard<sup>4</sup>. Further Peisistratus, not content to be excluded altogether from the worship of Pythian Apollo, set up in Athens a Pythium of his own<sup>5</sup>. But at Holy Pytho the Alcmaeonid influence was supreme, and we must now glance at the history of Hellas from a Delphian standpoint.

In 546 B.C., when the Athenian exiles had but recently arrived, there came to Delphi the embassy from Croesus asking advice as to his war against the Persians. The Lydians met the Alcmaeonidae there and learnt from them the state of affairs in Athens<sup>6</sup>. As for Delphi itself, two years previously the Temple of Apollo had been burnt to the ground, and the enemies of Peisistratus laid the blame at his door<sup>7</sup>, a foolish charge which may have gained slight credence only because the tyrant happened to be in exile when the fire occurred. The Amphic-tionic League estimated the cost of rebuilding at three hundred talents, of which sum the Delphians themselves were to contribute seventy-five talents or one-quarter, and subscriptions were collected throughout the Hellenic world<sup>8</sup>. The funds were soon subscribed and the larger part of the remaining two hundred and twenty-five talents must have come from the wealthy cities of Asia Minor which still employed a currency chiefly of electrum.

Now the Alcmaeonidae, ever plotting a return to Athens, were unable to achieve anything against the power and wealth of Peisistratus; but a few years after his death in 528-7 B.C., and almost certainly before the murder of Hip-

<sup>1</sup> *Ath. Pol.* 19, 2; *Hdt.* v, 62.

<sup>2</sup> Gruppe in Müller's *Handb. d. Altertumswissenschaft*, v, 2, p. 241.

<sup>3</sup> *Hdt.* i, 64. *Thuc.* iii, 104.

<sup>4</sup> *B.T.* II, i, Pl. LXI, 16 to 20, the last with **ΔΗΛΙ** on reverse. To the late Sir Hermann Weber belongs the credit of having identified the early Delian coinage (*N.C.* 1892, p. 201 ff.).

<sup>5</sup> *Thuc.* vi, 54.

<sup>6</sup> *Hdt.* i, 59. Cf. p. 43, note 4 above.

<sup>7</sup> Philochorus *ap. Schol.* in *Pind. Pyth.* vii, 9.

<sup>8</sup> *Hdt.* ii, 180.

parchus in 514 B.C.<sup>1</sup>, the exiles made an abortive attempt to drive out the tyrant Hippias. They seized and fortified Leipsydriion on the slopes of Mount Parnes. It was to this memorable occasion that Aristophanes referred when he coupled the names of Leipsydriion and *Leukopodes*, or White-legs<sup>2</sup>. Hippias was still popular in Athens, and as the exiles obtained little support from the city their attempt ended in a dismal failure whence came the note of hopelessness which rings through the famous Scolion:

Ah! Leipsydriion, faithless friend,  
Lo, what heroes to death didst send,  
Nobly born and great in deed!  
Well did they prove themselves in need  
Of noble sires a noble seed<sup>3</sup>.

After this failure the Alcmaeonidae cast their eyes upon the vast treasures lying in Delphi, and secured the contract for rebuilding the temple. By this means the Athenian exiles in Phocis gained renown throughout the Hellenic world, and the splendour of the temple they built was sung by Pindar; by this means too they got large sums of bullion into their hands and instantly proceeded to coin money<sup>4</sup>.

### GROUP J

Ca. 514 B.C. (or earlier) to 510 B.C.

Number of coins recorded 9                      Number of specimens recorded 21

§ 61.

### GROUP Ji

#### ELECTRUM

Official Badges: Athenian owl;  
Athenian bull's head facing;  
Alcmaeonid wheel.

Pl. XIV, P251A199 to P255A203 (Catalogue Nos. 306 to 310)

Whenever gold or electrum was coined in Greece proper—or in Western Hellas—before the age of Alexander its issue was the outcome either of desperate financial straits or of military adventure<sup>5</sup>; and in the present instance it was for

<sup>1</sup> Wilamowitz, *Aristot. u. Athen*, i, p. 34.

<sup>2</sup> § 13 above.

<sup>3</sup> *Ath. Pol.* 19, 3, transl. Sir F. Kenyon.

<sup>4</sup> An issue of money is to be inferred in any case from the words of Philochorus (*F.H.G.* i, 395) *ap. Schol. in Pind. Pyth.* vii, 9: οἱ Ἀλκμαιωνίδαι φυγαδευθέντες ὑπὸ τῶν Πεισιστρατιδῶν ἐπέσχοντο ἀνοικοδομήσειν (thus D) [τὸν ναὸν] καὶ δεξάμενοι χρῆματα καὶ συναγαγόντες δύναμιν ἐπέθεντο τοῖς Πεισιστρατίδαις, κ.τ.λ. Once they had received this money from the Delphians they could neither have got together, nor kept together, a force of mercenaries without coining the metal into money to pay these troops. *Ath. Pol.* 19, 4, confirms this with εὐπόρησαν χρημάτων πρὸς τὴν τῶν Λακόνων βοήθειαν. For further confirmation cf. Isocr. *de Perm.* 232; Demosth. *c. Mid.* 144.

<sup>5</sup> Instances are plentiful: Athens, first gold issue, 407–6 B.C. (*H.N.*<sup>2</sup>, p. 373), second ca. 339 B.C. (*l.c.* p. 375), third issue in Mithradatic War, 87 B.C. (*l.c.* p. 385)—Olympia, under the Pisan presidency (Seltman, *Temp. Coins Olympia*, p. 56 f.)—Thebes, in war against Sparta, 395 B.C. (Head, *Coinage of Boeot.* p. 39 ff.). In the west the gold issues of Tarentum are all coincident with military expeditions as has been shown by M. Vlasto (*J.I.A.N.* ii, 1899, p. 305)—The Gold of Acragas (*H.N.*<sup>2</sup>, p. 121),

a great military expedition that the Alcmaeonidae were able to utilize the stores of Asiatic electrum given for the glory of Apollo and lying at Delphi.

First it will be well to note the little coins with the owl (Pl. XIV, P251A199, P252A200) weighing 1.31 to 1.44 grammes (20.2 to 22.2 grains) most of which have been found in Attica whither the victorious Alcmaeonid army brought them<sup>1</sup>. The owl itself is a facsimile in miniature of the fine owls turned to the left which appear upon the contemporary coins issued from the civic mint of Hippias (Fig. 47)<sup>2</sup>, and the coins themselves are, like the Hippian money, of flattish fabric. But most significant of all is the reverse incuse which contains



FIG. 47. *a*, Electrum coin (enlarged).  
*b*, Tetradrachm of Hippias, Group H.

a well-defined letter  $\Delta$ , the initial letter of the name  $\Delta\Lambda\Phi\text{IKON}$ , which appears a few years later as the legend upon Delphian coins<sup>3</sup>. The combination is significant; on either side the Athenian owl and the Delphic initial which together epitomize the Alcmaeonid aspirations. At the same time they issued coins of identical weight, fabric and metal with the type of the Alcmaeonid

wheel (Pl. XIV, P253A201, P254A202). As at Athens, in the years before these nobles were driven into exile, the civic and the private badge appeared side by side. But Lycurgus, head of the Eteobutad clan, who had been allied with the Alcmaeonids must have fled with them to Phocis when Peisistratus returned, and so the Eteobutad badge—if such the bull's head is—appears upon the electrum as well as the wheel-device of the Alcmaeonidae. Little coins of 0.67 grammes (10.4 grains), just half the weight of the owl and wheel pieces, were struck with the facing head of a shorthorn bull as type<sup>4</sup>. In fabric these too are just like the wheel and owl coins, while the incuse reverses of the wheel and bull's head coins are shallow depressions similar to those of the owl pieces but without the Delphic initial.

While Peisistratus closed the Eupatrid mint in Athens, while Hippias demonetized the oligarchic coins and sought to sweep them from the market, the Eupatrid exiles revived the old coinages and re-issued their own old types in electrum at Delphi.

Camarina (*l.c.* p. 129), Gela (*l.c.* p. 141) and Syracuse (*l.c.* p. 175) was struck to meet the emergency of the great Carthaginian invasion of 406 B.C.; while much of the Syracusan gold coinage was occasioned by the wars of Dionysius, Dion and Timoleon.

<sup>1</sup> Cf. V. Köhler in *Atth. Mitt.* ix, 1884, p. 359, who cites four (out of six known to him) as found in Attica. There are no records of other find spots.

<sup>2</sup> On Fig. 47 the little electrum piece is enlarged so as to be comparable with the Hippian coin (B.M.C. *Attica*, Pl. II, 3; our No. 300 *a*) figured beside it. The little electrum owl coins cannot be placed as early as Head, *H.N.*<sup>2</sup>, p. 368, would date them.

<sup>3</sup> B.T.II, i, Pl. XLII, 16 and *Z.f.N.* xiii, 1885, Pl. III, 1. On the last the form of the  $\Delta$  is clear. Six (*N.C.* 1895, p. 179), reading  $\Delta$ , wished to attribute these pieces to Delos. But if they were Delian so would be all the electrum pieces under discussion, and as we saw (§ 60) Delos had a definite coinage of its own at this period.

<sup>4</sup> Pl. XIV, P255A203. One specimen is recorded as found in Attica, another in Euboea (Catalogue Nos. 310 *b* and *e*). It is impossible to accept M. Babelon's arrangement which would place all electrum coins, irrespective of the testimony of Finds, into Asia.

## § 62.

## GROUP J ii

## ELECTRUM AND SILVER

Official Badges: human leg;  
triskeles upon a shield.

Pl. XIV, P256A204 to P259A207 (Catalogue Nos. 311 to 314)

In addition to the electrum pieces of 0.67 grammes (10.4 grains) with the bull's head, the exiles issued little electrum coins of identical weight with the type of a human leg (Fig. 48)<sup>1</sup>. This bent leg is common as a shield device (Fig. 49)<sup>2</sup> on Attic B.F. vases as an alternative to the three legs of the triskeles, the Alcmaeonid crest<sup>3</sup>.

When account is taken of the quantities of electrum stored at Delphi<sup>4</sup> it is not surprising to find the contractors who rebuilt the temple issuing money in

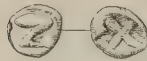


FIG. 48. Electrum coin with leg.



FIG. 49. Hoplite from an Attic vase.

this metal, but it seems that they at the same time issued a few silver coins. Now it has been shown that the ratio of electrum to silver was in early times as one to ten<sup>5</sup>; and since the Alcmaeonidae were coining electrum units of about 0.67 and 1.35 to 1.40 grammes, it follows that if their silver units were to have corresponding values they must be ten times as heavy, that is to say must weigh about 6.7 or 14 grammes. Of the larger of these two denominations no coins can be identified, but some pieces approximately half this weight are in existence scaling 7.05 to 7.2 grammes. The type upon these coins (Pl. XIV, A205 to A207) is none other than the old original Alcmaeonid badge—the circle of a shield enclosing a triskeles. Besides these “didrachms,” which are




<sup>1</sup> The coin (in the Boston collection) is also depicted on Pl. XIV, P256A204.

<sup>2</sup> Fig. 49 is from a vase figured by Gerhard, *Auserl. Vasenb.* iii, Pl. 231. Cf. Chase in *Harv. Stud.* xiii, 1902, p. 112, where sixty-one examples of Attic vases with this shield device are cited.

<sup>3</sup> Cf. Ch. III, § 13, where it is discussed.

<sup>4</sup> Significant is the reference to “Gygian gold” dedicated at Delphi (Hdt. i, 14). This was probably pale gold, i.e. electrum, for a pure gold coinage had not been issued in Lydia in the reign of Gyges. Croesus had dedicated 113 electrum ingots or “half-bricks,” weighing altogether 226 talents, which, with four golden ingots, formed the base for a golden lion (Hdt. i, 50).

<sup>5</sup> Hulstsch, *Griech. u. Röm. Metrologie*<sup>2</sup>, p. 181.

neither Pheidonian nor Attic in weight, there were issued diobols weighing 1.16 grammes or one sixth of the "didrachms" of 7.05 grammes weight. The type upon these little coins (Pl. XIV, *a*) is again a human leg exactly as on the little electrum piece (Fig. 48). Thus it appears that the three coins of our Group Jii<sup>1</sup> belong to a single issue and are identical in standard, fabric and in type. Their reverse incuse squares are marked by cross lines, either  on the electrum, or ,  on the silver coins. Just as the little electrum piece with the Athenian owl was marked with the Delphian  $\blacktriangleright$ , so the silver coin with the Alcmaeonid triskeles was marked with the Phocian letter  $\text{Ⓢ}$  indicative of its place of mintage. The shapes of both letters correspond with those in use on the earliest official coins of both Delphi and Phocis<sup>2</sup>.

§ 63. The classification of these "didrachms" with the triskeles and  $\text{Ⓢ}$  has hitherto been a baffling problem<sup>3</sup>. Of the four specimens extant one was found in Attica and another in Arcadia, whither some Peloponnesian mercenary had doubtless taken it. Yet the standard on which they are struck conforms to neither of the two systems which were the rule in Greece proper, and no attempt has as yet been made to account for the weight of these coins. But once they are united with the electrum issues of the Athenian exiles in Phocis the difficulties vanish. The Alcmaeonidae coined their electrum on the standard used for this metal both in northern Asia Minor<sup>4</sup> and on the Thracian coasts<sup>5</sup>; and when they came to coin silver by a simple calculation they made their silver coins roughly ten times the weight of their smallest electrum pieces<sup>6</sup>, in order that the "silver triskeles" might have the same face value as the "electrum leg."

These coins of the Athenian exiles are probably the oldest money minted in Phocis, for at this period neither Delphi nor Phocis had as yet initiated a currency of their own<sup>7</sup>.

<sup>1</sup> El. 0.65 g.:  $\mathcal{A}$  didrachm, 7.05 g.:  $\mathcal{A}$  diobol, 1.16 g.

<sup>2</sup> Cf. § 61. For  $\text{Ⓢ}$  on Phocian coins cf. B.T.II, i, Pl. XLII, 3 and especially 15.

<sup>3</sup> Six (*N.C.* 1888, p. 97) proposed to assign the coins with the triskeles to Phlius, but made no attempt to explain the weight standard. B.T.II, i, p. 811 ff. follows this attribution. The coins are supposed to be linked with a unique piece of Pheidonian weight in the British Museum (*l.c.* Pl. XXX, 20; B.M.C. *Attica*, Pl. XXIV, 8); obverse: turtle of Aeginetan type; reverse: incuse square in which triskeles, *adjunctis virilibus* (not leaves as Six, *l.c.* thought). Both these types occur on coins of Melos—turtle, B.T.II, iii, Pl. CCXLIII, 16; triskeles, *adjunctis virilibus*, *l.c.* Pl. CCXLII, 6; *Rev. Num.* 1909, Pl. VI, 25. Melos, however, coined not on a Pheidonian, but on an Asiatic standard. The mint from which this coin was issued must therefore still remain uncertain.

<sup>4</sup> B.T.II, i, p. 91, at Phocea, Lesbos, Teos, Smyrna, Clazomenae, etc.

<sup>5</sup> Svoronos in *J.I.A.N.* 1919, p. 189, Nos. 14, 15, 16.

<sup>6</sup> And five times the weight of their larger electrum pieces of 1.41 g.

<sup>7</sup> Svoronos (*B.C.H.* xx, 1896, p. 5 ff.), would place the first Delphian issue as early as 520 B.C., but Babelon (*Traité*, II, i, p. 993) argues conclusively against so early a date, preferring 490 B.C. as the time when the large pieces of Delphi were issued. Possibly, however, the earliest coins were those with the tripod and patera (not omphalos) for type (*l.c.* p. 998, 1408, Pl. XLII, 28), which may have appeared about 500 B.C. The coins issued in the name of the Phocians were likewise first minted about 500 B.C., for the pieces with a rough cow's head and an incuse square, usually assigned to Phocis (*l.c.* p. 982, 1374-6, Pl. XLII, 1, 2) have not the shorthorn's head, but the head of an animal with

The Paeonian coinage of Peisistratus and the Phocian coinage of the Alcmaeonidae were both minted in their respective regions simply for the purpose of hiring troops who should win Athens by force of arms. Both coinages achieved the purpose for which they had been struck and both passed into the current coin of Athens for a time, mingling with contemporary issues. Hence the electrum pieces have been found mainly in Attica.

§ 64. When the Paeonian mines of Hippias fell into disuse in 512 B.C.<sup>1</sup> and that tyrant was deprived of part of his income, the time for striking seemed to have come. In the summer probably of 511 B.C. a Peloponnesian army under the Spartan Anchimolus attempted an invasion which was beaten off by the cavalry which the Thessalian ally of Hippias brought to his aid. The Pythian priestess, bribed by the Athenian exiles, had continually urged the Lacedaemonians to free Athens<sup>2</sup>, and so this one failure did not restrain the Spartans from a second and more formidable effort. Plots in the city may also have helped at this juncture to weaken Hippias' position—plots which perhaps had the connivance of Isagoras, a noble of foreign descent. The Lacedaemonian king, Cleomenes, with a large army, hired with Delphic money, marched into Attica in 510 B.C. and was joined by the Athenian exiles and their forces led by Cleisthenes, son of Megacles, grandson of Alcmaeon. On a splendid B.F. dish in the British Museum (Fig. 50)<sup>3</sup> is a picture that might almost



FIG. 50. Hoplites and mercenaries, on a dish in the British Museum.

represent troops of the invading army. Athenian hoplites bear upon their shields the very badges adorning the money which the exiles struck in Delphi—the bull's head and the triskeles—and beyond them are the barbarous mercenaries whom that money enabled the exiles to hire.

After a pitched battle Hippias was besieged in the Acropolis; his children by chance fell into the hands of his enemies, a circumstance which forced him to capitulate. He retired to Sigeum, an Athenian possession on the Hellespont, and Athens, after thirty-six years of continuous security and prosperity under Peisistratus and his sons, was at last "free."

curving horns, and are now recognized as early Corcyrean money (*H.N.*<sup>2</sup>, p. 326; *N.C.* 1908, p. 80). The types of the Athenian exiles' money had, however, some influence upon the types of coins of Delphi and Phocis when these did begin to appear, for on some of the earliest issues of both mints we find the facing head of the shorthorn bull exactly as on the electrum money of the exiles (*B.T.* II, i, Pl. XLII, 27 Delphi: 3 to 15, Phocis).

<sup>1</sup> Cf. § 58.

<sup>2</sup> *Ath. Pol.* 19, 4; *Hdt.* v, 63.

<sup>3</sup> *B.M. Vases*, B. 426. The drawing is partly restored; the date of the dish is ca. 510–500 B.C.; a portion therefore is illustrated by Bury, *Hist. of Gr.*<sup>2</sup>, p. 195, fig. 67.

## CHAPTER XII

ὀλίγοι δὲ ἄρχουσιν καὶ μοχθηροὶ ἀντὶ τῶν ἐπιεικεστάτων.  
ARISTOT. *Eth. Nic.* 1160<sup>b</sup>, 15.

§ 65. The sudden collapse and withdrawal of the tyrant Hippias left three protagonists in the field at Athens, Cleisthenes the Alcmaeonid, Cleomenes king of Sparta and Isagoras son of Tisander. The first commanded money in plenty and a full share of that brilliant intellect for which his House was famed. The second possessed the power of the sword to which, Spartan-like, he was ready to resort at any time. Isagoras seems to have had little but great ambition and considerable cunning.

To Cleisthenes the time seemed ripe for the scheme he must have planned in advance, the setting up in Athens of a genuine democracy. But he had misjudged the populace and the far-reaching reforms he outlined met with insufficient popular support. The nobles—both those who had accompanied him from Delphi, and those who had remained in Athens under the tyranny—grew alarmed at suggestions subversive of the oligarchy they were intending to restore, and in Isagoras they found a leader. It is probable that this noble had lived in Athens under Hippias, for Aristotle<sup>1</sup> definitely brands him as “a friend of the tyrants.” As one of the most insidious enemies of the Alcmaeonidae he naturally earned the dislike of Herodotus, who supported that famous House, and the historian described him as “of an illustrious family; but,” he adds, “I am unable to state whence he came; his kinsmen however worship Zeus Karios<sup>2</sup>.” It really seems as though a gibe at his foreign origin is implied in this statement, a view taken by Plutarch in his essay “on the spitefulness of Herodotus<sup>3</sup>.” If so we should possibly regard Isagoras as of Carian extraction, for Herodotus elsewhere<sup>4</sup> mentions the worship of Zeus Karios at Mylasa, a worship in which only true Carians, with their kinsmen the Lydians and Mysians, might participate. As a native of Halicarnassus the historian was exceptionally well informed on these matters, and to him Zeus Karios probably meant only the well-known god of Mylasa<sup>5</sup>; nor does he mention any other site where this cult-title was given to Zeus.

In the autumn of 510 B.C., the year of the tyrant’s expulsion, the old party struggles at Athens had broken out anew, with Cleisthenes and Isagoras as rival leaders. By the spring, perhaps, of the following year Isagoras by a clever piece of intrigue removed his opponent for a time. He was on intimate terms with the Spartan king Cleomenes, whose name scandal coupled with that of Isagoras’

<sup>1</sup> *Ath. Pol.* 20, 1. Cf. Wilamowitz, *Arist. u. Athen*, ii, p. 76, note 6.

<sup>2</sup> v, 66.

<sup>3</sup> *de Mal. Herod.* 23.

<sup>4</sup> i, 171.

<sup>5</sup> Macan wishes to connect Isagoras with Caria, the Acropolis of Megara. Wilamowitz (*l.c.* ii, p. 76, note 6) thinks the reference is to Zeus Karios, or more correctly Karaïos, worshipped in Boeotia. Adler, in Pauly, *R.E.* x, 1949, 55, regards the Carian Zeus here mentioned as Zeus of Mylasa. It seems impossible to lend credence to the suggestions of the two first mentioned scholars.

wife, and he instigated the Spartan to demand the expulsion of Cleisthenes as well as such other Athenians as were "under a curse<sup>1</sup>." Cleisthenes withdrew, probably to Delphi; and a narrow oligarchy, with a council of three hundred partizans of Isagoras, governed Athens<sup>2</sup>.

## § 66.

## GROUP K

## THE "CIVIC" MINT

510 B.C. to 507 B.C.

Tetradrachm anvil-dies	6	Coins	13
Tetradrachm punch-dies	13	Number of specimens recorded	23

Official Badge: Gorgoneion.

Private Badges: Bull's head facing;

Panther's head facing.

Pl. XIV, A208P260 to A213P272 (Catalogue Nos. 315 to 327)

Since the exiles at Delphi had deliberately revived in electrum and silver the old Eupatrid types which Hippias a few years before had tried to sweep from the markets, it was only likely that, once they got possession of the tyrant's mint, they would in their turn abandon his monetary types. This, it seems, is precisely what happened. The last of the Eupatrid coins struck about 546 B.C.,

shortly before Peisistratus returned from Thrace, had borne as their chief type the Gorgoneion, the civic badge of Athens (Pl. IV, A54 to A57, A60, A61). With them were minted coins bearing a facing bull's head which may have been the device of the Eteobutadae (Pl. IV, A51, A58)<sup>3</sup>. And at Delphi there had likewise been issued little electrum coins with this same bull's head badge (Pl. XIV, A203). Now, when Hippias was expelled, the triumphant Eupatridae revived their old types in the mint of Athens and coined money, the chief

badge of which was the Gorgoneion, while on the reverse appeared the head of the shorthorn bull (Pl. XIV, A208P260). Just as the little owl on the electrum struck at Delphi (Pl. XIV, A199 and Fig. 47 *a*) is a facsimile in miniature of contemporary Hippias owl coins (Fig. 47 *b*), so this bull's head is a magnified edition of the little bull's heads on the electrum of Delphian mintage (Pl. XIV, A203, and Fig. 51)<sup>4</sup>.

<sup>1</sup> Hdt. v, 70, 71. They were under a curse for the murder of the Cylonians more than a century before. The whole of our numismatic evidence controverts Beloch's extraordinary attempt (*Gr. Gesch.* i<sup>2</sup>, 302 ff.) to drag the Cylonian conspiracy into the sixth century, in defiance of all the authors.

<sup>2</sup> Without some period of government by these 300 oligarchs the figure 300 would not have been handed down to us.

<sup>3</sup> Cf. §§ 34 f.

<sup>4</sup> In the illustration the little Delphian electrum coin is enlarged so as to be comparable with the oligarchic tetradrachm placed beside it.



FIG. 51. *a*, Electrum coin (Group J), enlarged. *b*, Tetradrachm of the restored oligarchy (Group K).

The victorious nobles marked their triumph by the issue of a special coinage; but, while they revived their own old types of thirty-five years before, they retained the denomination and the mint-technique of the exiled tyrant, for instead of their own old didrachms they issued tetradrachms, instead of thickish coins they minted widespread pieces with flat or bevelled fields around their incuse squares.

Moreover, there can be no doubt that the nobles produced these effective-looking pieces from the "civic" mint, which Hippias appears to have opened in connection with the festival of the Greater Panathenaia<sup>1</sup>. In fabric these tetradrachms are the direct successors of the coins of Group H, which were possibly issued every fourth year. Hippias, it may be presumed, was expelled in the spring, and in the summer of that same year, 510 B.C., the Greater Panathenaia were celebrated. Thus it was entirely natural for the oligarchic coins of Group K to follow on the heels of the monarchic pieces of Group H. The old Eupatrid mint, which



FIG. 52. *a*, Gorgoneion in the Acropolis Museum. *b*, Tetradrachm of Group K.

Peisistratus closed in 546 B.C., seems to have been in the city of Athens<sup>2</sup>; consequently it was in conformity with the general policy of Isagoras to re-establish the city mint as the chief source of Athenian-coined money. As for the "Imperial" mint in Laureiotikē, it may have ceased work altogether during the years of aristocratic domination in Attica.

Artistically it is worth comparing the Gorgoneia upon these tetradrachms with the head of a marble Gorgon (Fig. 52)<sup>3</sup>, in the Acropolis Museum at Athens, which may have been one of the acroteria of the marble temple built by Hippias on the citadel<sup>4</sup>. The coins and the head appear to be almost contemporary.

These coins with the Gorgoneion, like all the old Eupatrid issues, were regarded as Athenian beyond question by the great pioneers of numismatics, such as Mommsen<sup>5</sup>, Beulé<sup>6</sup> and Mionnet<sup>7</sup>, and only the more modern destructive criticism has sought ineffectually to scatter them, and the older coins, among diverse mints, although they are usually found in Attica<sup>8</sup>.

§ 67. If we are right in regarding the bull's head as an Eteobutad device the inference would be that the chief member of this clan, who had shared the Delphian exile with Cleisthenes and had set his device upon the little electrum coins, deserted the Alcmaeonid cause and allied himself with Isagoras. It is in any case likely that this would happen, for the Eteobutadae had ever been the mainstay of the oligarchic cause. There is at least evidence that another notable

<sup>1</sup> § 56.

<sup>3</sup> The tetradrachm is No. 318 *b* of the Catalogue. The Gorgon's head is figured in Perrot, Chipiez, *Hist. de l'Art*, viii, p. 624, fig. 317.

<sup>5</sup> *Gesch. d. Röm. Münzwesens*, p. 52 ff.

<sup>7</sup> *Descr. Méd. Ant.* 1806, etc. ii, p. 112 f. 2 to 15.

<sup>2</sup> § 27.

<sup>4</sup> Cf. § 54, note 2.

<sup>6</sup> *Monn. d'Athènes*, 1858, p. 25.

<sup>8</sup> Cf. Appendix, Finds I, II.

of the period deserted the cause of Cleisthenes for that of Isagoras, for there was a certain Delphian by name Timasitheus, a famous athlete, winner of two crowns for the Pancratium at Olympia and three at Pytho, who "spoiling for a fight" accompanied the Athenian exiles from Delphi to Athens. Pausanias<sup>1</sup> learnt from some old record that "he did bright deeds of valour, and fortune attended him in all his enterprises save the last, and that proved fatal to him. For when Isagoras the Athenian, seized the Acropolis of Athens to make himself tyrant, Timasitheus had a hand in the affair, and being one of those who were captured on the Acropolis, he paid the forfeit with his life."

For three years Isagoras was master of Athens and issued money with the Gorgon's head as principal type. Six anvil-dies (Pl. XIV, A208 to A213) are known for this period and thirteen punch-dies (P260 to P272), which would mean an average of two anvil designs and over four punches per annum. At a time when the mint was hard at work and producing widespread coins from big dies that fractured much and easily, this is a most natural proportion of dies<sup>2</sup>. There will be occasion to note how some twenty years later big dies wore out at a rate even quicker than this<sup>3</sup>.

§ 68. For the Panathenaia of 510 B.C., perhaps, the Eupatrid tetradrachm with the bull's head was issued, to be followed instantly by the first coin with the reverse type of a facing panther's head and forepaws, for the two punches (Pl. XIV, P260, P261) share the same Gorgon anvil-die (A208). Now the panther's head appeared as a tiny device in the uppermost triangle of the old cross-cut punch-dies (Pl. IV, P66, P67) which were the very last of the old Eupatrid punches used<sup>4</sup> in 546 B.C. An interval of thirty-six years divides the old didrachm from the new tetradrachm, and this interval represents a real advance in art and mint-technique to which the coins bear witness, for the sketchy little panther's head of the older coins has blossomed into a brilliant example of heraldic decorative art. If this beast is to be regarded as possibly the device of Isagoras himself, it would follow that on the older coin the panther's head was the device of his father Tisander. In that case Tisander might have occupied some official post in the year of Peisistratus' return, and perhaps<sup>5</sup> made his peace with the tyrant. One point seems clear; this feline beast—whether it be intended for a panther or a lion—is an attribute of the Carian Zeus of Mylasa whom Isagoras' family worshipped. On a coin of Ceramus in Caria of the age of Commodus appears the rude cult statue of this Zeus holding spear and labrys, and beside him a beast that resembles a panther<sup>6</sup> rather than

<sup>1</sup> vi, 8, 6. Transl. Frazer. Pausanias saw this athlete's statue, the work of the Argive sculptor Ageladas, at Olympia. Hdt. v, 72, also records the famous pancratiast's end.

<sup>2</sup> Cf. p. 44, note 1; p. 63, note 4; p. 65, note 1; § 85.

<sup>3</sup> § 82 below. Future finds may increase our knowledge of the annual proportion of anvil-dies.

<sup>4</sup> § 37.

<sup>5</sup> If Wilamowitz is right in claiming that Isagoras had lived in Athens under Hippias. Cf. § 65, note 1.

<sup>6</sup> B.M.C. *Caria*, Pl. XII, 13. Mr A. B. Cook informs me that the animal is now recognized as a lioness or panther, rather than "a goat" as described in the Catalogue.

a lion. Two other coins of the same mint depict the same deity accompanied by a beast unmistakably leonine (Fig. 53 *a, b*)<sup>1</sup>, and both clearly represent the



FIG. 53. *a, b.* Coins of Ceramus in Caria.

old cult-stature of the Carian god. In more civilized and Hellenic guise we meet this deity nearly six centuries earlier on the coins of the semi-Greek Hecatomnus, dynast of Caria (Fig. 54)<sup>2</sup>. His

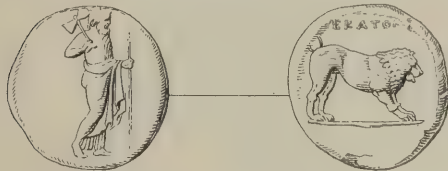


FIG. 54. Tetradrachm of Hecatomnus of Caria.

attributes there too are the spear and double-axe, and on the reverse of the same coin appears his sacred animal, the lion. He is in all probability the Hellenized successor of the ancient Hittite god who is found, with staff and labrys, standing upon the back of a panther on one of the great Hittite reliefs at Boghaz-köi (Fig. 55)<sup>3</sup>. Thus from the second millennium B.C. to the second century A.D. one may follow up in Asia Minor the cult of this Carian deity, with his labrys and spear or staff, accompanied by a panther or a lion.

§ 69. These tetradrachms with the panther's or lion's head and forepaws belong, as already mentioned, to the three years during which Isagoras was supreme in Athens, and it is therefore a fair assumption that the beast is the badge of his family and of the Carian Zeus. The dies which call for special comment are the two (Pl. XIV, P262, P263) which have, in addition to the animal's head, two pellets in the field. On the first they are immediately over the paws, on the second above the ears of the animal. Various deductions have been drawn from these pellets which have been universally regarded as signs of value<sup>4</sup>.

<sup>1</sup> Fig. 53 *a*, from a coin in the Trieste Municipal Collection. *Z.f.N.* ii, 1875, p. 109. On the obverse is the head of Antoninus Pius. Fig. 53 *b*, in Berlin; publ. *l.c.* p. 111. On the obverse, the head of Commodus.

<sup>2</sup> From a tetradrachm in Berlin. *B.T.* II, ii, Pl. LXXXIX, 15. Hecatomnus reigned 395 to 377 B.C. It is, of course, well known that late bronze coins often give more faithful pictures of primitive images than do the coins of the finest period of art.

<sup>3</sup> Perrot, Chipiez, *Hist. de l'Art*, iv, p. 637, fig. 313 and Pl. VIII.

<sup>4</sup> Those numismatists who believe that Solon raised the coin-standard, and that in consequence the old Eupatrid units were drachms and not didrachms, have pointed to these pellets as evidence supporting their contention, claiming that these tetradrachms were marked as didrachms by the two

It must, however, be confessed that it is doubtful whether these pellets are signs of value at all. Such a method of indicating the denomination of a coin is employed more generally in Western than in Central Hellas. It is possible to cite contemporary instances in which dots are certainly not signs of value. On the Paeonian money of Lete<sup>1</sup> there occur upon the didrachms either two, three or five pellets, on the drachms one or four dots<sup>2</sup>; and on the small change two or five pellets<sup>3</sup>. It seems therefore more likely that the pellets beside the panther's head on the tetradrachms of Isagoras may be merely part of the device, for they may be seen placed beside the animal's head on a shield sign (Fig. 56)<sup>4</sup>, where they cannot possibly be regarded as signs of value, unless it be claimed



FIG. 55. Deity from a Hittite relief, Boghaz-köi.



FIG. 56. Athena on a vase in Berlin.

that the vase-painter deliberately copied the coin—a procedure in itself somewhat unlikely. But if the pellets are signs of value they must be intended to indicate that the tetradrachm is worth two of the old didrachms, of which numbers were still in circulation; for when Hippias attempted to call these coins in and to cancel them many must have remained hidden. Such pieces would acquire a new lease of life under Isagoras.

Perhaps it was because these old coins circulated afresh that hardly any fractional currency survives which can be assigned to these three years. There dots. The fallacies involved in this whole theory have been dealt with fully in previous chapters (§§ 10, 58, 59). Numismatists who have regarded the Eupatrid didrachms as didrachms, and the Peisistratic tetradrachms as the tetradrachms which they are, have believed these pellets to be an indication that the tetradrachms which bore them were worth two of the old didrachms, that in fact each piece was marked as *distatēr*.

<sup>1</sup> Or, as Svoronos claims, of the Seræ, *J.I.A.N.* xix, 1919, Pls. VIII, 18 to 29 (2 dots); VII, 24 to 27 (3 dots); 17 and 19 (5 dots).

<sup>2</sup> *l.c.* Pl. VII, 11, 28.

<sup>3</sup> *l.c.* Pl. VIII, 11 to 17; Pl. VII, 12.

<sup>4</sup> From an amphora in Berlin, No. 1855, Micali, *Storia*, iii, p. 161, Pl. 92. The drawing is from a photo of the vase itself.

is, however, a drachma of a fabric identical with that of the larger coins, though with different types. On the obverse is an owl, and on the reverse within the incuse square an Attic amphora (Pl. XXII,  $\sigma$ ). Here again is a deliberate revival of the old Eupatrid types; and the types may have a certain historical significance, for the owl first appeared on the oligarchic money after Peisistratus was expelled from Attica<sup>1</sup>, the amphora marked the coinage of Solon<sup>2</sup>, founder of the oligarchic constitution. Possibly this drachma should be assigned to 510 B.C., the year of the exiles' triumph over Hippias.

§ 70. Feeling his position to be far from secure and aiming perhaps at becoming tyrant of the city<sup>3</sup>, Isagoras called on Cleomenes for support and a Spartan garrison occupied the Acropolis. This was too much for the Athenians and the people rose, while it was doubtless at this juncture that Cleisthenes returned knowing that at last his hour had come. How bitterly the Athenians felt the insult of the presence of this Spartan king in Athena's citadel is betrayed in those telling lines of the *Lysistrata* written a century later:

Not scatheless went Cleomenes, when he like this defied me,  
And dared my castle to seize: yet he,  
A Spartan breathing contempt and pride,  
Full soon surrendered his arms to me,  
And a scanty coat round his loins he tied,  
And with unwashed limbs, and with unkempt head,  
And with six years' dirt the intruder fled;  
So strict and stern a watch around my mates and I were keeping,  
In seventeen rows of serried shields before the fortress sleeping<sup>4</sup>.

The siege ended in the capitulation of the Spartan king, and he was allowed to withdraw in 507 B.C.<sup>5</sup> with Isagoras, but the partizans of the latter were slain.

At last the Alcmaeonidae were firmly established in their native city. The wealth of Delphian Apollo had triumphed over the silver of Hippias and the sword of Sparta.

<sup>1</sup> § 33.

<sup>2</sup> § 12.

<sup>3</sup> As was definitely stated by the authority whom Pausanias, vi, 8, 6, quoted.

<sup>4</sup> Aristoph. *Lysistr.* 274-283, transl. Rogers.

<sup>5</sup> Wilamowitz, *Arist. u. Athen*, ii, p. 77, note 9.

## CHAPTER XIII

*ἐγίγνωτό τε λόγῳ μὲν δημοκρατία, ἔργῳ δὲ ὑπὸ τοῦ πρώτου ἀνδρὸς ἀρχή.*  
THUC. ii, 65, 9.

§ 71. The terse sentence in which Thucydides summed up the political state of Athens under Pericles may be applied equally well to the city under the guidance of Pericles' grand-uncle Cleisthenes. Herodotus, in one of those brilliant phrases which betray the real historian behind the charming *raconteur*, puts the achievement of Cleisthenes into three words: τὸν δῆμον προσεταιρίζεται, "he took the people into partnership<sup>1</sup>." But during the years in which he guided the State he was the senior partner, "and so though nominally a democracy it was in reality a government administered by the first man."

The bad old days of selfish oligarchy were at an end; Athens was to return gradually to all the benefits enjoyed under a paternal despotism without the odium attaching to the name of tyranny. When weaker men held office the *Demos* was supreme, but when a Pericles, a Themistocles or a Cleisthenes guided the State his power was for a time as great as that of Peisistratus<sup>2</sup>.

Here our concern is not with the constitution of Cleisthenes, son of Megacles, whose reforms were less clearly understood by Herodotus than by Aristotle<sup>3</sup>, but rather with that history of his public works and foreign politics which finds a reflection in the Athenian coinage.

§ 72. The year 506 B.C.<sup>4</sup> was a momentous one in Attic history. Cleomenes, eager to revenge his humiliation, led the Peloponnesian army as far as Eleusis. But a quarrel between the Spartan king and his colleague as well as the refusal of the Corinthians to crush Athens, the enemy of their own foe Aegina, led to the collapse of this formidable expedition. Equally formidable, however, was the attack which Thebes and Chalcis, in agreement with Cleomenes, made at the same time upon the north of Attica. By clever manoeuvring the Athenian army separated its enemies and defeated first the Boeotians and then, after crossing the Euripus, the Chalcidian forces.

There are extant some important numismatic monuments commemorating this alliance between Thebes and Chalcis (Fig. 57 a)<sup>5</sup>. The first of these are

<sup>1</sup> Hdt. v, 66.

<sup>2</sup> Aristotle, *Pol.* vii (v), 1312<sup>b</sup>, calls democracy ἡ τελευταία τυραννίς, the last word in tyranny.

<sup>3</sup> It seems futile to attempt to minimize the work of Cleisthenes as does Kahrstedt in Pauly, *R.E.* xi, 621, following Beloch. Wilamowitz, *Arist. u. Athen.* ii, p. 77 and p. 145, has a masterly appreciation of the man.

<sup>4</sup> This is the date assigned by Wilamowitz, *l.c.* ii, p. 77, note 9—followed by Bury, *Hist. Gr.*<sup>2</sup>, p. 217—for the great attack on Attica.

<sup>5</sup> Two specimens are extant; the one here figured, now in Paris, from the Taranto Hoard (cf. Appendix, Find VIII), *Rev. Num.* 1912, Pl. I, 14; the other, in Berlin, was first published by Imhoof, *Mon. Gr.* 1883, p. 221, 55.

tetradrachms, struck upon the Attic standard then in use in Euboea<sup>1</sup>, with the wheel, the reverse type of other Chalcidian coins, upon the one side, and the Boeotian shield—the coat-of-arms of Thebes—upon the other. In the centre of the shield is the letter Ψ, the *Chi* of the Chalcidian alphabet, initial of the city's name<sup>2</sup>. This coin was struck in Chalcis in 507–6 B.C. to commemorate the alliance, and its fabric is exceptionally instructive; for like the tetradrachms of Hippias and Isagoras issued from the Athenian Mint it is of the widespread fabric which enabled both types to appear complete within the field. This alliance piece, which can be exactly dated, constitutes a *terminus ante quem* for all other coins of the same-fabric, which, as will presently appear, was abandoned by Cleisthenes soon after he began to coin in Athens. Simultaneously the Boeotians minted at Tanagra, the city nearest to Chalcis, complementary coins struck upon the Pheidonian standard current in Boeotia (Fig. 57 *b*)<sup>3</sup>. As the Chalcidians put the Chalcidian initial Ψ upon the Boeotian shield, so the

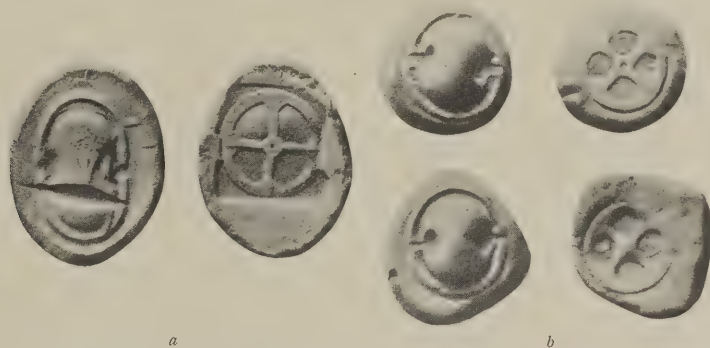


FIG. 57. *a*, Tetradrachm of Chalcis. *b*, Didrachms of the Boeotians struck at Tanagra.

Boeotians put the Boeotian **BOI** or **TA** within the Chalcidian wheel, and each state adhered to its own monetary standard.

Two famous monuments were erected by the Athenians after they had conquered and annexed Chalcis and defeated the Boeotians. Pausanias<sup>4</sup> still saw the bronze chariot, which Herodotus described<sup>5</sup>, set up in or near the Propylaea on the Acropolis in memory of the victory, and a fragment of the inscription beneath it is extant to our day<sup>6</sup>. Thus the Athenians offered thanks to Athena; but they did not forget the god of Pytho to whom they owed their liberty. At Delphi they erected a stoa—for the new Alcmaeonid temple was not yet complete—wherein, the inscription still extant tells us, “they dedicated the arms and the beaks (of the Chalcidian ships) taken in the war<sup>7</sup>.”

<sup>1</sup> Cf. § 103 below.

<sup>2</sup> This single letter on a war coinage is paralleled by the **Δ** and on the **Ⓢ** Alcmaeonid coinage struck in Phocis, § 61 f. above.

<sup>3</sup> Head, *Coins of Boeotia*, 1881, Pl. I, 14 to 17, cf. B.T.II, i, p. 971 ff. Head seems to have dated these coins too late and the earliest Boeotian money too early.

<sup>4</sup> i, 28, 2.

<sup>5</sup> v, 77. Cf. also Diodor. x, 24.

<sup>6</sup> *I.G.A.* iv, 334 a.

<sup>7</sup> Roehl, *Inscr. Gr. Ant.* 3a (p. 169). Cf. Wilamowitz, *Arist. u. Athen*, ii, p. 287.

Excavations have proved that Cleisthenes, like Peisistratus<sup>1</sup> before him and Pericles after him, followed the tradition of the progressive party in glorifying and promoting the worship of Athena. The great tyrant had enlarged and beautified the early temple of the virgin goddess; Pericles built the Parthenon which stands to-day; but its predecessor the older Parthenon was the conception of Cleisthenes<sup>2</sup>. The Alcmaeonidae who built the temple for Apollo at Delphi planned and began an even more splendid shrine for the patron goddess of Athens.

§ 73. In the light of later tyrannophobia it is hard to realize how Cleisthenes retained his popularity in spite of the fact that he modelled his policy so closely upon that of Peisistratus. The explanation is that the days of the great tyrant were still remembered as days of peace and prosperity, and his memory was not as yet execrated. In these circumstances Cleisthenes was able to revert at once to the coin types of Peisistratus; the Gorgon tetradrachms of Isagoras ceased to be minted and even the flat fabric—costly in dies which wore out quickly and characteristic of the unpopular administrations of Isagoras and Hippias—was soon abandoned. The money of Cleisthenes, moreover, gradually reverted to the Ionic style of art which had marked the money of Peisistratus. The trend of art followed the trend of politics. The Peloponnese had become unpopular in Athens, while Ionia was the object of sympathetic friendship.

During the Cleisthenic period, as in the age of Hippias, two mints operated in Attica, the one in Laureiotikē, the other in the city; and, since in the preceding chapters the money of the city mint has been under discussion, it seems best to continue dealing with the coins struck in Athens itself between 506 and 490 B.C. We shall therefore first consider the "civic" issue (Group L) of the period, and then pass on to the contemporary Group M which emanated from the old "Imperial" mint of the Laurian district, and which was the successor of Groups G i and G ii.

## § 74.

## GROUP L

## THE "CIVIC" MINT

Between 506 and 490 B.C.

Tetradrachm anvil-dies	15	Coins . . . . .	19
Tetradrachm punch-dies	19	Number of tetradrachms recorded	21

Types: helmeted head of Athena.

R: owl, olive-twig,  $\text{A}\Theta\text{E}$ ,  $\text{A}\Phi\text{E}$  or  $\text{E}\Phi\text{A}$ .

Pl. XV, A214P273 to A228P291 (Catalogue Nos. 328 to 346)

<sup>1</sup> Von Brauchitsch, *die Panathen. Preisamphoren*, 1910, supposed an anti-Peisistratic policy on the part of Cleisthenes which, he believed, led C. to abandon the distribution of Panathenaic amphorae as prizes. His arguments for the dating of these vases have been overthrown by Eduard Schmidt, *Archaische Kunst in Griechenland u. Rom*, Munich, 1922, p. 11 ff., who proves that Panathenaic vases were awarded not only under C. but during the whole of the fifth century B.C. as prizes.

<sup>2</sup> M. D'Ooge, *The Acrop. of Athens*, 1908, p. 79. As the Parthenon stood for imperialist democracy, so the Erechtheum, with its worship of Poseidon, Erechtheus and Boutes stood by contrast for oligarchic reaction.

Group L is the direct successor of Groups H and K, and the first few tetradrachms in it are struck on widespread flans, but the later pieces revert to the normal dumpy fabric of Athenian money. The Hippias coins of Group H were perhaps issued specially for the four festivals of the Greater Panathenaia<sup>1</sup>, which fell within the tyrant's reign. Possibly the tetradrachms of Group L were intended for a similar purpose, and if that were the case they would belong to five festivals and may have been distributed as follows:

Greater Panathenaia of B.C.	Anvils	No.	Punches	No.	Characteristics
506	A214, A215	2	P273 to P276	4	Spread flans
502	A216 to A218	3	P277 to P280	4	High relief; flans smaller
498	A219, A220	2	P281, P282	2	Relief lower; ⊕ in legend
494	A221 to A224	4	P283 to P287	5	Small heads; neat owls; ⊕ in legend
490	A225 to A228	4	P288 to P291	4	As last, but more artistic advance

But this suggested distribution may be modified by future finds of other pieces of the period.

Artistically the earlier heads (Pl. XV, A214, A215) represent the somewhat heavy Doric tradition, while the later Athenas are more typically Ionic in character. The tetradrachms help us to date other Athenian monuments to the last years of the sixth and to the first decade of the fifth centuries. In Figs. 58 *b* and 59 *c* are depicted the heads appearing on two terracotta tablets found on the Acropolis<sup>2</sup>, and beside them are illustrated coins of



FIG. 58. *a*, Tetrachm of the Democracy, Group L. *b*, Head on terracotta tablet found on the Acropolis.

<sup>1</sup> As suggested in § 56.

<sup>2</sup> Preserved in the Acropolis Museum and illustrated in *J.H.S.* xvii, 1897, Pls. VII, VIII. Miss Hutton, *l.c.* p. 318, assigned them on independent stylistic grounds to the same period as the one to which the coins prove them to belong.

Group L<sup>1</sup>. In either case coin and relief betray a striking resemblance. With the Athena of Fig. 59 *a* there may further be compared the head of one of the well-known *Korai* (Fig. 60)<sup>2</sup> from the Acropolis, in view of the similarity of profile and of expression. Both are typical of archaic Ionian art at its best.

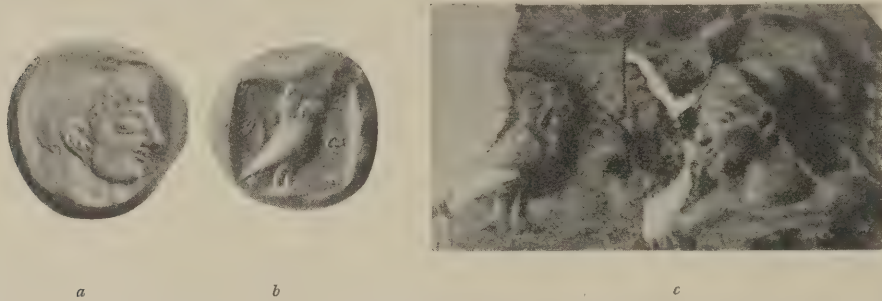


FIG. 59. *a, b*, Tetradrachms of the Democracy, Group L. *c*, Athena and owl, terracotta tablet found on the Acropolis.

The earlier owls are not unlike the later birds of Group H, while the later birds of our group tend to become more fixed in type, more triangular in outline. ☉ and ☉ both occur in the legends as they do upon other contemporary monuments<sup>3</sup>. The olive twig is, except on the first punch-die, placed in the upper left-hand corner of the square, and the number of leaves and berries which compose it is variable. Both anvil- and punch-dies seem, as in other groups<sup>4</sup>, to have been at times made from hubs.

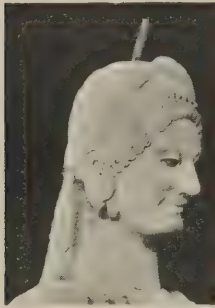


FIG. 60. Head of Koré, Acropolis Museum.

§ 75. More interesting than the tetradrachms of this group is the fractional currency. Drachms, hemidrachms (or triobols), trihemiobols, obols and half-obols were issued. The first (Pl. XXII, *v, φ, χ, ψ*) and two last (*ibid.* ζζ, ηη, θθ, υ) conform in type to the big denomination, but the triobols and trihemiobols introduce entirely new coin-types. On the first of these (Pl. XXII, ω, ββ) the female head, beside which are the letters ΑΘΕ in the incuse square, is simply that of Athena Erganē, patroness of craftsmen, contrasted with the helmeted head of Athena Promachos, defender of the city, on the obverse<sup>5</sup>. At a time

<sup>1</sup> The specimens are Fig. 58 *a*, Catalogue No. 345; Fig. 59 *a*, Catalogue No. 329 *b*; Fig. 59 *b* reverse of Catalogue No. 336 *a*.

<sup>2</sup> Cf. Perrot, Chipiez, *Hist. de l'Art*, viii, p. 589, fig. 295.

<sup>3</sup> Compare two *ostraka*, both of the year 486 B.C., with votes recorded against Xanthippus, father of Pericles: on one his name is written ΞΑΝΘΙΠΡΟΣ, on the other ΞΑΝΘΙΠΡΟΣ, Roehl, *Imag. Inscr. Gr.*<sup>3</sup>, p. 73, 26, 27.

<sup>4</sup> Cf. §§ 30, 48.

<sup>5</sup> Six, in *N.C.* 1895, p. 174, advanced a somewhat extravagant theory claiming that these coins, struck as he thought under Hippias, commemorated an alliance between the tyrant and Sparta; and that, in default of a Spartan coinage to copy, Hippias copied the money of the State closest to Sparta—Arcadia. The earliest Arcadian money was, however, struck considerably later. Babelon, *Traité II*, i, p. 756 f., who rightly criticizes Six, advances a theory which seems no more acceptable than Six's.

when all Athens was busy with masonry, pottery, metal-work and sculpture the head of the patron goddess of arts and crafts was a natural type for the coinage. The anvil-die which goes with these two heads of Athena Erganē was also used with another punch-die which bears the letters  $\Lambda\Theta\epsilon$  and a type of exceptional interest—the head of a curly-haired negro (Pl. XXII,  $\alpha\alpha$ )<sup>1</sup>. As a coin-type this head is so extraordinary that it is only natural to bring it into relationship with the other coins, almost contemporary, which bear the same type. These (Fig. 61)<sup>2</sup> are the little silver pieces of Delphi, with heads of goats or rams and the letters  $\Lambda\Delta$  on the reverse, and with a negro's head as obverse type<sup>3</sup>. The head has been identified as that of Delphos, son of Melaina (the black-woman), mythical founder of Delphi<sup>4</sup>; and this attribution is certainly strengthened by the Athenian triobol<sup>5</sup>. The coin belongs to the Cleisthenic age, probably to the time when the Alcmaeonidae had just completed the temple of Apollo at Pytho. Thus the Alcmaeonid Cleisthenes as the new founder of Delphi's temple placed upon the Athenian money the head of the first founder of Delphi itself.

The obverse-die (Pl. XXII,  $\omega$ ) which accompanies this negro head is a facsimile in miniature of the tetradrachm die A218 (Pl. XV), and for this die



FIG. 61. Silver coins of Delphi.

I have suggested<sup>6</sup> the date 502 B.C. Possibly the triobol was issued in the same year, in which case the conclusion drawn would be that Cleisthenes completed the Alcmaeonid temple at Delphi in time for the Pythian festival held in the year 502 B.C. One may at least infer from the Athenian stoa at Delphi, built to receive the armour and prows taken from the Chalcidians, that in 506 B.C. the temple was still uncompleted, else the trophies would have been housed within the shrine itself<sup>7</sup>.

On the contemporary trihemiobols the helmeted head of Athena was placed with the letters  $\Lambda\Theta\epsilon$  upon the punch-die, while the obverse showed the design of a Janiform female head (Pl. XXII,  $\delta\delta$ ,  $\epsilon\epsilon$ ). On later Athenian coins<sup>8</sup> the two-obol-piece was marked by an owl's head with two bodies; and on this coin the three faces—two on the obverse, one on the reverse—possibly indicated the "three half-obol" denomination. Certainly the obverse represents the conception of a twofold goddess—most probably Pallas Athena, who combined two

According to him the female head is a copy of the head of a nymph on money of Hippias' Thessalian allies. Such alliances rarely if ever find a record upon the small change struck for the local market. In any case the coins in question are Cleisthenic, not Hippias.

<sup>1</sup> This specimen seems to be a unique piece, preserved in the Berlin collection.

<sup>2</sup> The pieces figured are from B.M.C. *Central Gr.* Pl. IV, 6 to 8.

<sup>3</sup> Cf. B.T.II, i, p. 995 f.

<sup>4</sup> Babelon, *l.c.* p. 1000 f. following Panofka, *Delphos u. Melaine*, Winkelmannsfest, Berlin, 1849. The name of his mother is variously given as Celaino, Thyia, Melaina, Melainis, Melantheia, Melantho. All these names (except the second) suggest the black woman.

<sup>5</sup> The doubts cast upon this attribution in Pauly, *R.E.* iv, 2700, 63, are uncalled for.

<sup>6</sup> § 74, table.

<sup>7</sup> Cf. § 72.

<sup>8</sup> B.M.C. *Attica*, Pl. V, 16.

separate divine entities<sup>1</sup>. M. Six<sup>2</sup> wished to assign this coin to the reign of Hippias and sought to connect it with the Lampsacene coinage which has a similar type<sup>3</sup>. This, apart from the fact that the coin is Cleisthenic, seems speculative, for the same double Athena appears upon the coins of Tenedos<sup>4</sup>, Cilicia<sup>5</sup>, Syracuse<sup>6</sup> and Uxentum in Calabria<sup>7</sup>, while in the Capitoline Museum at Rome is a terminal figure with two heads of Athena<sup>8</sup>. This strange concept of a double goddess seems therefore to represent a widely-distributed cult-type.

Somewhat different from the usual drachmae of the period is one specimen (Pl. XXII, τ) bearing an owl with open wings, the left wing stretched in front of its breast. Possibly this is a clumsy attempt at depicting flight, for the design can be traced to an earlier age. A bird in the same position appears as a shield device of Athena on a B.F. vase by Amasis (Fig. 62)<sup>9</sup>. Its appearance on the coin seems due to a zeal for varying the normal design.



FIG. 62. Athena from a vase by Amasis.

In Group L we meet for the first time with an abundant issue of fractional currency of "Athena head" type. It is to be observed that the Laurian owls of Groups C, G i, G ii and M as well as the Paeonian issues of Groups E and F, contained scarcely any coins smaller than tetradrachms: yet these six groups between them covered a period of seventy years (561–490 B.C.). By contrast the Eupatridae from their Civic Mint had, between 594 and 546 B.C., issued an abundance of small change. And now under the Cleisthenic Democracy drachmae and smaller pieces were once again coined in plenty; not, however, at the "Imperial" Laurian mint, but in the city.

§ 76. Meanwhile the Imperial Mint in Laureiotikē, which had supplied the great bulk of the coinage of Peisistratus and Hippias, was revived by the Athenian Democracy. During the three years of Oligarchy (510–507 B.C.) it had presumably lain idle, but in 506 B.C. work was resumed almost as though no interruption had occurred.

### GROUP M

#### THE "IMPERIAL" MINT

506 B.C. to 490 B.C.

Tetradrachm anvil-dies	43	Coins	63
Tetradrachm punch-dies	56	Number of specimens recorded	76

Types: helmeted head of Athena.

R<sub>v</sub>: owl, olive-twig, AΘE.

Pl. XVI, A229P292 to Pl. XVIII, A271P347 (Catalogue Nos. 347 to 409)

<sup>1</sup> Cf. the curious tale in Apollodorus, i, 6, 2.

<sup>2</sup> *N.C.* 1895, p. 173 f.

<sup>3</sup> *B.M.C. Mysia*, Pl. XVIII, 9 to 12. *B.T.II*, i, Pl. XVI, 18 to 21.

<sup>4</sup> *l.c.* Pl. XVI, 9.

<sup>5</sup> Imhoof, *Mon. Gr.* Pl. G, 11.

<sup>6</sup> *N.C.* 1874, Pl. VI, 15, 16. Hill, *Coins of Ancient Sicily*, Pl. XI, 4.

<sup>7</sup> *B.M.C. Italy*, p. 220, 4, 5.

<sup>8</sup> *Mus. Capit.* i, Pl. IV.

<sup>9</sup> From an olpē, *Wiener Vorlegebl.* 1889, Pl. IV, 3<sup>b</sup>. Cf. Perrot, Chipiez, *Hist. de l'Art*, x, p. 188, fig. 119.

The sequence of tetradrachms which were struck in Attic mints cannot be determined by arranging coins in groups according to the modes in which Athena's hair was dressed. Yet this procedure has been adopted in the work which, up to the present, depicts the largest number of these coins<sup>1</sup>. In actual fact an arrangement by small groups of die-sequences is possible; and, when the pieces have been so arranged, there emerges a gradual artistic development of the head of Athena, and a marked artistic development in the treatment of the owl.

These phenomena are particularly clear in Group M. The earliest heads of Athena (Pl. XVI, A229 to A231) are the successors of the last heads (Pl. XII, A181 to A184) of Group G ii, which was the immediate predecessor of Group M. The owls, on the other hand, are definitely in advance of their forerunners in the older group<sup>2</sup> because they have been influenced by the more shapely birds occurring on the dies made in the Civic, or Panathenaic, Mint of Hippias. Group M, being contemporary with the civic issue Group L, was of course affected by it. Such influence is especially noticeable among the later coins, for on them may be perceived the abandonment of the Doric for the Ionic style of art<sup>3</sup>. While the "wheel" thēta was frequently employed on dies of the Civic Mint, the normal thēta is found to be invariable on all issues of the Imperial Mint. Numerous anvil, and a few punch-dies prove to have been produced by hubbing as was the case in former groups<sup>4</sup>. A few drachmae (Pl. XXII, κκ, λλ) correspond to the tetradrachms of the issue.

There are records of forty-three anvil-dies used during this period of seventeen years, while at the contemporary Civic Mint one can account for fifteen anvil-dies<sup>5</sup>. This is a total of fifty-eight anvil-dies and implies the use at the two mints together of something over three dies per annum. In former groups<sup>6</sup> three per annum was the normal number of dies employed, and if occasionally during the present period four dies were made in a year this must be accounted for by the fact that the miners of Laureion were striking deeper and richer veins than hitherto, and bringing more silver to the surface. That this was so will become evident in the next chapter.

A complete survey of all coins of Attic issue struck before the memorable time when the hoplites of Athens broke the Persian line at Marathon has now been made and the special issues of Peisistratus in Paeonia and of the Eupatrid exiles in Phocis<sup>7</sup> have also been identified. There remains, however, one curious little group of sixth century coins, compact but distinct from other groups, which has as yet to be accounted for.

<sup>1</sup> J. Svoronos, *Trésor des Monn. d'Athènes*, Munich, 1923.

<sup>2</sup> Compare Pl. XVI, p. 292ff. (of Group M) with Pl. XII, p. 224ff.

<sup>3</sup> Cf. especially Pl. XVIII, A262ff.

<sup>4</sup> §§ 30, 48.

<sup>5</sup> § 74.

<sup>6</sup> Cf. § 30, § 48, § 50, § 67, § 85.

<sup>7</sup> Groups E, F and J.

## § 77.

## GROUP P

MINT OF ATHENIAN CLERUCHS  
IN EUBOEA

Between 506 and 490 B.C.

Tetradrachm anvil-dies	6	Coins . . . . .	7
Tetradrachm punch-dies	7	Number of specimens recorded	7

Types: helmeted head of Athena.

R: owl, olive-twig, ΑΘΞ.

Pl. XXIII, A321P406 to A326P412 (Catalogue Nos. 475 to 481)

The dating of these coins is certain, since they are one and all—tetradrachms, hemidrachms and half-obols—rough imitations of coins in our Group L issued from the Civic Mint of Athens between 506 and 490 B.C.<sup>1</sup> They are, however, rougher in type and fabric than the products of either the Athenian or the Laurian Mint. Paeonian they cannot be, for the whole of Thrace was at that time subject to the Great King<sup>2</sup>, and already in 512 B.C. Athens had lost all her stakes in the Pangaeian mines. Neither are they to be regarded as mere barbarous imitations—degraded types like the coins shown on Pl. XXIII, 10 to 15. It is also in the highest degree unlikely that they were minted at Sigeum, to which city Hippias and his family had withdrawn in 510 B.C., for in the Propontic region the Persic, and not the Attic, coin-standard prevailed. Moreover, had Hippias coined pseudo-Athenian money he would not have imitated the types of the democracy which had expelled him; and the triobols of our group (Pl. XXIII, *a*, *β*) are copies of the triobols of Group L (Pl. XXII, *ω*, *ββ*), which were innovations of the democratic government.

There remains, then, but one place to which it is possible to assign Group P, and that place is Chalcis in Euboea. It was in the year 506 B.C. that the Athenians crushed the Chalcidians<sup>3</sup>, and, taking from them their most fertile lands, settled there four thousand poor Athenian citizens and their families<sup>4</sup>. These settlers formed the first Athenian Cleruchy<sup>5</sup>. To them must be ascribed the issue of this small group of coins which they required for both local and international trade, for the numismatic evidence points to a cessation of the autonomous coins of the city of Chalcis after 506 B.C.<sup>6</sup>

Further, there is in Group P an epigraphic feature which helps to confirm the attribution of these coins to Euboea. While on contemporary Attic issues the last letter of the legend has usually the form **E**, the same letter on the pieces of Group P has steeply sloping bars (Ξ); and in this respect it conforms to other

<sup>1</sup> Compare, e.g. Pl. XXIII, P410 with Pl. XV, P274; and the triobols Pl. XXIII *a*, *β* with those of group L on Pl. XXII *ω*, *ββ*, *γγ*.

<sup>2</sup> Hdt. v, 15.

<sup>3</sup> Cf. § 72 above.

<sup>4</sup> Hdt. v, 77.

<sup>5</sup> How and Wells, *Comm. on Hdt.* ii, p. 42.

<sup>6</sup> The sixth century coins of Chalcis are figured in B.T.II, i, Pl. XXXI, 1 to 6; and the latest coin struck by the Chalcidians is shown in Fig. 57 *a*, § 72, above.

late sixth century coins of Euboean issue, for the letter appears in the form  $\xi$  upon the money of Eretria struck at this period<sup>1</sup>.

The colony in Chalcis was abandoned in 490 B.C. under the following circumstances. When the Persian armament under Datis sailed to Greece to avenge upon Eretria and Athens the sack of Sardis, the Eretrians called upon the Athenians for aid and the latter ordered their settlers in Chalcidian territory to go to the help of their neighbours<sup>2</sup>. The colonists, however, were made aware of plot and counterplot among the Eretrians, who had in their midst many citizens favourable to Persia. Warned of this fact in time the Athenian cleruchs withdrew across the strait into Attica and lived to take part in the fight at Marathon. Eretria was betrayed to the Mede, and the flames rising from its temples and houses proclaimed the vengeance of the Great King for the burning of Sardis. Thus Datis accomplished the first part of his task, and the Persian fleet moved across the Euripus from Euboea bent upon forcing Athens to take back the aged Hippias as tyrant.

<sup>1</sup> B.T.II, i, Pl. XXXII, 1, 2; B.M.C. *Central Gr.* Pl. XXIII, 1 to 6.

<sup>2</sup> Hdt. vi, 100.

## CHAPTER XIV

σὲ γὰρ, ὃς Μῆδοισι διεξιφίσω περὶ τῆς χώρας Μαραθῶνι,  
καὶ νικήσας ἡμῖν μεγάλως ἐγγλωττοτυπεῖν παρέδωκας.

ARISTOPH. *Equit.* 781.

§ 78. Poets and rhetoricians from Aeschylus to Plutarch never wearied, it seems, from "coining with their tongues" fresh praises of the Athenian achievement at Marathon. That epic fight was indeed impressed so deeply on men's minds because its moral far transcended its material effect<sup>1</sup>. It appeared a marvel that the hoplites of Athens had defeated the dreaded army of the Mede, but of far greater significance was the fact that henceforward all thought of Athenian submission to tyrant or to Persian despot was impossible. Marathon definitely established the ideal of Hellenic liberty. And in Athens itself the victory altered the outlook of every citizen; each man knew himself a unit in a great state and if he had fought in that battle he was not quite as other men. "Even Aeschylus in the prospect of death, though his reputation as a poet stood so high...recorded (on his tombstone) nothing but his father's name, his own name and his city, and that the grove at Marathon and the Medes who landed in it were witnesses of his manhood<sup>2</sup>."

Because of the change which this achievement wrought in their outlook the Athenians "coined" not only "praises with their tongues," but also silver stamped with a type which should forever commemorate the victory granted them by Athena's aid.

§ 79.

### GROUP N

#### THE "IMPERIAL" MINT

490 to 480 B.C.

Tetradrachm anvil-dies	28	Coins	35
Tetradrachm punch-dies	32	Number of specimens recorded	38

Types: helmeted head of Athena olive crowned.

R<sub>y</sub>: owl, waning moon, olive-twigg, **AΘΕ**.

Pl. XVIII, A272P348 to Pl. XX, A299P379 (Catalogue Nos. 410 to 444)

The face of Athena on the first die of Group N (Pl. XVIII, A272) hardly differs from the face (*ibid.* A271) on the last anvil-die of Group M; but the whole head on the newer tetradrachm is slightly smaller. On the first seven dies of our group the helmet's crest is still marked with the old-fashioned pattern of

<sup>1</sup> For the clearest account of the campaign and the political situation of the time see the article by J. A. R. Munro in *J.H.S.* xix, 1899, p. 185 ff.

<sup>2</sup> Paus. i, 14, 4; Athen. xiv, p. 627, c, d.

chevrons and dots, and the old methods of indicating Athena's hair by lines of dots and lines prevail upon these and the eighth die. After that the hair was regularly dressed in waves, a mode which had, however, made an occasional appearance even in the time of Peisistratus, being found on coins of Groups G i, G ii and M, as well as on those of the Civic Groups H and L.

The new dies with types designed to commemorate the Marathonian victory were made rather smaller than their predecessors, and the owl was consequently squeezed into a smaller space; hence it appears more plump and upright, while the olive leaves hang down close together filling the whole area behind the bird. But the later dies of the group were made larger; thus the owl grew more triangular in shape and the leaves could spread themselves more naturally in the field (Pl. XIX, P<sub>357</sub> ff.).

Marathon, that amazing triumph of the Athenian arms under the leadership of the younger Miltiades, was commemorated on the Athenian coinage by the placing, first of four, and then of three upright olive leaves upon Athena's helmet; and these remained a part of the design until the age of Alexander the Great.

It has indeed been claimed<sup>1</sup> that the olive leaves were only introduced after Salamis, for it is generally acknowledged<sup>2</sup> that either Marathon or Salamis, and that no event other than these, would have called forth this alteration of the type. Salamis was fought in 480 B.C. In 479 B.C. the Athenians were again forced to leave their homes. In the two following years, since they were busy rebuilding their city and its fortifications, it is improbable that they would have time to think of commemorative medallic coinages. Thus if the olive leaves were only placed on the helmet of Athena after Salamis these coin types would hardly have appeared before 477 B.C. Their art, as well as their general archaic appearance, belies so late a date. From every point of view it is indeed obvious that these coins (Pl. XVIII, A<sub>272</sub>P<sub>348</sub> ff.) were issued immediately after the battle of Marathon and that the olive leaves commemorate the event. The battle was fought probably about August 10th<sup>3</sup>, and a few days later the Greater Panathenaia were due for celebration at the time when the moon was in its third quarter<sup>4</sup>. Thus it seems an almost irresistible conclusion that the tiny waning moon, now introduced for the first time upon the coins, is also a reference to the memorable date which impressed the average Athenian mind far more

<sup>1</sup> Sir Henry Howorth, *N.C.* 1893, p. 245; Lermann, *Athenatypen auf Gr. Münz.* p. 24 ff. Svoronos, in the new *Trésor des Monn. d'Athènes*, Pls. 8, 9, would assign most of our Group N to the years after Salamis. These and other suggestions are, however, founded only on opinions, and are in no case based on a study of dies.

<sup>2</sup> Head, *H.N.*<sup>2</sup>, p. 369, is alone in proposing to assign the olive-leaf issue to Hippias.

<sup>3</sup> Or, according to another account, in September (Plut. *de Gloria Athen.* 7). How and Wells, *Comm. on Hdt.* ii, p. 109, favour a date about Sept. 12th. Bury, *Hist. of Gr.*<sup>3</sup>, p. 252, mentions either August 10th or Sept. 9th. Even if we reject the possibility that Marathon preceded the Greater Panathenaia, the fact remains that the battle was fought when the moon was past the full, for the Spartans arrived in time to view the Persian dead upon the field, and the Spartans, it will be remembered, could not leave Lacedaemon until after full moon.

<sup>4</sup> Head, *H.N.*<sup>2</sup>, p. 370, quoting Mommsen, *Feste d. Stadt Athen*, 1898, p. 106.

even than Salamis. Salamis was a pan-Hellenic victory: Marathon was the glory of Athens and her friend Plataea alone. Finally, while Marathon was probably fought with a moon already into its third quarter, Salamis was certainly fought with a full moon<sup>1</sup>.

§ 80. These coins of Group N which can be dated with such exactitude

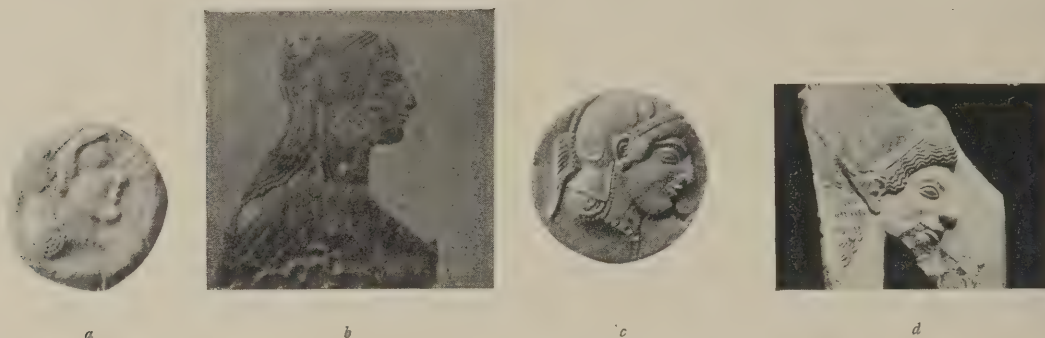


FIG. 63. *a, c*, Tetrachms of Group N. *b*, Bronze relief, Athens Museum. *d*, Head from an Attic stele in Berlin.

afford a means of fixing the date of other Athenian works of art. Comparable with one of the first coins of this group (Fig. 63 *a*) is a bronze relief (Fig. 63 *b*)<sup>2</sup> in the Athenian Museum. A bas-relief from Athens (Fig. 63 *d*) has the same artistic character as another tetradrachm (Fig. 63 *c*)<sup>3</sup> of the period, and with the coins of this decade may be compared the head of one of the very latest of the *Korai* (Fig. 64)<sup>4</sup> found on the Acropolis among the Persian débris. To this same brief period belong, as pointed out above<sup>5</sup>, a youthful head from the Acropolis (Fig. 44 *a*) and the relief of the *Stephanēphoros* from Sunium (Fig. 44 *b*).



FIG. 64. Head of a *Koré*, Acropolis Museum.

There is evidence, as in earlier groups<sup>6</sup>, that hubs were used to make the dies for these tetradrachms with a view to increasing the speed of production at the mint. Twenty-eight obverse dies cover this period of ten years. If, as may

have been the case, the first die only (A272) was produced in the late autumn

<sup>1</sup> Plut. *de Gloria Athen.* 7 τὴν δὲ ἕκτην ἐπὶ δέκα τοῦ Μουνυχιῶνος Ἀρτέμιδι καθιέρωσαν, ἐν ᾗ τοῖς Ἑλλήσι περὶ Σαλαμίνα νικῶσιν ἐπέλαμψεν ἡ θεὸς πανσέληνος.

<sup>2</sup> Fig. 63 *a* is No. 415 of the Catalogue. Fig. 63 *b* is depicted by M. Schede, *die Burg von Athen*, Berlin, 1922, Pl. 26.

<sup>3</sup> Fig. 63 *d* shows part of a stele in the Museum at Berlin. Perrot, Chipiez, *Hist. de l'Art*, viii, p. 662, fig. 340. As for the tetradrachm, Fig. 63 *c*, the specimen shown is No. 423 of the Catalogue.

<sup>4</sup> Perrot, Chipiez, *l.c.* p. 592, fig. 297, give another view of the same statue.

<sup>5</sup> § 52.

<sup>6</sup> §§ 30, 48, 76.

of 490 B.C. after the victory, there remain twenty-seven dies for the nine years before Salamis, or an average of three anvil-dies per annum, a proportion which was the rule for preceding issues<sup>1</sup>.

Fractional currency, which had been issued only in small quantities by the Peisistratidae, grew abundant under the democracy<sup>2</sup>, and this "small change" was the product not so much of the Imperial Mint in Laureiotikē as of the Civic Mint in Athens. That mint appears no longer to have produced tetradrachms of a panathenaic character between 490 and 480 B.C. Possibly the interest taken in the new "Marathonian" owls produced by the Imperial Mint resulted in the abandonment of a special issue for the Greater Panathenaia of 486 B.C. Besides the Athenian fancy was by that date stirred by a new and different numismatic interest. But this will appear in its proper place.

The Civic Mint, then, no longer struck tetradrachms, but it may be the case that it issued drachmae and obols. The latter are not rare<sup>3</sup>, while of the former nine obverse dies—an average of one anvil-die per annum—are on record (Pl. XXII,  $\mu\mu$  to  $\omega\omega$ ). Their artistic development is exactly parallel to that of the tetradrachms of Group N, but they may have been minted in the city rather than in Laureiotikē<sup>4</sup>. This point, however, must remain undecided.

## § 81.

## GROUP O

## THE ANNUAL DOLE

486, 485, 484 B.C.

Decadrachm anvil-dies	8	Coins	8
Decadrachm punch-dies	8	Number of specimens recorded	9

Types: helmeted head of Athena olive-crowned.

R<sub>v</sub>: owl facing, olive-twig,  $\Sigma\Theta\nabla$ .

Pl. XX, A300P380 to Pl. XXI, A307P387 (Catalogue Nos. 445 to 452)

Didrachm anvil-dies	13	Coins	22
Didrachm punch-dies	18	Number of specimens recorded	29

Types: helmeted head of Athena olive-crowned.

R<sub>v</sub>: owl, olive-twig,  $\Lambda\Theta\text{E}$ .

Pl. XX, A308P388 to Pl. XXI, A320P405 (Catalogue Nos. 453 to 474)

A brief comparison of the two denominations of this compact little group with the pieces of Group N is sufficient to convince the observer that the heads of Athena on decadrachms and didrachms are definitely contemporary with those on the tetradrachms belonging to the middle of Group N. Set the didrachms A308, A309 and the decadrachm A300 on the one hand beside the tetradrachms A280, A281 on the other, and a glance will show them to be of the same date. In like fashion the owls P388, P389, prove contemporary with the birds on the tetradrachms P355, P356. Again the latest tetradrachm of

<sup>1</sup> §§ 30, 48, 50, 67, 76, 85.<sup>2</sup> As noted in § 75.<sup>3</sup> Pl. XXII,  $\alpha\alpha\alpha$  to  $\gamma\gamma\gamma$ . Only a few typical specimens are mentioned in the Catalogue.<sup>4</sup> For convenient reference the drachmae have been catalogued after the tetradrachms of Group N.

Group N<sup>1</sup> are rather more advanced than the latest decadrachm and than the last of the didrachms<sup>2</sup>, the conclusion being that Group N lasted for a longer time than Group O.

In short, while the four-drachma pieces of Group N covered the years 490 to 480 B.C., the two and ten-drachma pieces of Group O were issued only for a limited number of years midway between those dates. And the decadrachms and didrachms lack the waning moon which characterizes the tetradrachms produced from the Imperial Mint.

Scholars have naturally been inclined to associate the great Athenian decadrachms with the great Athenian victory<sup>3</sup>, thinking the coins to be worthy of the event. But, as has already been pointed out<sup>4</sup>, pieces (Pl. VII, 16 to 18) more primitive than the decadrachms must be the Marathonian issues. Neither can the decadrachms be regarded as commemorative of Salamis, for there is reason to believe<sup>5</sup> that the Athenians had no time immediately after Salamis to plan commemorative medallic issues. The actual fact is that the decadrachms and the contemporary didrachms were issued for a few years during the decade between the two great battles. The real occasion of their issue is indeed carefully recorded by Herodotus, though it has hitherto escaped the notice of scholars<sup>6</sup>. "Fortunately," he writes, "another piece of advice on the part of Themistocles had before this (i.e. before the great Persian invasion) been taken. When the Athenians, having in the treasury much money which came from the mines of Laureion, were about to share it, coming up one after another for *ten drachmae* each; then Themistocles persuaded them to give up this distribution and to build two hundred ships with the money for the war against Aegina." Plutarch in his life of Themistocles confirms the distribution with the words "whereas the Athenians were wont to divide up among themselves the revenue coming from the silver mines at Laureion, Themistocles alone dared to come before the people with a motion that the division be given up." This happened in the year 483 B.C., and it is obvious that for some three or four years before that

All this theory re.  
Decadrachms is untenable,  
for various reasons.  
The 10 dr. was issued  
to commemorate the victory  
over Persians, in 490.

<sup>1</sup> A293P370 and those which follow.

<sup>2</sup> A307; A319, A320; P404, P405.

<sup>3</sup> The inclination to associate decadrachm and victory is of course increased by the existence of the almost contemporary Syracusan decadrachm—or Demareteion—which actually was a commemorative medal as much as it was a coin.

<sup>4</sup> § 79. H. Gaebler in *Nomisma*, xii, p. 10 f., approaching the question from a different angle, comes to the same conclusion.

<sup>5</sup> § 79.

<sup>6</sup> The clearest account is in Hdt. vii, 144: ἐτέρη τέ Θεμιστοκλέϊ γνώμη ἔμπροσθε ταύτης ἐς καιρὸν ἠρίστευσε, ὅτε Ἀθηναῖοις γενομένων χρημάτων μεγάλων ἐν τῷ κοινῷ, τὰ ἐκ τῶν μετάλλων σφί προσηλθε τῶν ἀπὸ Λαυρείου, ἔμελλον λάξεσθαι ὀρχηδὸν ἕκαστος δέκα δραχμάς· τότε Θεμιστοκλῆς ἀνέγνωσε Ἀθηναίους τῆς διαιρέσιος ταύτης παυσαμένους νέας τουτέων τῶν χρημάτων ποιήσασθαι διηκοσίας. Cf. Plutarch, v. *Themist.* 4, καὶ πρῶτον μὲν τὴν Λαυρεωτικὴν πρόσοδον ἀπὸ τῶν ἀργυρείων μετάλλων ἔθος ἔχόντων Ἀθηναίων διανέμεσθαι, μόνος εἰπεῖν ἐτόλμησε παρελθὼν εἰς τὸν δῆμον, ὡς χρὴ τὴν διανομὴν εἰσάσαντας ἐκ τῶν χρημάτων τούτων κατασκευάσασθαι τριήρεις. . . . . Aristotle, *Ath. Pol.* 22, 7, confuses the issue by stating that the rich vein which made this distribution possible was only discovered in 483 B.C., whereas it is clear from other passages that the distribution had extended over several years. Aristotle, however, adds to our information the name of Maronea in the mining district, where the vein of silver was discovered.

date each fortunate citizen of Athens had, instead of paying income-tax, received the bonus of ten drachmae once a year.

Now as the Athenian citizens to the number of thirty thousand<sup>1</sup> came up "one after another<sup>2</sup>" to get their ten drachmae apiece a serious problem confronted the paymaster behind the table. Drachmae (Pl. XXII,  $\mu\mu$  to  $\omega\omega$ ) were comparatively scarce at this period; four-drachma pieces were plentiful, but you cannot pay a man ten drachmae down in tetradrachms.

For this occasion, therefore, the mint issued two new denominations, the decadrachm and the didrachm, thus enabling the paymaster to hand over to each payee either a single ten-drachma piece, or two of the current tetradrachms and one didrachm<sup>3</sup>, or simply five didrachms.

It has long been recognized that the decadrachms and didrachms are strictly contemporary. They were issued simultaneously on this occasion, and on this occasion alone, for at no other period in subsequent Athenian history do we meet either the one denomination or the other<sup>4</sup>.

§ 82. The number of dies and specimens extant confirm the inference that this practice had obtained for some three or four years before Themistocles diverted the funds to the fleet. There are extant eight decadrachm anvil-dies, which quickly wore out as is proved by flaws on many of the coins—flaws due to the excessive strain upon the die in the striking of so large a "medal." For the didrachms, thirteen anvil-dies are recorded by extant specimens. These, being smaller dies, were more durable; but on the other hand far larger numbers of didrachms than of decadrachms were issued. We can gain some idea of the work of the Athenian mint when we realize that over a period of three years at least 90,000 extra coins (taking decadrachms and didrachms together) must have been issued in addition to the ordinary tetradrachms and obols which the markets required. Of these 90,000 coins not more than thirty-eight specimens appear to survive at the present day. *V. de 2. j. N., 1926, pp. 38-54.*

It is possible to suggest a distribution of the extant ten and two-drachma pieces over the three years during which their issue took place. The die-sequences of the twenty-two different didrachms establish their chronological order and the decadrachms can be classified by comparing the heads of Athena with those upon the smaller coins.

<sup>1</sup> Hdt. v, 97, gives this as a round number at the time of the Ionian Revolt.

<sup>2</sup>  $\delta\rho\chi\eta\delta\delta\upsilon\nu$  is the word employed by Hdt.

<sup>3</sup> A few years later in 480 B.C., the Areopagites handed eight drachmae—i.e. two of the current tetradrachms—to each member of the ships' crews before Salamis. *Ath. Pol.* 23.

<sup>4</sup> Svoronos, *Trésor des Monn. d'Athènes*, 1923, Pl. 11, 18, figures a later didrachm; but this, like the tetradrachm (Pl. 11, 17) beside it, is clearly not of official Athenian issue. Both are perhaps ancient "forgeries" struck in Egypt. The decadrachm published *N.C.* 1921, Pl. V, 16, has been omitted as it resembles too closely the casts figured in *Synopsis de Mille Coins Faux*, Athens, 1922, Pl. J, 294.

Year B.C.	Didrachm anvil-dies	No.	Didrachm punch-dies	No.	Decadrachms: anvil- and punch-dies	No.
486	A308 to A311	4	P388 to P394	7	A300P380 to A302P282	3+3
485	A312 to A316	5	P395 to P400	6	A303P283 to A304P284	2+2
484	A317 to A320	4	P401 to P405	5	A305P285 to A307P287	3+3

§ 83. For three years, 486 to 484 B.C., the fortunate citizens of Athens received a dole, but in the fourth year it was discontinued and the funds diverted to the building of the fleet which was destined to turn the scale at Salamis. Athens for the second time was to save Europe from the Orient.

When the citizens returned to their ruined homes and, having set their house in order, were once more able to begin the issue of the popular "Laurian owls," the coins assumed a character different from that of the pieces which had preceded the Great Persian Invasion. In Fig. 65 *a* is depicted a typical tetra-

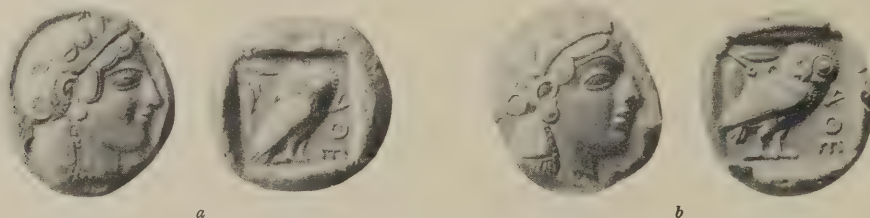


FIG. 65. Tetradrachms; *a*, of Group N. *b*, struck after the Persian Invasion.

drachm<sup>1</sup> of Group N, and in Fig. 65 *b* a coin<sup>2</sup> of the type issued after the new epoch in the history of Athens had begun. With the coinage of that new epoch we are not concerned, and have only to mention the last historical fact on record relating to the older tetradrachms like Fig. 65 *a*.

The forces under Leonidas had failed at Thermopylae to stem the tide of the Great Invasion; the fleet had withdrawn from Artemisium to Salamis, and the hosts of Xerxes were sweeping through the Boeotian plain towards Attica. Themistocles had persuaded the people of Athens to seek refuge in Salamis and trust to the "wooden walls" of their fleet, and he, the great leader of the democracy, was supported in that hour of trial by the conservative Council of the Areopagus. When even the generals, Aristotle tells<sup>3</sup>, "were utterly at a loss to meet the crisis and made proclamation that everyone should seek his own safety, the Areopagus provided a donation of money, distributing eight drachmae to each member of the ships' crews, and so prevailed on them to go aboard."

<sup>1</sup> No. 431 of the Catalogue.

<sup>2</sup> In the British Museum: 17·22 g. (265·7).

<sup>3</sup> *Ath. Pol.* 23.

That is the picture which the historian has left. As tangible memorials of the event there lie before us tetradrachms of that time (Fig. 65 *a* and Pl. XX, A295P374 ff.). Two such pieces were handed by the elders of the Council to every sailor as he went on board to take part in the battle which was to decide the issue between West and East.

The history of Athenian coinage, traced from its birth before the reforms of Solon to the time when it attained its full development in the decade between the two Persian invasions, is now complete. From that time onward till the age of Alexander the Great its character was destined to remain unaltered. There are few coins that have obtained a wider currency in their own time than did the Athenian tetradrachm which was famed from the Crimea to Arabia, from India to Spain. In the history of civilization its sole rivals are the money of the Macedonian Alexander, the Roman denarius, the golden "Besants" of the Middle Ages, the fiorino and sequin of Florence and of Venice and the now vanished British sovereign.

§ 84.

CHART OF THE PEISISTRATID AND LATER ISSUES\*



\* Cf. for earlier issues Chart of the Eupatrid Coinage, § 39.

§ 85.

A TABLE SHOWING THE AVERAGE NUMBER OF ANVIL-DIES  
IN USE PER ANNUM

Period	Dates B.C. <i>ca.</i>	Groups	Denominations	Number of anvil-dies	Years	Approximate number of dies per annum
Before Solon	610-595	A	Didrachms	5	15	1 in 3 years
Oligarchy	594-561	B	„	23	33	2 in 3 years
Oligarchy	550-546	D	„	16	14	Over 1 a year
Peisistratus	561-556	C	Tetradrachms	15	5	3 a year
Peisistratus	555-546	E	„	26	9	3 a year
Peisistratus	{ 546-536 546-527	F Gi	„ „	{ 15 42 } 57	19	3 a year
Hippias	{ 527-510 527-510	Gii H	„ „	{ 40 14 } 54	17	3 a year
Isagoras	510-507	K	„	6	3	2 a year
Cleisthenes	{ 507-490 507-490	L M	„ „	{ 15 43 } 58	17	Just over 3 a year
Marathon to Salamis	490-480	N	„	28	10	3 a year
SPECIAL DOLE	486-484	O	Decadrachms and didrachms	21	3	7 a year

NOTE. It may be estimated that there are extant at the present time, in museums, private collections and catalogues, coins representing perhaps 75 per cent. of the dies actually in use in antiquity. The above table does not, therefore, claim to chronicle the approximate number of dies actually used each year, but only the approximate number recorded by surviving coins.

## CHAPTER XV

ἔνθεν ἄρ' οἰνίζοντο κάρη κομόωντες Ἀχαιοί,  
ἄλλοι μὲν χαλκῷ, ἄλλοι δ' αἶθωνι σιδήρῳ,  
ἄλλοι δὲ ῥινοῖς, ἄλλοι δ' αὐτῆσι βόεσσιν.

*Iliad* vii. 472.

§ 86. In Egypt, Babylonia and Crete the spade has turned up a number of weights and ingots the discovery of which has provided matter for much speculation concerning early weight systems—speculation which has, up to the present, wrought more of confusion than of order in the field of metrology. In Hellas one weight<sup>1</sup> of the prehistoric period has been unearthed and only eighteen ingots; thus though the material is restricted the problem is simplified.

Under the Minoan and Helladic civilizations of the Bronze Age silver was of considerable rarity<sup>2</sup>, while gold and copper were abundant. Both of these metals were at times employed as currency and were, naturally enough, equated with the older barter unit, the ox or cow<sup>3</sup>.

The gold equivalent of the cow was the Homeric (and probably pre-Homeric) Talanton: the copper equivalent was the ox-hide ingot<sup>4</sup>.

I propose briefly to examine the evidence of ancient writers and of archaeological discoveries in Greece proper bearing upon (A) the gold talent, and (B) the copper-ingot talent.

### A. THE GOLD TALENT

§ 87. An Alexandrine metrologist has preserved for us the tradition that “the talent of Homer was equal in amount to the later Daric. Accordingly the gold talent weighs two Attic drachmas<sup>5</sup>.” The Daric scales 8.34 grammes, two Attic gold drachmae 8.62 grammes; obviously the metrologist was dealing in approximations, a point which finds in Hellas have tended to confirm. Five gold rings and twelve spirals, found in a shaft-grave at Mycenae dating from about the seventeenth century B.C.<sup>6</sup>, have already been cited by Sir William Ridgeway<sup>7</sup> as evidence of this standard, and if the approximate unit be taken as 8.5 grammes the following results are obtained:

<sup>1</sup> The iron κανών described in § 93 below.

<sup>2</sup> At Troy, Mycenae and in Crete comparatively few silver objects have been found.

<sup>3</sup> Sir W. Ridgeway, *Origin of Currency, etc.* Ch. I. *J.H.S.* viii, 1887, p. 133 ff.

<sup>4</sup> § 3 above.

<sup>5</sup> τὸ δὲ παρ' Ὀμήρῳ τάλαντον ἴσον ἐδύνατο τῷ μετὰ ταῦτα Δαρεϊκῷ. ἄγει δ' οὖν τὸ χρυσοῦν τάλαντον Ἀττικὰς δραχμὰς Β'. Hultsch; *Reliq. Scriptor. Metrol.* i, 301.

<sup>6</sup> That is to say from the Middle Helladic to Late Helladic I periods. *B.S.A.* xxii, 1916-18, p. 187.

<sup>7</sup> *J.H.S.* x, 1889, p. 91, where full details are given.

TABLE I

Talents	Exact multiples in grammes	Rings and spirals of gold diverging from the correct weight by no more than	
		$\frac{1}{2}$ a gramme	$\frac{3}{4}$ of a gramme
1	8.5	(i) 8.5	
$1\frac{1}{4}$	10.63	(ii) 10.8	
2	17	(iii) 16.5	
$2\frac{1}{4}$	19.13	(iv) 19	(v) 19.4
$2\frac{1}{2}$ <sup>1</sup>	21.25	(vi) 21.5	(vii) 20.5 (viii) 22
$3\frac{1}{2}$	29.75	(ix) 29.3	
$4\frac{1}{2}$ <sup>2</sup>	38.25		(x) 39
5	42.5	(xi) 42.2 (xii) 42.3 (xiii) 42.8	

Here ten pieces<sup>3</sup> diverge from the correct weight by no more than half a gramme, and three by no more than three-quarters of a gramme; thus there is a considerable measure of exactitude, as much, indeed, as can be expected at so early a period in a process so delicate as the weighing of small quantities of metal.

There is evidence, then, in the prehistoric age, for a small talanton of gold weighing about 8.5 grammes in use at Mycenae and known to Homer.

#### B. THE COPPER TALENT

§ 88. Here the literary evidence is confined to the tablet discovered by Sir A. Evans at Knossos (§ 2, Fig. 2, above) which seems to equate ox-hide ingots of copper with talents. But reasons have been advanced for supposing that both the "Homeric" gold talent of 8.5 grammes and the large copper ingot are roughly the metallic price of an ox or cow<sup>4</sup>; therefore they are more or less equal in value to one another. Concerned as is the present enquiry with the systems of Greece Proper it is best only to take into account the weights of ingots found in Greece. Of these there are seventeen discovered in the sea off Euboean Cyme and one from the Palace of Mycenae<sup>5</sup> (§ 3, Figs. 3, 4, above). An analysis<sup>6</sup> of these gives the following results:

<sup>1</sup> Known as τρίτον ἡμιτάλαντον. Pollux, *Onom.* ix, 54.

<sup>2</sup> Οἱ πέμπτον ἡμιτάλαντον. *l.c.*

<sup>3</sup> Nos. iii, iv, v, viii, in the table are plain rings, the others spirals. Of the remaining four rings of which the weights are given in *J.H.S. l.c.* one of 15.9 g. may be intended to weigh 2 talents; one of 39.5 g., four and a half; one of 41.5 g. five talents. The seventeenth ring of 9.9 g. seems not to conform.

<sup>4</sup> Chapter I above.

<sup>5</sup> Cf. *J.I.A.N.* ix, 1906, p. 171 and Pl. III, for the Euboean ingots. As to the Mycenaean, for details, cf. p. 4, footnote 1. Mr Wace is inclined to date this ingot Late Helladic III, i.e. 1400 to 1250 B.C.

<sup>6</sup> Omitted from Table II are a quarter-talent of 5350 g. and four half-talents of 9450, 10,080, 11,340, 11,650 g., all very definitely under weight. That these ingots tended to fall below weight is proved by the equation on the Knossian tablet, Fig. 2. As we are not concerned with the whole Mediterranean area, but only with Greece Proper, where the Euboic and Pheidonian Systems originated, I have left out of account ingots of the bronze age found in Cyprus, Anatolia, Crete and Sardinia.

TABLE II

From Cyme,	$\frac{1}{4}$	talent of	6,930 g.	=	talent of	27,720 g.
" "	$\frac{1}{2}$	"	11,970 "	=	"	23,940 "
" "	$\frac{1}{2}$	"	12,000 "	=	"	25,200 "
" "	$\frac{1}{2}$	"	12,900 "	=	"	25,800 "
" "	$\frac{1}{2}$	"	13,230 "	=	"	26,460 "
" "	$\frac{1}{2}$	"	13,230 "	=	"	26,460 "
" "	$\frac{1}{2}$	"	13,230 "	=	"	26,460 "
" "	$\frac{1}{2}$	"	13,336 "	=	"	26,672 "
" "	$\frac{1}{2}$	"	13,336 "	=	"	26,672 "
" "	$\frac{1}{2}$	"	17,000 "	=	"	22,666 "
" "	$\frac{1}{2}$	"	17,000 "	=	"	22,666 "
" "	$\frac{1}{2}$	"	17,640 "	=	"	23,520 "
" Mycenaë, I		"	23,625 "	=	"	23,625 "
Resultant average talent						25,220 "

Now the average weight invariably falls somewhat short of the full norm. But it seems clear that in Hellas during the Bronze Age the ratio of gold to copper was as 1 : 3000, for if the little gold talent weighed 8.5 grammes it would, at that ratio, have been equivalent to a copper ingot or talent of 25,500 grammes<sup>1</sup>. The metallic monuments confirm the written evidence, for the Alexandrine writer enables us to fix the gold talent at 8.5 grammes. The Knossian tablet equates the gold talent with a copper ox-hide talent. The Mycenaean rings confirm the first, while the copper ingots, pointing to a standard of  $25\frac{1}{2}$  kilogrammes result in a ratio of gold to copper of 1 : 3000. This ratio can be paralleled in the third century copper and gold coinage of Central Italy<sup>2</sup>.

Both these talents: the gold talent of 8.5 grammes and the copper talent of  $25\frac{1}{2}$  kilogrammes survived down to Hellenistic times.

#### A. THE GOLD TALENT'S SURVIVAL

§ 89. The texts provide at least four clear instances of its continuance:

(i) When the Delians computed the weight of frankincense, presented to them by the Persian Datis<sup>3</sup> at 300 talents, they were clearly reckoning by this gold-talent, as Sir W. Ridgeway, following Hultsch, has shown<sup>4</sup>. Frankincense was of enormous value in ancient times and it is inconceivable that the Persian presented the people of Delos with seven tons of it. In actual fact he must have given about 5 lb.

(ii) Demarete, wife of the Syracusan Gelo, received from the Carthaginians in token of their gratitude a golden crown weighing 100 talents<sup>5</sup>. It may have

<sup>1</sup>  $8.5 \times 3000 = 25,500$ .

<sup>2</sup> O. Viedebant, *Antike Gewichtsnormen*, etc. Berlin, 1923, p. 135, No. 9, gold and copper of Campania as 1 : 2250. Allowing for the greater rarity of gold in a more primitive age 1 : 3000 is entirely natural as a ratio. Cf. also p. 3, note 1 above.

<sup>3</sup> Hdt. vi, 97.

<sup>4</sup> *Origin of Currency*, etc. p. 6. The same small talent must be referred to by Schol. in Aristoph. *Aves*, 369. According to this passage, which must not be regarded as authoritative, there was an ancient law in Attica which gave for a wolf-cub killed a reward of 1 talent, for a full-grown wolf 2 talents. But cf. Plut. *v. Sol.* 23.

<sup>5</sup> Diodor. xi, 26, 3.

weighed 100 talents of 8.5 grammes or 850 grammes (= about 2 lb.), but it cannot have weighed 2550 kilogrammes<sup>1</sup> (or over 2½ tons).

(iii) From the Chersonesians Demosthenes<sup>2</sup> received a golden crown of 60 talents, which again must have weighed  $60 \times 8.5$  grammes or 510 grammes, rather than 1530 kilogrammes (or over 1½ tons).

(iv) The Alexandrine metrologist already quoted knew of the existence of this talent.

Thus the Mycenaean and Homer in the second millennium B.C., the Delians and Demarete in the fifth century, Demosthenes in the fourth century and the Hellenistic Alexandrine metrologist were apparently familiar with a small talent of 8.5 grammes for weighing gold.

#### B. THE COPPER TALENT'S SURVIVAL

§ 90. The copper talent became a weight, and as such the writers of the classical period are familiar with it under the name of "Euboic talent<sup>3</sup>," a norm which, as the coins prove, scaled exactly 25½ kilogrammes. Among the Greeks this talent seems naturally to have taken its name from Euboea, that island being the nearest and most familiar source of copper and so the producer of Euboic talents.

With the great migrations the Aeolian<sup>4</sup> and Ionian Greeks took with them to Asia Minor the weight system of the Euboic talent. From these same Greeks the Lydians learnt the trader's art, and, proving apt pupils, themselves invented coined money. But they retained the Euboic talent as their monetary norm. As will presently be seen the system of almost every state around the Aegean Sea, from Lydia to Corinth and from Thrace to Cyrene was based upon the Euboic talanton.

§ 91. So far our attention has centred on a gold and a copper currency, but now we have to reckon with the introduction of a *regular* silver medium of exchange, an innovation which was perhaps introduced by the Phoenicians who sailed as far as Spain in their quest for this metal. As the drachma owes its origin to an iron currency<sup>5</sup>, the stater to gold and the talent to copper, so the Mina (Semitic *Mana*) and shekel came in with the abundant use of silver.

In the end of the eighth and in the early seventh century B.C. Greek mercantile affairs centred in Asia Minor, and it seems likely that the Lydians and Asiatic Greeks between them adopted the mana-shekel system of silver into their own Euboic-talanton system, as the Babylonians perhaps had at an earlier date adjusted it to their native *Biltu*, or heavy unit<sup>6</sup>. The resultant system in Asia Minor was as follows:

<sup>1</sup> I.e. 100 Euboic talents of 25½ kilog. each.

<sup>2</sup> *de Coron.* p. 256, 25.

<sup>3</sup> Hdt. iii, 89. Its survival down to a late period is attested by the passage in Diodor. v, 36.

<sup>4</sup> Cyme, the chief Aeolian city of Asia, derived its name from Euboean Cyme, the very place where the copper ingots were discovered. The Ionian colonists came chiefly from the coasts of Attica and Argolis.

<sup>5</sup> Cf. § 92 ff. below.

<sup>6</sup> It is really misleading to speak of a "Babylonian talent." When Hdt. does so (iii, 89) he is merely translating for the benefit of his Greek readers. The Babylonian heavy unit had an origin independent of the Greek talent.

TABLE III

Euboic talent = Lydian-Milesian talent of 25,200 to 25,500 g.	
This is supported by the sixth century bronze lion of Abydos <sup>1</sup> , with inscription "correct in accordance with the silver-staters" in Aramaic	
	scaling 25,675 g.
$\frac{1}{60}$ or 1 mina	being 420-425 g.
$\frac{1}{60}$ of mina = 1 shekel	being 7-7.08 g.
A regular denomination was a double-shekel of	14-14.16 g.

On this system were struck the coins, mainly in electrum, of the Lydian kings before Croesus and of Miletus, Ephesus, Chios and other Ionian cities; and, notwithstanding the intervening monetary changes of Croesus and of the Persians, it was to this standard<sup>2</sup> that the cities of Ionia returned when they revolted against the Great King in 500 B.C.

TABLE IV

GROUP A (§ 5), Catal. Nos. 1 to 10, with corresponding drachma	
Grammes	Specimens
Below to 11.6	1
11.6 ,, 11.7	1
11.7 ,, 11.8	1
11.8 ,, 11.9	—
11.9 ,, 12.0	3
12.0 ,, 12.1	3
12.1 ,, 12.2	3
12.2 ,, 12.3	3
12.3 ,, 12.4	7
12.4 ,, 12.5	—
12.5 ,, above	—

§ 92. The earliest Athenian coins (§ 5) were struck, not on the old Mycenaean-Homeric-Euhoic, but on the Pheidonian standard, and the testimony of literature agrees in assigning to Pheidon of Argos the fixing of the coin-standard for the Peloponnese. At present, for lack of detailed study in other mints, there is only one group of early coins of Pheidonian weight which can be dated with any exactitude, and these are the pre-Solonian coins of Athens (Catalogue Group A) struck between *ca.* 610 and 595 B.C.<sup>3</sup> In assessing their weights it is best to construct a table of frequency (Table IV). This points to a weight of 12 to 12.4 grammes as representative of a Pheidonian didrachm about 600 B.C.

Now the ratio of gold to silver was certainly variable, and it may well be doubted whether the Pheidonian standard derived either from a gold norm or from a depreciated Phoenician norm<sup>4</sup>.

<sup>1</sup> S. A. Cook, *A Glossary of Aramaic Inscriptions*, Cambridge, 1898, p. 23. = *C. I. Semit.* No. 108.

<sup>2</sup> P. Gardner, *Hist. of Ancient Coinage*, 1918, p. 93.

<sup>3</sup> Cf. § 5 ff. above.

<sup>4</sup> Possibly silver was in the Mycenaean age the more valuable metal; but during the eighth and seventh centuries it must have grown more common, for not only did the Phoenicians import it from the West, but silver was found in abundance in Paeonia and Siphnos (§ 103), while the Laurian mines, which were probably worked to a small extent even in Mycenaean times (§ 103), proved every year to be more productive. While the opening of new and accessible silver mines depressed the value of silver, the influx of fresh supplies of gold on the markets from whatsoever source raised the value of silver. The ratio tended to be in flux. This goes to show that it is impossible to fix from a silver coinage the ratio of the metals at a given date unless we have contemporary gold coins wherewith to equate them, and the Aeginetans coined no gold. None the less it is very likely that in Pheidon's time the ratio of gold to silver was as 1 : 15. (Cf. Ridgeway, *l.c.* p. 221.) If so, gold to iron was 1 : 6000, since silver to iron was 1 : 400; § 93.

The Euboic system was, as already indicated, founded ultimately upon the copper talanton. It appears that the Pheidonian was founded on the iron "drax," or handful, which comprised six "obeloi," or spits.

§ 93. A summary of the literary evidence is desirable:

(i) "Parian Marble," Boeckh, *C.I.G.* 2374, 45. "Pheidon the Argive...struck silver money in Aegina."

(ii) *Etym. Magn. s.v. ὀβελισκος* repeats this, adding, "and as he had adopted (coined) money, he took the spits and dedicated them to Argive Hera."

(iii) Plutarch, *v. Lysand.* 17, referring to the Spartan money of iron says: "Probably all ancient money was of this sort, some peoples using iron spits as coins and some bronze; whence it comes that even to this day many small pieces retain the name of 'obols' (spits), and six obols make a 'drachma' (handful), since that was as many as the hand could grasp."

(iv) Pollux, *Onom.* ix, 77, repeats this in fewer words.

(v) These authorities probably trace back to Heracleides of Pontus, who seems to have been born about 400 B.C. In his lost work on Etymology<sup>1</sup> (quoted in Orion's *Etymologicum, s.v. ὀβελος*) he wrote: "Obolos, derived through substitution of o for e; in former times people used a currency of rough spits; actually the Ionians say 'obelos,' we 'obolos.' Pheidon the Argive first of all men struck coins in Aegina, and having issued coins, he removed the spits and dedicated them to Argive Hera. But since at that time the spits filled the hand, that is the grasp (drax), we, although six obols do not fill our hand, still call them a grasp-full (drachma) because of the grasping of them (τὸ δρᾶξασθαι)."

It is fortunate indeed that these actual iron spits or obeloi dedicated by Pheidon have been found in the excavations conducted by the American School in Athens on the site of the Argive Heraeum (Fig. 66)<sup>2</sup>. The obeloi were found at the north-east angle of the terrace on the site occupied by the early temple, which had preceded the building burnt down in 423 B.C., that is to say the temple contemporary with the famous Argive king. Beside the great bundle of obeloi (Fig. 66 a), originally 180 spits which had been bound with iron bands and bedded in a leaden base when they were dedicated, the excavators found another iron object, a great bar of rectangular section hammered near the upper end into a flattish disk (Fig. 66 c). This object is about 1 metre 19 cm. in length<sup>3</sup> and weighs 73 kilogrammes.

The obeloi agree in every respect with the account of Heracleides of Pontus even to the detail that six of them form a convenient "drax" or grasp<sup>4</sup>, but for our purpose the most important factor is their weight<sup>5</sup>.

<sup>1</sup> Cf. Pauly, *R.E.* viii, 475, 49.

<sup>2</sup> Sir C. Walston, *The Argive Heraeum*, i, p. 62. The illustration is from *J.I.A.N.* ix, 1906, Pl. X. Svoronos described these objects, *l.c.* p. 192 f. and, though he failed to note their metrological value, we owe to him their preservation and the careful record of their length and weight.

<sup>3</sup> Cf. § 96.

<sup>4</sup> *J.I.A.N. l.c.* p. 197, fig. 17.

<sup>5</sup> *l.c.* where the weights are recorded. 176 rods survive in various stages of completeness and fragments as well. Before they were broken there must have been 180 rods making up the 30 drachmae in the half mina.

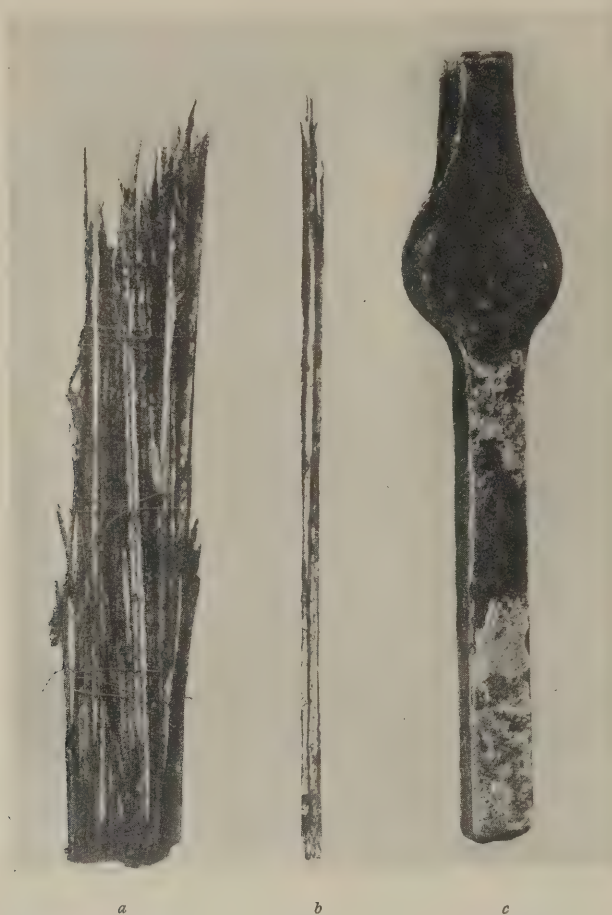


FIG. 66. *a, b*, obeloi. *c*, iron weight, all from the Argive Heraeum.

TABLE V

	Divided by	Grammes	
The large iron bar (Fig. 66 <i>c</i> ) weighs 73,000 g.	400	= 182.5	= HALF A PHEIDONIAN MINA OR 30 drachmae
The whole bundle of spits, with the fragments broken from it (Fig. 66 <i>a</i> ), weighs 72,540 g.	400	= 181.35	= HALF A PHEIDONIAN MINA OR 30 drachmae
A "drax" of six of the best preserved specimens (Fig. 66 <i>b</i> ) weighs 2418 g.	400	= 6.03	= ONE PHEIDONIAN DRACHMA
An "obelos," estimated by the average of the same six, weighs 403 g.	400	= 1.008	= ONE PHEIDONIAN OBOL

Now, as was shown above (Table IV), the Pheidonian didrachm in the seventh century B.C. weighed from 12 to 12.4 grammes, giving a drachma of 6 to 6.2 grammes and a half-mina of 180 to 186 grammes. The correspondence between iron and silver is evident. Pheidon tariffed them at 1 : 400 when he decided to replace the old iron money by silver coins, and in the Heraeum he dedicated half a Peloponnesian silver mina's worth of obeloi and half a silver mina's worth of solid iron, of which more below<sup>1</sup>.

This is not the place in which to consider the debated question of Pheidon's date, especially as the last word has been so well said on this subject by Ure<sup>2</sup>. I unhesitatingly accept his conclusions that Pheidon interfered at Pisa in the 28th Olympiad, 668 B.C., and that he was master of Aegina as well as of all Argolis. Four years later, in 664 B.C., Psamtek I, who had thrown off the Assyrian yoke and had become Pharaoh of all Egypt with the help of Greek troops, built the fortress of Defenneh (or Daphnae)<sup>3</sup> and Egypt was thrown open to Greek commerce. The Milesian factory at Naucratis was founded not long after and other Greeks from Asia joined the Milesians. But only one state of Greece Proper secured the privilege of a factory at Naucratis—Aegina. It is possible that this footing in Egypt was won by the Aeginetans in the lifetime of Pheidon's successor.

§ 94. A Pheidonian silver drachma (see Table IV) might weigh as much as 6.2 grammes; further, the ratio of iron to silver was (Table V) in his day 400 : 1. In consequence a handful of six iron obeloi weighing together 2418 grammes would have to be replaced by a silver drachma of 6.03 grammes, and by such a drachma they *were* replaced. If the Aeginetans, like their contemporaries, called 60 drachmae a mina, the following table (Table VI) represents the system of their silver coinage.

TABLE VI

$\frac{1}{30}$	Drachma	6.03 to 6.2 g.
$\frac{1}{30}$	Didrachmon	12.06 ,, 12.4 ,,
1	Mina	361.80 ,, 368.0 ,,

TABLE VII

1	1 Kedet	.9096 g.
10	1 Deben	90.96 ,,
40	4 ,,	363.84 ,,

Now the Egyptians from the XVIIIth Dynasty onwards generally used the *Kedet-Deben* system for weighing precious metals<sup>4</sup>, and it is possible to determine this standard with exactitude from two weights of On (or Heliopolis). The first (British Museum, No. 33,871) is inscribed "Five Kedets of the Treasury of On<sup>5</sup>," and weighs (allowing for a slight fracture) 45.4 to 45.5 grammes, implying a *kedet* of 9.08 to 9.1 grammes. The second, perfectly preserved, is in the Louvre and bears the legend "Half (deben), five (kedets),

<sup>1</sup> § 96.

<sup>2</sup> *Origin of Tyranny*, p. 154 ff. He suggests *ca.* 715-665 B.C. as the probable dates between which Pheidon was king.

<sup>3</sup> Hdt. ii, 30.

<sup>4</sup> Sir A. Evans in *Corolla Num.* p. 339.

<sup>5</sup> Figured by Sir W. Ridgeway, *Origin of Currency, etc.* p. 240, fig. 22.

temple of On." This scales 45.48 grammes, giving a *kedet* of 9.096 grammes<sup>1</sup>. The one weight confirms the other<sup>2</sup> and establishes the scale in Table VII.

The new Aeginetan silver mina of 361.80 to 368 grammes thus corresponded with four Egyptian debens, and for the Aeginetans this was a fortunate coincidence which must have facilitated their trade in the Delta.

§ 95. It seems as though the discovery of this fixed relationship between the



FIG. 67. Fragments of iron obeloi from Sparta in the Fitzwilliam Museum.

is recorded in other states, but only in such states as coined their silver on the Pheidonian standard.

(i) *Phocis*. The Delphians were proud of the dedication which Rhodopis, the famous Greek courtesan of Naucratis, had piled up behind the altar of the

Pheidonian iron spits, or rods, and the Pheidonian drachma and obol may throw not a little light on certain economic problems of a later period.

The Lacedemonians regularly used these rods of iron (Fig. 67)<sup>3</sup> as currency, and it has been difficult hitherto to conceive how any satisfactory trade could be accomplished on this basis with neighbouring states. But if iron *regularly* stood to silver as 400 : 1, even as at Argos in Pheidon's day, then such an iron spit, about 1 m. 19 cm. long, would have been recognized all over Peloponnese as the equivalent of a silver obol. Plutarch<sup>4</sup> records the tradition that Lycurgus "ordained the use of iron money only. Then to a great weight and mass of this he gave a trifling value, so that ten mina's worth required a large storeroom in the house, and a yoke of cattle to transport it." As pointed out already, half a mina of Pheidonian spits weighed 72½ kilogrammes; and on this analogy, supposing the standard to have been maintained, ten minas would weigh 1450 kilogrammes, or nearly 1½ tons. A yoke of oxen would certainly be required to haul this sum.

Sparta, indeed, seems not to have been alone in the use of these iron spits. Their employment

<sup>1</sup> Cf. Viedebantt, *Antike Gewichtsnormen*, etc. p. 63 f. for full description of these weights.

<sup>2</sup> There can be no question of taking into account other *kedet* weights which differ from these two of which one is a treasury weight, the other a temple weight. These are above suspicion, others are not. Cf. Sir W. Ridgeway's note on this point, *l.c.* p. 241.

<sup>3</sup> The figure depicts some of this Spartan "money" found during the excavations at Sparta conducted by the British School in Athens. These obeloi are now preserved in the Fitzwilliam Museum, Cambridge, and are published for the first time here by the permission of Miss Winifred Lamb. The chief passages mentioning this currency are Plutarch, *v. Lycurg.* 9, *v. Lysand.* 17.

<sup>4</sup> *l.c.*

Chians<sup>1</sup>. This consisted of a great number of iron obeloi ("spits for roasting beef," as they called them) which they claimed as representing a tithe of the money Rhodopis had gained by her trade. These seem to have been a bundle or bundles of obeloi exactly like the one unearthed at the Argive Heraeum.

(ii) *Sicyon*. In the lost *Constitution of the Sicyonians* Aristotle had something to say about "iron obeloi" and oboloi<sup>2</sup>, from which their use at some time in Sicyon may be inferred.

(iii) *Thebes*. Even in the fourth century iron bars must have been employed as small change in Boeotia, for "Epaminondas," so Plutarch tells<sup>3</sup>, "was buried by the Thebans at the public cost because of the poverty in which he died; for it is said that nothing was found in his house after his death except one 'iron spit' (ὀβελίσκον σιδηροῦν)."

The Lacedaemonians ascribed all their customs to Lycurgus, whose existence or non-existence need not here concern us<sup>4</sup>, since many of their institutions must have originated before his supposed date. Perhaps the Spartan use of iron as a currency was due not so much to a disciplinary law as to an economic circumstance; for, while they had no gold, silver or copper mines, there lay within their territory the chief iron mines of Greece, which were situated in the mountains of the Malean cape and in the Taenarian promontory<sup>5</sup>. It is not unlikely that their iron obeloi continued to be just 400 times the weight of the Aeginetan silver oboloi which formed the staple currency of all Peloponnese.

§ 96. A further point of some interest arises from the Argive spits. They were when complete about 1 m. 19 cm. long, that is to say equal in length to the great iron weight (Fig. 66 c) of 73 kilogrammes found with them<sup>6</sup>. Now the Aeginetan foot was 33.3 cm., this being one of the new measures which Pheidon gave to the Peloponnesians. Before that the Greeks had presumably all employed the older "Attic foot" which was 29.57 cm.<sup>7</sup> This sum multiplied by 4 = 1 m. 18.28 cm., or just 5 mm. ( $\frac{3}{16}$ th of an inch) short of the mean length (1 m. 18.8 cm.) of the great iron weight and of the Argive spits. These spits were conceivably intended to be 4 pre-Pheidonian feet long. The Spartans are said<sup>8</sup> to have made them brittle by immersion in vinegar, perhaps so that they might easily be broken into foot-lengths representing quarter-obols or tetartemoria. The parallel with ancient Roman practice is significant; for the Roman foot measured 29.6 cm., being practically identical with the pre-Pheidonian or "Attic" foot. It was called the *as* and divided into 12 *unciae*<sup>9</sup>. From the foot (*as*) length of copper came the monetary copper *as* and its 12 *unciae*.

As to the iron weight, it is almost certainly a *Kanōn*<sup>10</sup> or official measure both of weight and length. It determines both the weight of 180 obeloi and the

<sup>1</sup> Hdt. ii, 135.

<sup>2</sup> *Ap.* Pollux, *Onom.* ix, 77.

<sup>3</sup> *v. Fab. Max.* 27. It may be argued that this was no more than a kitchen utensil.

<sup>4</sup> Cf. summary in How and Wells' *Comment. on Hdt.* i, p. 85 f.

<sup>5</sup> Ardaillon in Daremberg, Saglio, *Dict. d. Antiq.* iii, p. 1850 b.

<sup>6</sup> The length is not 1 m. 20 cm., as stated *l.c.* by Svoronos. Mr A. M. Woodward has kindly sent me the following particulars: the weight is cut off below askew. The height of the left-hand side is 1 m. 19.5 cm. and that of the right-hand side is 1 m. 18.2 cm. (mean length, or height, 1 m. 18.8 cm.).

<sup>7</sup> Ridgeway in *Companion to Grk. Stud.*<sup>3</sup>, Cambridge, § 570.

<sup>8</sup> *Plut. v. Lycurg.* 9.

<sup>9</sup> Columella, 5, 3. Ridgeway in *Comp. Lat. Stud.*, Cambridge, § 676.

<sup>10</sup> Svoronos, *l.c.* p. 198.

length which they should assume. It is the "mint-apparatus" of an age before coins were struck, and as such it was dedicated when obsolete, as at a later date the Athenians dedicated in the Parthenon the whole of the obsolete mint-apparatus employed to coin their gold issue of 406 B.C.<sup>1</sup>

The iron obeloi, by Pheidon's act, ceased to have official recognition, but continued as currency unrecognized (save in Sparta) by the state down to the fourth century B.C. The fact that the Argive obeloi no longer represented *standard* weight and length made it possible for Pheidon to introduce new "measures for the Peloponnesians<sup>2</sup>," although his coinage was still based on the relative value of iron and silver.

§ 97. The history of Hellas is in large measure a history of the conflict between Ionian and Dorian, between the older inhabitants and the newer invaders, between those who had once used bronze and those who brought in the use of iron. The copper mines of Euboea supplied the former with metal; the latter worked the iron of southern Peloponnesus. To the Helladic peoples and the Ionians belonged originally the gold stater and the great copper talanton; the Achaeans of Homer used gold, copper and iron as currency; the Dorians used the iron obelos and drachma<sup>3</sup> which they generally abandoned in favour of a silver currency.

In art, as is well known, the meeting place of the Doric and Ionic was Athens. At Athens too the rival systems of currency met and merged. She began indeed to coin on the Dorian system, whence she derived her obols, drachmae and didrachms. Under Solon's reform, however, Athens went over to the Ionian system and adjusted her money to the Ionian Euboic talanton.

§ 98. It is now necessary to return to the Euboic talent of 25 kilogrammes.

TABLE VIII  
SYSTEMS. Weights in grammes

(i) Lydian-Milesian				(ii) Cyreno-Corintho-Attic				(iii) Paeonian			
T	60	3600	25,500	T	60	6000	25,500	T	60	5400	25,500
M	1	60	425	M	1	100	425	M	1	90	425
DS	$\frac{1}{30}$	2	14.16	DD	$\frac{1}{50}$	2	8.50	DD	$\frac{1}{45}$	2	9.44
S	$\frac{1}{60}$	1	7.08	D	$\frac{1}{100}$	1	4.25	D	$\frac{1}{90}$	1	4.72

T = Talent. M = Mina. DS = Double-shekel. S = Shekel. DD = Didrachm. D = Drachma. The second column in each system gives the proportions in terms of Minae, the third in terms of drachmae.

<sup>1</sup> Cf. A. M. Woodward in *N.C.* 1911, p. 351.

<sup>2</sup> Hdt. vi, 127.

<sup>3</sup> I must refrain from pursuing this interesting question of obelos and drax into regions beyond Greece. The abundant evidence of iron, and sometimes, bronze spit-currency used in Etruria, Central Europe, Gaul, Spain and Britain, is collected by M. J. Déchelette in an illuminating article, "Les Origines de la drachme et de l'obole," in *Rev. Num.* 1911, p. 1. The writer, however, did not perceive the relationship of iron and silver, at 400 : 1, which produced the Pheidonian standard. A recent find of iron spit-currency of ancient British origin is now housed in the Winchester Museum (found on Worthy Down, Winchester). I am indebted to Miss Webb of Melbourne University for calling my attention to these currency bars which are published by R. M. Hooley in the *Antiquary's Journal*, 1921. Cf. also *Brit. Mus. Guide, Antiquities of Early Iron Age*, 1905, p. 148 ff.

From this table it is clear that in the seventh and sixth centuries B.C. the Euboïc talent and its  $\frac{1}{60}$ th part, or mina, were common to the Lydians and Ionians, the Thracians of Paeonia, the Cyreneans, Corinthians and to the Athenians after Solon's reform. The credit of this discovery is due to O. Viedebantt<sup>1</sup>, from whom I dissent only in so far as to believe that the Lydian-Milesian unit of 14·16 grammes was a double-shekel and not a shekel, just as the Athenian unit of 8·5 grammes was a didrachm and not a drachma<sup>2</sup>. Viedebantt, however, did not realize that the talent was of Greek mainland origin, that it passed to Ionia whence the Lydians borrowed it, and that when some of the Greeks of Europe adopted it they were only taking back a norm which had been their own centuries before. In Asia Minor the Lydians and Milesians established this talent of 25½ kilogrammes and its mina of 425 grammes. The Paeonians of Thrace took it over, and for some reason as yet unexplained<sup>3</sup> divided the mina by 90, instead of 60, to get their drachma. Again the Milesian system must have prevailed at Naucratis, where the Milesian colonists dominated the remaining Greeks. It hardly availed the Aeginetans that their system happened to agree with the native Egyptian norm<sup>4</sup>, for the bulk of the trade passed through the hands of wealthy Ionian merchants. Hence, when the Greeks of Cyrene determined on a coinage, they adapted their standard, not to *kedet* or Pheidonian drachma—Dorians though they were—but to the Milesian mina and talent. They, however, divided that mina not into 60 but into 100 drachmae or 50 didrachms; and this didrachm proved to weigh 8·5 grammes; being in fact of the same weight as the old Homeric talanton or gold-stater. The Corinthians began to coin perhaps during the reign of Cypselus<sup>5</sup>, and, since their currency was of silver, employed for their staters the same weight as the Greeks of Cyrene, thereby facilitating trade with Egypt through Naucratis<sup>6</sup> and with Miletus, Ionia and the Lydian Empire. It was to this Cyreno-Corinthian silver standard that Solon adjusted the Athenian money when he carried through his reforms of 594 B.C. The proof of these facts is to be found in the tables of frequency for this coinage given below (Table XI, columns i, ii, iv, v).

The Pheidonian standard, though of independent origin, had a "working relationship" to this Euboïc talent and mina. Aristotle<sup>7</sup> expressed the relationship as follows: "The Mina which had formerly held 70 drachmae was filled up to 100 drachmae." He was, of course, writing from a fourth century point of view and so had to put the matter in terms of the mina of his own day—the Euboïc-Attic mina. Such a mina, had it been employed in pre-Solonian times, would have held 70 Pheidonian drachmae. Solon increased the number of drachmae in a mina's worth of silver so that 100 now made up a mina. This statement is corroborated by the coins themselves, for the Euboïc mina,  $\frac{1}{60}$ th

<sup>1</sup> Viedebantt, *Antike Gewichtsnormen, etc.* Chs. III, IV, VIII.

<sup>2</sup> As was demonstrated, §§ 10, 59.

<sup>3</sup> Viedebantt's suggestion, *l.c.* p. 72, regarding the conjectural local ratio of silver and copper, is not convincing.

<sup>4</sup> Cf. § 94 above.

<sup>5</sup> *H.N.*<sup>2</sup>, p. 399.

<sup>6</sup> Cf. § 11 above.

<sup>7</sup> *Ath. Pol.* 10.

of the talent, weighed 425 grammes, and this divided by 70 gives a Pheidonian drachma of 6.07 grammes, the actual weight already ascertained in Tables IV and V above<sup>1</sup>.

§ 99. The Lydian-Milesian system (Table VIII, i) was completely changed by the bi-metallic reform of Croesus. This can be most briefly demonstrated in a table.

TABLE IX

(i) Ratio EL : AR :: 1 : 10 ∴ 1 EL shekel of 7.18 to 7.15 g. = 10 AR shekels of 7.15 g. each. Now 20 AR shekels of 7.15 g. each weigh 143 g. Ratio A : AR :: 1 : 13 $\frac{1}{3}$ . <span style="float: right;">143 ÷ 13<math>\frac{1}{3}</math> = 10.72.</span> ∴ to go with the <i>double</i> EL shekel of 14.16 } Croesus struck a gold coin of 10.72. or with 20 AR shekels of 7.15 }	
This was his first adjustment of A to the extant EL and AR currency.	
NEXT	
(ii) Croesus issued a A coin $\frac{3}{4}$ of the 10.72 A coin = 8.04; and AR of 10.72 g. of which 10 weigh } 10.72; " AR " 5.36 " " " 20 " " } but 10.72 ÷ 13 $\frac{1}{3}$ (ratio A : AR being 13 $\frac{1}{3}$ : 1) = 8.04. ∴ 10 AR of 10.72 each } = 1 A coin of 8.04. and 20 AR " 5.36 " }	
For details cf. Viedebantt, <i>Antike Gewichtsnormen etc.</i> , p. 42 ff.	

In actual practice a table of frequency<sup>2</sup> shows that the new silver shekel of Croesus weighs from 5.22 to 5.31 grammes (rather than the full 5.36 grammes).

As a result of these apparently complicated adjustments of (i) a pure gold unit to the older electrum double-shekel, and (ii) the creation of a new silver coinage adjusted to the new gold coinage the Aegean world found itself confronted with an imperial Lydian currency consisting of a gold unit of 8.04 grammes equivalent to 10 silver double-shekels of 10.72 grammes each or 20 silver shekels of 5.36 grammes each. As this new coinage had been evolved from the old Lydian-Milesian system it was found that the Attic coinage, which had been related to the latter, was likewise in harmony with the Croesean money. In fact five Attic drachmae, of 4.25 grammes each, weighed 21.25 grammes, while four shekels of Croesus, of 5.31 grammes each, weighed 21.24 grammes. The Lydian money had superseded the money of the Ionian cities, but Athenians could still trade advantageously with Asia Minor, five of their drachmae being given in exchange for four Lydian shekels.

When Peisistratus introduced his "owls" in Attica he adhered to the same standard as the Eupatridae had employed. This is proved by the table of

<sup>1</sup> As to the Pheidonian system, the views expressed in *The Temple Coins of Olympia*, Cambridge, 1921, p. 110 f., regarding the Aeginetan system may now need revision.

<sup>2</sup> Viedebantt, *l.c.* p. 42.

frequency (Table XI, columns vi, vii, viii) which likewise shows that his Paeonian issues did not diverge from that standard.

§ 100. In 546 B.C. he returned to Athens, and in that, or the following, year Croesus and his empire fell before Cyrus the Persian. Now the Persians had adopted the Royal Standard of Babylonia, and with the Persian arms the Babylonian standard swept up to the shores of the Aegean.

With the origins or age of the Babylonian standard the present enquiry is not concerned, but only with its possible effect upon the Attic system. In its monetary form it took under the Persian kings a shape which was manifestly modelled upon the coin-system of Croesus, for it was bi-metallic and so adjusted that twenty silver shekels or *sigloi* were exchangeable for one gold unit or *Daric* which weighed 8.34 grammes.

In the *British Museum Catalogue of Coins of Arabia, Mesopotamia and Persia* Dr Hill has succeeded in classifying the coins approximately under different Achaemenid kings, and for the period under consideration account can only be taken of the pieces minted in the reigns of Darius I and Xerxes. These are

TABLE X

Grammes	Darius I I A, II A	Xerxes I B, II B	Totals including Nos. 92-106
Below to 5.30	2	1	4
5.30 „ 5.35	1	—	3
5.35 „ 5.40	3	2	8
5.40 „ 5.45	6	4	14
5.45 „ 5.50	12	7	22
5.50 „ 5.55	11	10	22
5.55 „ 5.60	6	4	10
5.60 „ 5.65	5	2	7
5.65 „ 5.70	1	—	1
5.70 „ above	2	—	2

Dr Hill's classes I A, II A and I B, II B, as well as the coins catalogued under Nos. 92 to 106. A table of frequency constructed from these coins points to a preponderance of *sigloi* weighing between 5.40 and 5.59 grammes.

Now when Croesus had secured the monopoly of coinage in Asia Minor five Attic drachmae were exchangeable for four shekels of Croesus. But the latter weighed only 5.31 grammes, while the new Persian shekels of Darius weighed about 5.45 to 5.55 grammes. If, therefore, Attic

drachmae, either for reasons of trade or political sympathy, were to rank beside Persian as they had ranked with exactitude beside Lydian shekels there must also be a proportionate and corresponding rise in weight. This is not precisely what happened. Nevertheless during the latter part of the reign of Peisistratus the standard betrays an improvement, which became gradually stabilized during the reign of Hippias and in the subsequent democratic period, perhaps under the influence of contact with the Asiatic markets. The tetradrachm, one gathers from the table below (Table XI, cols. ix to xv) rose gradually from about 17 grammes (drachma 4.25 grammes) to 17.20 grammes (drachma 4.30 grammes) with the result that five Attic drachmae, of 4.30 grammes each, weighed 21.50 grammes, while four *sigloi* of Darius, of 5.45 grammes each, weighed 21.80 grammes, or four *sigloi* of Darius, of 5.55 grammes each, weighed 22.2 grammes. The difference, in fact, was no more than one-third or two-thirds of a gramme

in five drachmae, an approximation sufficiently accurate for the smaller transactions of any merchant of the sixth century B.C.<sup>1</sup>

It will be remembered that Corinth coined on the same standard as Athens, and in Corinthian staters there may be traced a rise in weight similar to that observed in Athenian tetradrachms. This increase (Table XI, col. iii) corresponds with the adoption of a reverse type, the helmeted head of Athena, by the Corinthians, and this can only have been adopted subsequent to the introduction by Peisistratus of an Athenian coinage with two types<sup>2</sup>. From the fact that with the adoption of a second type the Corinthian money rises in weight, so as to approximate to Persian rather than to Lydian shekels, it is possible to fix the date of these Corinthian coins as later than 546–5 B.C., the year of the fall of the Lydian Empire. It is not yet, however, possible to say whether Corinth and Athens were both influenced by Persia, or whether Peisistratus, the autocrat, improved the standard of his money of his own free will, independent of Asiatic markets, Corinth of necessity following his lead.

One historical point presents itself. The Lydian money of Croesus ceased in 546–5 B.C.; Darius I came to the throne in 521 B.C., and it is customary to ascribe the beginning of the Persian coinage to that monarch. He may have initiated the gold coins which were named *Darics* after him<sup>3</sup>, but the evidence of the weights of Athenian and Corinthian coins may suggest that the silver *sigloi* were introduced by Cyrus, or at least by Cambyses. The gap of forty-three years is not filled by the coinage of any other Asiatic state, and the Persian *sigloi* of the Great King are, even in fabric, the direct successors of Lydian shekels. Darius may have been the first Great King to coin in the central regions of his empire; but it is a preferable conclusion that the satraps of Cyrus began to coin silver "Persian archers" in the west of his dominions not long after the cities of Ionia passed from beneath the Lydian to the Persian yoke.

## § 101.

## TABLE XI

## A TABLE OF FREQUENCY OF THE CYRENAÏC, CORINTHIAN AND ATHENIAN COINAGE BEFORE THE PERSIAN INVASION

The didrachm weights are so arranged as to tally with the corresponding tetradrachm weights.

Column i. Cyrene. Here didrachms and tetradrachms are taken together for convenience, the latter at half their full weight. The sources whence these weights are drawn are Babelon's *Traité*, II, i, and Müller's *Numismatique de l'Ancienne Afrique* (for specimens not cited in *Traité*).

Cols. ii and iii. Corinthian staters. The weights are derived from B.M.C.

<sup>1</sup> In large transactions the discrepancy of 0.06 g. or 0.12 g. per drachma would mount up. But in such transactions the merchants' scales would in any case be employed.

<sup>2</sup> Cf. H. von Fritze in *Z.f.N.* xx, 1897, p. 142 ff.

<sup>3</sup> Hdt. iv, 166. The story of the silver of Aryandes in Egypt does not preclude an earlier issue of *sigloi* in Asia Minor. Further Harpocration in *Schol. ad Aristoph. Eccles.* 602, states that even the gold *Darics* were struck before the time of Darius.

*Corinth, Traité*, II, i, Regling's *Die Griech. Münzen d. Samml. Warren*, and the published catalogues of sales held in Munich and Lucerne.

Cols. iv to xv. The weights of the Athenian coins are derived from the Corpus at the end of this volume.

The great irregularity of the weights of early coins is evidenced by these tables, which show that very little exactitude governed the weighing of the silver blanks before types were struck upon them. The coins in columns i to viii offend most in this respect. After 490 B.C., however (Column xv), the Athenian mint-officials succeeded in coining tetradrachms of which the weights are comparatively accurate.

The actual norm of each group of coins in the table below must lie somewhere between the dotted horizontal lines.

TABLE XI

GRAMMES	i	ii	iii	iv	v	GRAMMES	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv
	CYRENE	CORINTH, no rev. type	CORINTH, with rev. type	ATHENS			PEISISTRATUS				HIPPIAS		ISAGORAS	DEMOCRACY		
				EUPATRID, Group B	EUPATRID, Group D		ATTICA, Group C	PAEONIA, Group E	PAEONIA, Group F	ATTICA, Group G <sub>i</sub>	ATTICA, Group G <sub>ii</sub>	ATHENS, Group H	ATHENS, Group K	ATHENS, Group L	ATTICA, Group M	ATTICA, Group N
Under to 7.90	3	2	—	3	3	Under to 15.8	—	I	—	—	—	—	I	I	I	—
7.90 „ 7.95	—	2	I	—	—	15.8 „ 15.9	I	—	—	—	—	—	—	—	I	—
7.95 „ 8.00	2	2	I	I	I	15.9 „ 16.0	—	—	—	—	I	—	—	—	—	—
8.00 „ 8.05	2	I	—	—	3	16.0 „ 16.1	—	—	—	—	I	I	—	—	—	—
8.05 „ 8.10	2	2	I	—	—	16.1 „ 16.2	—	I	—	—	I	—	—	—	I	—
8.10 „ 8.15	—	5	I	I	2	16.2 „ 16.3	2	—	I	I	—	—	I	—	—	—
8.15 „ 8.20	—	5	I	4	—	16.3 „ 16.4	—	3	—	—	I	—	I	—	2	—
8.20 „ 8.25	8	3	I	3	4	16.4 „ 16.5	—	—	—	—	—	—	I	—	I	—
8.25 „ 8.30	2	9	—	3	2	16.5 „ 16.6	I	2	3	2	3	—	3	I	5	—
8.30 „ 8.35	—	3	4	I	4	16.6 „ 16.7	2	6	I	5	3	—	I	I	I	I
8.35 „ 8.40	3	7	2	2	2	16.7 „ 16.8	2	7	—	2	5	I	I	—	6	2
8.40 „ 8.45	2	4	4	9	8	16.8 „ 16.9	4	7	2	14	8	2	4	—	7	3
8.45 „ 8.50	I	I	6	7	II	16.9 „ 17.0	3	2	3	10	II	5	2	5	II	5
8.50 „ 8.55	7	5	I6	4	9	17.0 „ 17.1	2	5	2	II	6	4	3	2	7	7
8.55 „ 8.60	5	I	I2	3	3	17.1 „ 17.2	I	5	6	9	8	9	I	7	9	II
8.60 „ 8.65	9	3	I4	2	—	17.2 „ 17.3	—	3	3	4	5	7	2	I	4	2
8.65 „ 8.70	3	—	8	—	3	17.3 „ 17.4	—	I	—	4	3	4	I	I	I	2
8.70 „ 8.75	I	I	2	I	I	17.4 „ 17.5	—	—	I	4	2	I	I	—	6	—
8.75 „ 8.80	—	—	I	—	—	17.5 „ 17.6	I	I	—	—	I	I	—	—	2	—
8.80 „ 8.85	—	2	—	—	—	17.6 „ 17.7	I	I	—	I	—	—	—	—	I	—
8.85 „ over	—	—	I	I	—	17.7 „ over	—	I	—	—	4	I	—	—	—	—

## CHAPTER XVI

ἀργύρου πηγή τις αὐτοῖς ἐστὶ θησαυρὸς χθονός.  
AESCH. *Pers.*, 238.

§ 102. The copper mines of Euboea and the iron mines of Peloponnese had their influence on the coin-standards of classical times, but the mine-shafts whence the Greeks drew their silver are from the numismatic standpoint naturally of far greater importance. The preceding chapters have been devoted chiefly to the historical and archaeological aspect of the early Attic coinage, and economic considerations have come only occasionally into view. It therefore seems best to consider briefly the economic aspect of Athenian coinage in the sixth century B.C. both as regards its source—the mines, and its distribution—the trade routes on which it was employed.

It is well known that the Greeks of Hellas, by contrast with the Greeks of Asia, coined only silver. But the states which can be named as issuers of an abundant coinage before about 560 B.C. are only three in number: Aegina, Corinth and Athens<sup>1</sup>. A question deserving of some consideration is, whence did these states obtain their silver?

§ 103. Now in the Eastern Mediterranean there are records of no more than four important silver-mining districts; the mines of Damastium in Epirus, the mines of the isle of Siphnos, the Laurian mines of Attica and that greatest of all mining regions, Paeonia. In the last region there was a vast local coinage of early date; and indeed the wealthy cities of Asia, when they did coin silver as well as electrum, must have bought their metal almost entirely from the Pangaeian mines, for the Thracian coast had ever closer relationship with Asia than with Europe.

But it seems more than a mere coincidence that the other three mining districts should correspond exactly with the respective spheres of influence of the three earliest Hellenic silver-coining states.

According to tradition Corinth founded Corcyra in 734 B.C., and these two cities joined in founding Epidamnus, or Dyrrhachium, in 627 B.C. and Apollonia in 588 B.C., both places in the Illyrio-Epirote region. Strabo<sup>2</sup> records that the Damastian silver mines lay among the tribes, including certain Brygoi<sup>3</sup>, between the territories of Epidamnus and Apollonia and the Acroceraunian promontory

<sup>1</sup> It is possible that Aegae (B.T.II, i, Pl. XXXVII, 6 to 8) and Argos (*l.c.* 12 to 18) issued local small change before this date. If so Aegae could buy bar-silver from Corinth, Argos from Aegina. The Theban coinage almost certainly began after the middle of the sixth century B.C. and the same remark applies to Euboean silver. A number of the islands of course coined money in the seventh century, but they fell more within the Asiatic Greek sphere of influence, which is not our concern. For Ceos, however, cf. § 8.

<sup>2</sup> vii, 326. There is some uncertainty as to their exact whereabouts.

<sup>3</sup> I.e. Phrygians, kinsmen of the Thraco-Phrygians who dwelt around the Pangaeian mines.

north of Corcyra. If more were known of Corinthian colonial history we should perhaps find that the real cause of the constant quarrels between Corinth and Corcyra, quarrels which always involved a question of supremacy on the Illyrian and Epirote coasts, centred primarily around the supply of silver which could be obtained from the mines of Damastium<sup>1</sup>. Unfortunately, as Strabo is the sole authority to mention them, no other evidence exists concerning the age of the Damastian mines, but it is a fair assumption that the Brygoi of Epirus were no more backward than their cousins, the Bryges of Thrace, in working the silver-bearing veins.

Aegina in the sixth century held the thalassocracy of the Aegean<sup>2</sup>, just as Corinth and Corcyra controlled the Ionian Sea; and the silver coinage of Aegina was at that time more plentiful than any other. It seems probable that Aegina had a first claim upon the enormously wealthy silver mines of the isle of Siphnos which brought those islanders so great a fortune that, after dividing the profits among themselves<sup>3</sup>, they were able to erect at Delphi a treasure house equal to that of the wealthiest city<sup>4</sup>. Indeed when certain Samians had attacked Siphnos and raised a forced levy of 100 talents the Aeginetans took fierce vengeance upon them<sup>5</sup>, from which it is obvious that Siphnos was under the special protection of Aegina.

The source whence Athens drew her supply of silver was that

Spring of silver...treasure-house of Earth

as Aeschylus called the mines of Laureion. Xenophon in his treatise on Revenues says, "that they were worked in very ancient times is well-known to all; for assuredly no one attempts to specify at what time they were formed<sup>6</sup>." Modern discoveries of Mycenaean remains at Thoricus in the Laurian district<sup>7</sup> point to the conclusion that the mines may have been worked in a small way even in Mycenaean times, for it is unlikely that an early settlement would have been founded in a barren land, unfit for agriculture and removed from any trade route, unless some real material advantage, such as silver, was the motive that drew settlers to the place. And here it is perhaps worth noting that Pliny<sup>8</sup>, quoting apparently Theophrastus, states that the man who was claimed as the first to discover the use of silver was the Athenian Erichthonios, or as others say Aeacus, the first king of Aegina. These legends at least emphasize the early use of the metal by both Aeginetans and Athenians.

Thus Corinth, Aegina and Athens all seem to have had special opportunities of acquiring silver, and for that reason were the first to issue silver coin in Greece. Aegina and Corinth were first class Powers at a time when Athens was

<sup>1</sup> For the coins of Damastium (fourth century B.C.) cf. *Z.f.N.* i, 1874, p. 99 ff. Among the types occur a large square ingot with handle for carrying attached, also a miner's pickaxe.

<sup>2</sup> The coins of Siphnos, Seriphos as well as other island pieces of uncertain mintage were struck under Aeginetan influence.

<sup>3</sup> *Hdt.* iii, 57.

<sup>4</sup> *Paus.* x, 11, 2. Cf. Frazer's *Commentary*, v, p. 272 ff.

<sup>5</sup> *Hdt.* iii, 58, 59.

<sup>6</sup> *de Vect.* iv, 2.

<sup>7</sup> Baedeker, *Greece*<sup>4</sup>, p. 122.

<sup>8</sup> *H.N.* vii, 197.

but a state in the second rank, but having the means of raising money in her own territory, she was enabled primarily by that money to obtain a position second to none.

Chalcis and Eretria, two other powerful Greek cities, commanded great mines of copper. But the earliest Euboean coins had types on both sides<sup>1</sup> and cannot have been issued until after the time when Peisistratus introduced in Attica coins with a type upon each side, that is to say later than about 560 B.C.<sup>2</sup> Before that date, since they had copper in plenty to offer in exchange, it is probable that the Euboean cities bought currency from Athens; and this practice of buying coined money from some friendly neighbour who owned a mint must have been prevalent in early times<sup>3</sup>. Such a practice accounts for the frequent finds of Corinthian coins in Italy and Sicily, of Aeginetan money in Peloponnese and the islands and the Attic money in Euboea<sup>4</sup>.

§ 104. Those states which issued a currency that became in a sense international took great precautions against forgeries which would bring discredit upon their money. Even in Solon's day the coin-forgery may have been punished with death as Demosthenes implies<sup>5</sup>. This severity did not, however, deter many rogues from producing coins with a copper core plated with silver. Of the Athenian Eupatrid coins three such didrachms are preserved (Pl. XXIII, 1, 2, 3) with the types of astragalos, bull's head and wheel, none of course from official dies. In addition a drachm exists (Pl. XXIII, 4) of which, curiously enough no original official prototype is extant. This has the forepart of a horse which occurs on Eupatrid didrachms before 561 B.C. A few false tetradrachms, copies of Laurian owls, are also still extant (Pl. XXIII, 5 to 8).

§ 105. The extent of Athenian trade in the sixth century can be gleaned primarily from finds of Attic coins and pottery; and furthermore from the coinage and pots of other nations which are manifestly copied from Attic money or vases. From such observations there emerge three principal lines of early Athenian trade; the route to Egypt, the route to Etruria and the route into the Euxine.

To the first and oldest of the routes reference has already been made<sup>6</sup> and attention has been called to the considerable finds of Attic pottery at Naucratis. In addition to vases early Attic money has likewise turned up in the Delta to which fact hoards recorded at Sakha and at Naucratis bear witness (Appendix Nos. IV, V), finds in which both Eupatrid and Cleisthenic coins occur. But, considerable as was the Athenian trade with Egypt in early times, it was small as compared with the later commercial relations in the days of the Athenian Empire.

<sup>1</sup> Chalcis, B.T.II, i, Pl. XXXI, 1 to 6; Carystos, *l.c.* Pl. XXXII, 14 to 19; Eretria, *l.c.* 1 to 13. The fabric of the money of the two last named proves it contemporary with the coinage of Hippias and Isagoras, cf. § 72.

<sup>2</sup> § 26 ff.

<sup>3</sup> The Aeginetan "turtles" were the staple currency of Peloponnese. After the fall of Aegina in 456 B.C. the Olympian money took the place of the "turtles." Cf. Seltman, *Temple Coins of Olympia*, p. 55.

<sup>4</sup> Cf. the Pasha Find, Appendix, No. III.

<sup>5</sup> *c. Timocrat.* 212.

<sup>6</sup> § 6; § 11.

§ 106. The Attic trade with Etruria, on the other hand, was far greater in the sixth century than it was in later times. Such numbers of the best Athenian B.F. vases have come from Etruscan tombs that for long they were regarded as Etruscan products. The Attic vases were indeed so popular among the Tyrrhenians that they themselves strove to imitate Athenian ware<sup>1</sup>. But they imitated more than Attic vases, for when the Etruscans first began to coin silver they adopted, in part at least, the Attic standard<sup>2</sup>, and copied the types of the Athenian Eupatrid coins, which must have come to them at times with Athenian vases. Four characteristic Eupatrid types, the cartwheel, the owl within a circle, the Gorgoneion and the amphora in a circle<sup>3</sup> are shown in Fig. 68<sup>4</sup>. The last is probably a coin of Tyrrhenian Pisa, the others of uncertain

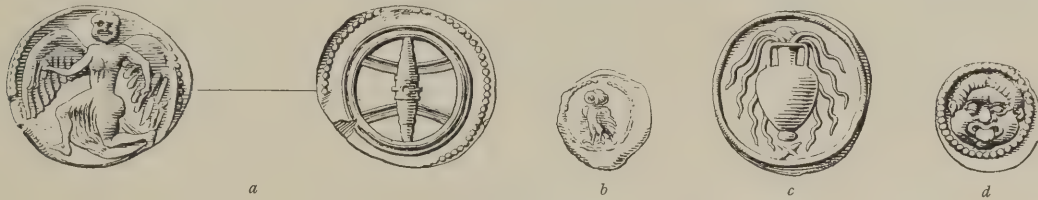


FIG. 68. Early Etruscan silver coins.

Etruscan mintage, but all seem inspired by the early money of Athens. The general tendency has been to date these coins too late<sup>5</sup>, whereas they were probably first issued not long after 500 B.C. It may be accepted as a general principle that if the money which the original state issued begins to grow scarce in the markets of the world, then other states which have grown accustomed to that money begin to copy it themselves seeking to perpetuate the popular types<sup>6</sup>.

With the exception of the Taranto Find there are, it is true, no records of finds of Eupatrid coins in Italy. But such negative evidence from a country where coin finds are only on the rarest occasions published is of no weight against the testimony of the actual Etruscan coin-types which so carefully reproduce early Athenian badges.

<sup>1</sup> Walters, *Hist. Ancient Pottery*, ii, p. 308, Pl. LVIII. Some excellent examples of Etruscan imitations of Athenian ware are now in the Museum of Ethnology, Cambridge.

<sup>2</sup> Which was of course also employed by Corinth, Syracuse, etc.

<sup>3</sup> The cuttlefish emerging from the amphora was perhaps suggested by coins of Eretria, which would circulate with Athenian money, for this creature was the device of the city.

<sup>4</sup> Fig. 68 *a*, Paris, Luynes: 11.30 g. (174.4), found at Vulci. Sambon, *Monn. Ant. de l'Italie*, Paris, 1903, Pl. I, 2. Fig. 68 *b*, Strozzi: 2.10 g. (32.4), *l.c.* p. 48, 32. Fig. 68 *c*, Volterra: 11.5 g. (177.5), *l.c.* Pl. I, 21. Another, Lloyd, Cambridge: 10.5 g. (162.1). Fig. 68 *d*, Berlin: 4.15 g. (64.1), *l.c.* Pl. I, 38.

<sup>5</sup> Sambon, *l.c.* dates them from about 450 B.C. Head, *H.N.*<sup>2</sup>, p. 12, suggests the fifth century B.C.

<sup>6</sup> Cf. the "Indian" (B.M.C. *Attica*, Pl. VII, 3 to 10) and especially Arabian copies (B.M.C. *Arabia, Mesopotamia, Persia*, Pl. VII, 3 to 29, Pls. VIII, IX, X, Pl. XI, 24 to 26) of Athenian coins. Anglo-Saxon Sceattas in their types often reproduce roughly the designs of vanishing Roman denarii (Keary, *The Coinages of W. Europe*, 1879, Pl. IV, 6 to 15) and some Carolingian pieces follow the same principle (Macdonald, *Coin Types*, Pl. X, 6).

The great Taranto Find (Appendix, No. VIII) is chiefly of value on account of the numerous coins within it which can be dated with exactitude. There are coins of Phocaea struck just before 545 B.C., when the inhabitants migrated westwards<sup>1</sup>, specimens of the first issues of Velia which these same Phocaeans founded some four years later, pieces of Sybaris, fresh from the mint, issued shortly before that great city was destroyed in 510 B.C.; and from Athens one of the last Eupatrid pieces of about 548 B.C., four of the civic issue of Hippias struck about 522 B.C.<sup>2</sup>, a coin of the period of Isagoras, 510 to 507 B.C., and a Chalcidian tetradrachm (Fig. 57 *a*) commemorating the alliance with Boeotia and minted in 507 B.C.

Even if this find were merely a silversmith's hoard and so had little to tell of trade, it would still tell much of sixth century history; for, since the pieces which can be dated exactly all fall within a period of thirty years, they mutually corroborate one another's dates. The coins, for example, of Phocaea, Velia and Sybaris prove the correctness of the dates that have been assigned to Athenian coins.

§ 107. The third great line of Athenian trade was through the Hellespont into the rich lands around the Euxine, a trade-route to which Athens held the key from 559 B.C. onwards, by reason of her possession of the Chersonese<sup>3</sup>. In many Greek and half-Greek cities on the northern coast of the Euxine finds of Attic B.F. ware have been plentiful<sup>4</sup>. Olbia, the great Graeco-Scythian town which was linked in after years with Attic Prasiae by means of the annual conveyance of the Hyperborean offerings, is referred to elsewhere<sup>5</sup>. But from coin-types deductions of an even earlier connection between Athens and Olbia are possible. Its people, whom the Hellenes called Borysthenitae<sup>6</sup> after the great river near the mouth of which it lay, were the Middlemen between Scythians and Greeks. They claimed Hellenic descent as being among the earliest colonists from Miletus<sup>7</sup>, but when Athens occupied the Chersonese which had once been Milesian she succeeded Miletus in her colonial trade.

The people of Olbia were the first of all nations to issue a bronze coinage, for Dr Minns has shown<sup>8</sup> that these Olbian coins are found in company with sixth century potsherds, and must belong to the end of the sixth and beginning of the fifth centuries. Like the earliest Italian bronze currency, which must, however, be dated a century and a half later, these pieces were cast, not struck, and had intrinsic value. But their types are what here concern us most (Fig. 69)<sup>9</sup>, for with one exception<sup>10</sup> they are all Athenian. The helmeted head of Athena is

<sup>1</sup> Hdt. i, 163 to 167.

<sup>2</sup> § 56.

<sup>3</sup> Cf. § 109. From 493 to 478 B.C. the Persians held Chersonesus and excluded Athenian trade.

<sup>4</sup> Minns, *Scythians and Greeks*, p. 339.

<sup>5</sup> § 7.

<sup>6</sup> Hdt. iv, 17, 18, 53.

<sup>7</sup> Hdt. iv, 78. Minns, *l.c.* p. 451.

<sup>8</sup> Minns, *l.c.* p. 484. Head, *H.N.*<sup>2</sup>, p. 272, was, of course, wide of the mark in assigning them to as late a date as the third century B.C.

<sup>9</sup> The specimens figured are from the collection of M. Giel, *Antike Münz. N. Griechenlands*, I, I, Pl. VIII, 1, 2. For another specimen of Fig. 69 *a* cf. Minns, *l.c.* Pl. II, 2, where weights are recorded as well as an illustration of one of the large pieces [max. weight 138 g. (2130)], obv.: Gorgoneion; rev.: APIX archaic eagle with spread wings upon a dolphin.

<sup>10</sup> The exception being the archaic eagle just described. The other *aes grave* Minns, *l.c.* Pl. II, 3, 4, are, of course, of considerably later date.

copied from the tetradrachms of Peisistratus, while the Gorgoneion and the wheel are simply copied from the common Attic Eupatrid didrachms with these types. Here again is exemplified the principle which was applied in the case of the Etruscan copies of Attic coins. When the Attic types grew scarce on certain markets other nations began to reproduce their types.

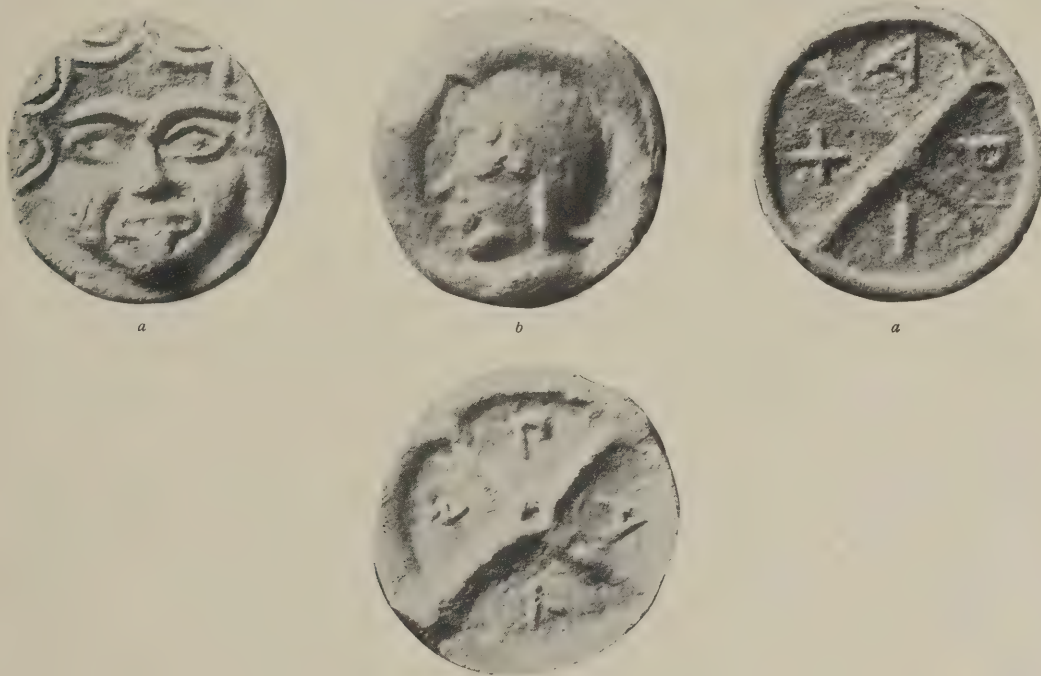


FIG. 69. Cast bronze coins of Olbia.

§ 108. The mention of Olbia and its sixth century trade with Athens brings forward for fresh consideration that most problematical of all coin hoards—the Schubin Find.

In 1824 Levezow got possession of thirty-six Attic Eupatrid coins and one early obol of Boeotian Orchomenos<sup>1</sup> which, it was claimed, were dug up at Schubin, a village in Posen<sup>2</sup>. The Eupatrid coins were didrachms and fractions of two types only—the wheel and facing Gorgoneion—which Olbia copied. Delight at the discovery of archaic Greek coins in Central Europe presently gave place to scepticism, which was increased when the Prussian authorities set the local police to interrogate the peasantry about the find. The yokels knew nothing of a hoard, for naturally enough no peasant will divulge the discovery

<sup>1</sup> Of the type of B.M.C. *Central Gr.* Pl. VIII, 2 or 3. To these were added, probably by Jewish merchants into whose hands they passed at Frankfort on the Oder or in Berlin, two later Greek coins and a Siamese silver piece.

<sup>2</sup> Friedländer in *Z.f.N.* v, p. 213, and Dr C. Fredrich in *Zeitschr. d. Histor. Gesellschaft für d. Provinz Posen*, xxiv, ii, p. 197. The coins are now all in the Berlin Museum.

of treasure trove to a minion of the law. This purely negative evidence, which has caused so much disbelief<sup>1</sup>, therefore proves nothing. On the other hand outside evidence tends to prove it far from unlikely that the coins were found in Posen. From rich finds of Roman and mediaeval coins in the same district<sup>2</sup> the place is admitted to have lain on some highway of great antiquity, while the astonishing find made at Vettersfelde<sup>3</sup> in Brandenburg in the year 1882 proves beyond doubt the importation of objects of sixth century Greek manufacture into Central Europe. An embossed pectoral and shield-device, a dagger-sheath, earrings and other objects, all of electrum<sup>4</sup>, the work of Ionian artists, were found; and it is worth noting that a number of these objects weigh approximately some multiple of the Attic drachma<sup>5</sup>. In a sense the Vettersfelde Find supplies the key to the Schubin Find<sup>6</sup>. Though the latter consisted of coins these coins were not imported for trade purposes, neither had they any subtle bearing upon the supposed amber-route from the Baltic to the Black Sea. If such a route existed the presence of these coins close to it is but a coincidence.

Now from the Vettersfelde Find we can read the tale of an adventurous Scythic chieftain who perhaps took service in the army of some wealthy city of Ionia, or at any rate purchased at Olbia rich electrum armour of Ionian manufacture. On a later adventure perhaps this chieftain met his end fighting in Germany.

A similar career of adventure would fully explain the Schubin Find. From the types of the earliest Olbian coins we learn that the Borysthenitae made much use of Athenian silver money. Thus the Teutonic or Scythic barbarian who buried the Schubin coins need have gone no farther than Olbia to collect his little treasure. Let us conceive, however, of a more attractive explanation for these coins, for tales, which must have some foundation, there are of the visit of the Scythic chieftain Anacharsis to Athens in Solon's time<sup>7</sup>, and it is well known that the Athenians employed Scyths as municipal police<sup>8</sup>.

Now Peisistratus collected a large force of mercenaries in Thrace to enable him to regain the tyranny in 546 B.C.<sup>9</sup> Is it possible that some Scythians joined the army, and that one of their number retained a portion of the pay he got in Athens, filled with a childish delight in the little shining silver disks which he took with him and buried under stress of circumstances? That the coins could not have got to Posen in the course of trade is clear, for no barbarian

<sup>1</sup> Especially on the part of Fredrich, *l.c.* who sets out the police "researches" and pronounces the find to be spurious. I am indebted to Mr J. M. de Navarro for calling my attention to Fredrich's paper.

<sup>2</sup> *Z.f.N. l.c.*

<sup>3</sup> 34 *Programm z. Winkelmannsfeste*, Berlin, 1883; Furtwängler, *Kleine Schriften*, i, p. 469. Schubin and Vettersfelde are apparently not 50 miles apart.

<sup>4</sup> Or 18 ct. gold, as Furtwängler, *l.c.* calls it.

<sup>5</sup> The diamond-shaped pendant, *l.c.* p. 474, 23.7 g. = 5 drachmae: the earring, 17.5 g. = 4 drms.; the armlet, 48.9 g. = 12 drms.; the chain, 212 g. = 48 drms.; the dagger-sheath, 178 g. = 40 drms.

<sup>6</sup> Furtwängler, *l.c.* p. 514, already noted the parallelism of the two Finds.

<sup>7</sup> Plut. *v. Sol.* 5. Diog. Laert. *v. Anachar.*

<sup>8</sup> Schol. in Aristoph. *Acharn.* 54.

<sup>9</sup> § 44.

there as yet understood the use of currency. But to the savage mind coins are not currency but bright trinkets, fraught often with an apotropaic value. Whether their barbarian owner got them in Athens or Olbia, one fact concerning them has so far passed unnoticed: their types are only such as would appeal to the primitive and superstitious mind<sup>1</sup>. What better than the bright grinning Gorgon-face for keeping away harmful spirits? As for the wheel, its significance as a solar emblem and its consequent use as an amulet is well known<sup>2</sup>. As such it was appreciated in Central Europe as much as in the Mediterranean area, for specimens of amuletic wheels intended for wear have been found in the Swiss lake-dwellings (Fig. 70)<sup>3</sup> of early bronze-age date.



FIG. 70. Wheel amulet from a Swiss lake-dwelling.

Thus the types of these particular early Eupatrid coins were such as to delight the heart of any savage who might have kept them as talismans though not for trade.

Strange but not impossible<sup>4</sup> it was that into the heart of barbarous Europe there should penetrate coins with the wheel-device of the proud house of Alcmaeon and the Gorgon-head, badge of Athena's citadel.

<sup>1</sup> If the little Orchomenian piece was part of the original find, as is probable, a little corn-grain in shining silver would of itself appeal to the savage mind.

<sup>2</sup> The solar wheel is discussed by Frazer, *Golden Bough*<sup>3</sup>, x, p. 334 ff. Cf. A. B. Cook, *Zeus*, i, p. 197 ff. p. 330, and H. Gaidoz, *Rev. Arch.* 1884 and 1885, various articles.

<sup>3</sup> The photograph is from a lead wheel amulet, 1.9 inches in diameter (without the loop) in my possession, from a Swiss lake-dwelling.

<sup>4</sup> As Friedländer himself admits *Z.f.N.* v, p. 216.

## CHAPTER XVII

ἀσπίδι γιγνώσκων ἀλώπιδί τε τρυφαλείη  
ἵππους τ' εἰσορόων· σάφα δ' οὐκ οἶδ' εἰ θεός ἐστιν.  
*Iliad* v, 182.

§ 109. In the year 559 B.C., when Peisistratus, having wedded the daughter of Megacles, was firmly established on the despot's throne<sup>1</sup>, there were many to whom the tyrant's rule was so irksome that they longed to escape from his sway. Among these was Miltiades, son of Cypselus of the Philaid clan, who traced his descent through Telamonian Ajax and Aeacus to Zeus himself. As he sat in the portico of his country house at Laciadae<sup>2</sup>, between Athens and Eleusis, there came along the dusty road a body of men clothed in strange garb. Prompted both by curiosity and natural hospitality he invited them into his house. The sequel to the romantic story told by Herodotus<sup>3</sup> was that the great Athenian noble left his home at the invitation of these barbarous strangers from the Chersonese who had come to Hellas in search of a strong man to lead and rule them. With him he took a body of discontented or adventurous Athenians as colonists, and building a wall across the neck of the Chersonese to keep off marauding Thracian tribes, he ruled with the firmness of a tyrant over the native Dolonci, and with the privileges of a Founder over the Hellenes in the colony.

Miltiades went out to the Hellespont with the help and benediction of Peisistratus<sup>4</sup>, who saw in his departure the opportunity both of removing a dangerous and wealthy noble and of gaining for Athens control of those straits which have been since before the dawn of history a bone of contention between West and East. The state which held the Chersonese controlled the great corn-route from the Euxine, and the colony was the first Athenian step to empire.

This Athenian noble was already a famous man in Hellas before his departure from Athens; for he, like his rivals the Alcmaeonidae, was a great breeder of horses and his four-horse chariot had gained an Olympic victory<sup>5</sup>. With him he took to the new colony all the traditions of the Athenian aristocracy; and on the first coins which he issued in the new country a record of his Olympic exploit and the Eupatrid mint tradition both meet the eye.

<sup>1</sup> § 32.

<sup>2</sup> *Ath. Pol.* 27, 3; Cimon, who is there mentioned as lord of the manor, was grand-nephew of Miltiades, son of Cypselus.

<sup>3</sup> vi, 35, 36.

<sup>4</sup> Criticism is perhaps too ready to prune away the picturesque details of the Herodotean story and to treat the colony as the conception of Peisistratus alone.

<sup>5</sup> *Hdt.* vi, 36.

GROUP Q  
CHERSONESE


§ 110.

## GROUP Qi

Miltiades I, 559 B.C. to ca. 523 B.C.

Badges: four-horse chariot facing on shield;  
horseman with second horse facing on shield;  
horseman facing;  
horseman to right on shield.

Pl. XXIV, P413A327, and  $\alpha$ ,  $\beta$ ,  $\gamma$  (Catalogue No. 482)

In fabric these coins of the elder Miltiades are identical with those of the contemporary Athenian Eupatrid mint, even the  incuse square being of the same character; but the chief denomination was an Attic tetradrachm instead of a didrachm. The linear circle, indicative of a shield, encloses the design of this piece; and on the smaller coins the shield is actually represented in relief with the design upon it. The definitely Attic character<sup>1</sup> of these devices

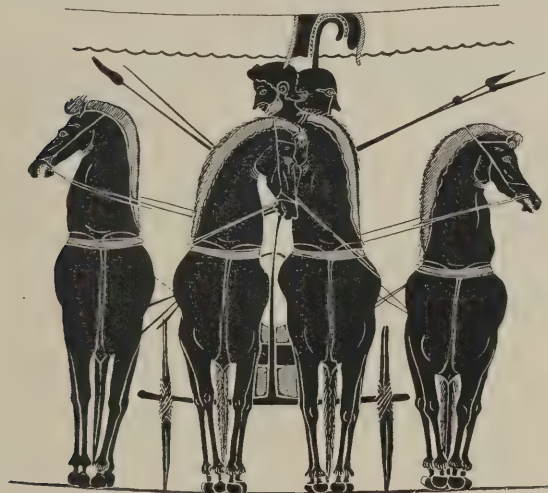


FIG. 71. Quadriga. Amphora in the Fitzwilliam Museum.



FIG. 72. Horseman on an Attic vase.



FIG. 73. Hoplite from a kylix by Duris.

becomes obvious when they are compared with Attic B.F. vases, for the facing four-horse chariot (Fig. 71)<sup>2</sup> is a favourite subject with the vase-painter. When

<sup>1</sup> Until recently these coins were assigned to the Chalcidice, as suggested by Sir H. Weber (*N.C.* 1892, p. 190 f.), who formerly owned a number of the specimens on our Pl. XXIV. Babelon, *Traité II*, i, p. 1250, does not commit himself to suggesting any mint, but Dr Hill, realizing a relationship between these coins and the heraldic pieces, calls it Euboean (*N.C.* 1920, p. 99). Professor P. Gardner was very near the mark when he drew a parallel between the standard in the Chalcidice and the Chersonese (*Hist. of Ancient Coinage*, p. 199).

<sup>2</sup> Fig. 71 is from an Attic B.F. amphora in the Fitzwilliam Museum.

a war-chariot is represented, as in our picture, charioteer and armed warrior stand together in the car, the fighter holding two spears and the driver a spear and a straight whip. On the coin, however, a racing-chariot seems to be depicted for there is but one figure who holds a staff or whip. The facing horseman of Pl. XXIV,  $\beta$ , also finds his counterpart on an Attic B.F. vase (Fig. 72)<sup>1</sup>, where there is seen a boy rider holding a pair of spears. The larger coin (Pl. XXIV,  $\alpha$ ), which is just double the weight of this piece, depicts the same horseman leading a second animal. Here the whole design is on a raised shield, as is the horseman shown in profile upon the small pieces (Pl. XXIV,  $\gamma$ ). As a shield-device a man on horseback appears upon an early R.F. kylix (Fig. 73)<sup>2</sup> by Duris, and once again the Athenian character of the design is evident.

§ III. The standard on which these coins of the elder Miltiades were struck was carefully adjusted so as to conform to two different coin-standards in order that they might be acceptable for both westward and eastward trade. The large pieces were Attic tetradrachms and could therefore circulate beside Athenian and Corinthian money as well as in the Chalcidice; but instead of being divided in halves and quarters they were split into thirds and sixths. In this way a coin like Pl. XXIV,  $\alpha$ , while worth eight Attic obols, could circulate beside silver half-staters of Croesus<sup>3</sup> and their successors the Persian sigloi<sup>4</sup>, while they approximated to the early silver units of Sinope<sup>5</sup>. Thus these coins of the Chersonese would obtain a ready acceptance in all the markets of Asia Minor as well as in Hellas.

Miltiades was on terms of special friendship with Croesus, for, when the Athenian was captured by his enemies, the people of Lampsacus, in a raid upon their city, the king of Lydia obtained his friend's release<sup>6</sup>. After a reign of thirty-six years he died and was treated as a hero—the semi-divine Founder of the State. Games were held in his honour—games in which no Lampsacene might participate<sup>7</sup>, presumably lest the presence of a hated enemy should disturb the hero's spirit. Gymnastic contests and horse-racing were the main features of these games, the latter most suitable to the lover of horses, winner of an Olympic victory, who placed chariots and horsemen as devices upon his coins.

<sup>1</sup> After Gerhard, *Auserl. Vasenb.* iii, Pl. 248.

<sup>2</sup> *Arch. Zeitung*, 1883, p. 1, Pl. I. Duris worked in the end of the sixth century and in the first half of the fifth; cf. also J. C. Hoppin, *Handbook of Attic Red-fig. Vases*, 1919, i, p. 210 f. No. 2.

<sup>3</sup> Weighing about 5.36 g. (82.7), § 99.

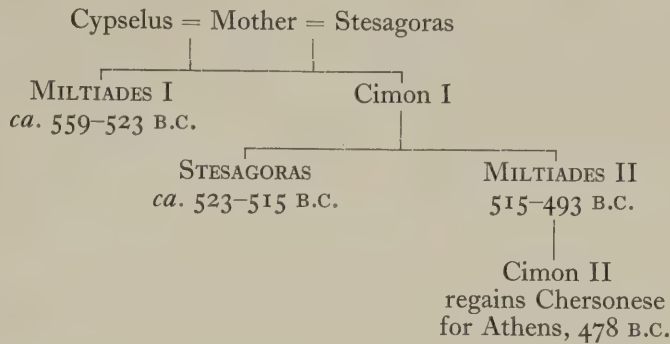
<sup>4</sup> About 5.5 g. (85), § 100. Byzantium later coined on the same standard.

<sup>5</sup> From 6.05 g. (93.3) to 5.7 g. (88).

<sup>6</sup> Hdt. vi, 37.

<sup>7</sup> Later historical cases of such games in honour of heroic Founders are those which the Amphipolitans instituted for Brasidas (Thuc. v, 11) and the Syracusans for Timoleon (Plut. v. *Timol.* 39).

## § 112.



Cimon, half-brother of Miltiades the elder, was a greater patron of the race-course even than his step-brother, for his horses won three successive Olympic chariot victories. These fell in 532, 528 and 524 B.C. The second of these he allowed to be proclaimed in the name of Peisistratus as a flattery to the aged tyrant's vanity—thereby securing his own return from banishment—while the first was given to his half-brother Miltiades and the third victory only was proclaimed in his own name. The third fell within the first few years of Hippias' reign, and since Cimon met his end in the same year, 524 B.C., gossip laid his death at the door of the jealous tyrant<sup>1</sup>. Meanwhile his eldest son, Stesagoras, was living with his uncle Miltiades in the Chersonese, and about 523 B.C. succeeded the uncle in the tyranny.

## § 113.

## GROUP Q ii

Stesagoras, *ca.* 523 to 515 B.C.

Badges: four-horse chariot;  
horseman facing.

Pl. XXIV, A328P414, and  $\delta$  (Catalogue No. 483)

Once again the fabric characteristic of the Athenian mint is employed for the contemporary money of the Chersonese. The coins are struck upon wide-spread flans which, like the flans used for the pieces of Hippias (Pl. XIII), Isagoras (Pl. XIV) and Chalcis (Fig. 57 *a*), enable the whole design to appear upon the money. The denominations extant are an Attic tetradrachm and its third (Pl. XXIV, A328P414 and  $\delta$ )<sup>2</sup>, the latter equivalent in weight to a Persian siglos. Unfortunately but a single specimen survives of the larger coin, and that in so badly rubbed a condition that little of the detail is visible. Upon the punch-die appears the same racing-chariot as was engraved on the anvil-die of the first Miltiades; a second reference this to the family's Olympic victories.

<sup>1</sup> Hdt. vi, 103.

<sup>2</sup> The unique tetradrachm was first published by Sir H. Weber, its former owner, in *N.C.* 1892, Pl. XV, 11.

The worn condition of the obverse—a condition made worse by double-striking<sup>1</sup>—makes it difficult to recognize the character of the male head which was engraved on the anvil-die. The head appears to be diademed, and archaic waves of hair, as on contemporary Hippias coins<sup>2</sup> are visible over the forehead; the long hair is caught up by the diadem at the back of the neck. The high forehead, aquiline nose and firm chin suggest an attempt at portraiture, such as is found on some contemporary Attic *stelai*<sup>3</sup>, rather than the representation of an idealized head<sup>4</sup>. It can hardly be a faithful portrait, but is possibly a representation of the elder Miltiades in his prime as the heroic Oekist of the Chersonese<sup>5</sup>. Such a head might be placed upon the coinage by his nephew and successor who instituted games in the Founder's honour.

The smaller silver piece repeats the facing horseman type of the preceding reign, but the draughtsmanship is more successful.

Stesagoras met his end after a short reign at the hands of a Lampsacene assassin, and Hippias sent out as successor Stesagoras' younger brother Miltiades who had up till that time lived in Athens<sup>6</sup>, where he seems to have been on comparatively good terms with Hippias. Thus about 515 B.C., in the year before the murder of Hipparchus, the second Miltiades became tyrant of the Chersonese.

§ 114.

#### GROUP Q iii

Miltiades II, ca. 515 to 500 B.C.

First issue—Badge: horseman.

Pl. XXIV, A329P415 to A330P416, and  $\epsilon$ ,  $\zeta$  (Catalogue Nos. 484 to 486)

Miltiades on taking over his new dominions seems at first to have continued the coin-types of his uncle and to have issued principally small silver pieces (Pl. XXIV,  $\epsilon$ ,  $\zeta$ ) which would pass as equivalent to four Attic obols or to half a Persian siglos. In 512 B.C. there took place the first Persian invasion of Thrace whereby Hippias lost his concessions in the Pangaeian silver mines. Miltiades found himself obliged, like other Greek tyrants, to submit to the Persian king<sup>7</sup>, and his coinage thus conformed to the Persian<sup>8</sup> rather than to the Attic system; for at this period he seems to have coined no Attic tetradrachms. His little

<sup>1</sup> The double-striking even gives the eye the effect of being drawn in profile, but a close examination shows that it is treated like the eye of Pl. XXIV, P417.

<sup>2</sup> E.g. Pl. XIII, A194. This fact was already noted by Sir H. Weber, *N.C. l.c.* p. 190, 12.

<sup>3</sup> Perrot, Chipiez, *Hist. de l'Art*, viii, p. 663, fig. 341, and especially p. 665, fig. 343.

<sup>4</sup> Sir H. Weber, *l.c.* suggested "Apollo (?)."

<sup>5</sup> Cf. the head of Taras (or Phalanthos?) Oekist of Tarentum on early coins of the city; Head, *H.N.*<sup>2</sup>, p. 55, fig. 24.

<sup>6</sup> Hdt. vi, 39.

<sup>7</sup> Hdt. iv, 137. Wells suggests (*Studies in Hdt.*, 1923, p. 118 ff.) that Miltiades was obliged to leave his kingdom between 511 and 499 B.C. The coins do not conflict with this theory, and may well have lasted for 4 rather than 15 years.

<sup>8</sup> Professor P. Gardner, *Hist. of Ancient Coinage*, p. 182, points out that various cities on the Asiatic shore of the Propontis struck coins on the Persian standard before the Persian Wars. Of these the didrachm of Antandrus (B.T.II, ii, Pl. CLXIII, 1) which Babelon certainly dates too late is of the same weight as the Persic didrachms of Miltiades II.

tetrobols of 2.79 grammes (43 grains) were treated, not as sixths of Athenian four-drachma pieces, but as quarters of a new denomination of 11.47 to 11.79 grammes (177 to 182 grains), which now appears for the first time (Pl. XXIV, A329P415)<sup>1</sup>. This coin was the equivalent of two Persian sigloi. On the reverse

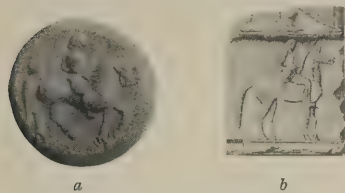


FIG. 74. a, Coin of Miltiades II.  
b, Relief from an Attic stele.

is the same horseman who figures on the smaller coins and on some of the money of the elder Miltiades (Pl. XXIV, γ)<sup>2</sup>, and he may be compared with a horseman (Fig. 74) depicted on a sixth century Attic stele<sup>3</sup>. The reverse die is marked with a peculiar incuse. This incuse must have originated in the unintentional filling up of two opposite compartments of a quadripartite incuse square. The beginnings of this can be seen on a piece like Pl. XXIV, ζ, its second stage on P415, and its deliberate adoption as a type on P420 of the same Plate, for the two diamond squares with tangent angles were later adopted as the regular reverse type for the coins of this region<sup>4</sup>.

### § 115.

### GROUP Q iv

Miltiades II, 499 to 493 B.C.

Second issue—Badges: the civic devices of Miletus and of Athens.

Pl. XXIV, A331P417 to A332P419, and η, θ (Catalogue Nos. 487 to 489)

In 499 B.C. there came the great Ionian revolt against Persia in which Miletus was the principal mover, while from the mainland of Hellas Athens alone<sup>5</sup> sent help to her Ionian daughters in the east. City after city renounced the Persian over-lordship and expelled its pro-Persian tyrant. But the tyrant of the Chersonese was an Athenian citizen and no friend of Persia as Herodotus is at pains to show<sup>6</sup>, and he now threw off his allegiance to Persia and issued a coinage which by its types proclaimed to the world his sympathies with the whole Ionian cause.

The chief city of the Chersonese was Cardia close to the isthmus and that defensive wall which the first tyrant had built. Cardia now remembered that, before ever the elder Miltiades came out with his Athenian followers, she had been founded by Miletus<sup>7</sup> in the seventh century and at the time when that great city controlled the corn-route from the Euxine. Thus it was that on the anvil-die of Miltiades' money there now appeared the lion of Miletus—a splendid heraldic beast with lashing tail, with head reverted and bared teeth (Pl. XXIV, A331, A332). This lion had, from the time when coins were first

<sup>1</sup> Three specimens are extant, Catalogue Nos. 484 to 486.

<sup>2</sup> On the coins of Miltiades II the horseman carries two spears; none on the pieces of Miltiades I.

<sup>3</sup> Fig. 74 b is taken from Perrot, Chipiez, *Hist. de l'Art*, viii, p. 660, fig. 338.

<sup>4</sup> Cf. B.M.C. *Thrace*. The type was also adopted for the reverse of coins of Sinope; compare Regling's note in *Catal. of the Warren Collection*, p. 216.

<sup>5</sup> Eretria in the island of Euboea sent a contingent at the same time. Cf. § 77.

<sup>6</sup> iv, 137.

<sup>7</sup> With the help of some settlers from Clazomenae.

issued, been the Milesian civic device<sup>1</sup>, and continued as such at least until the age of the Flavian Emperors<sup>2</sup>. On the punch-dies of his coins Miltiades placed the head of Athena Promachos, the patron goddess of Athens who was sending help to Miletus—a head copied from the Cleisthenic tetradrachms (Pl. XV) current in Athens at that time. On one of the dies (Pl. XXIV, P417) the letters **XEP** appear in front of Athena's head. Once more close relations were established with Athens and so these coins are struck with the weight of Attic tetradrachms, not, like the coins with the horseman, on a Persic system. The fractions (Pl. XXIV, η, θ) destined for the Pontic trade were of course still sixths and twelfths, and depicted only the forepart of the Milesian lion<sup>3</sup>. Others, with the lion's head alone (Pl. XXIV, ι), were perhaps the local coinage of the chief city Cardia.

It is clear that the people of Chersonese took part in the Ionian revolt from the fact that the Ionian allies had free access to the Propontis<sup>4</sup>, an access only possible with the sanction of the Chersonesian Greeks. Further, when the revolt was crushed by the Persians, they in revenge drove Miltiades from his dominion. It was probably during this war that Miltiades gained possession of the island of Lemnos<sup>5</sup> and handed it over to the Athenians, an act whereby he won no small degree of popularity.



FIG. 75. Kylix by Epictetos depicting Miltiades.

§ 116. This wealthy Athenian noble, though a tyrant over the mixed population in the Thracian peninsula, was a most popular figure in democratic Athens, and the extent of this popularity is proved by a R.F. kylix by Epictetos in Oxford (Fig. 75)<sup>6</sup>, on which he is actually depicted with the inscription **ΜΙΛΤΙΑΔΕΣ ΚΑΙΟΣ** painted around the design. The youthful tyrant of the Dolonci, who had married the daughter of a Thracian king, sits on horse-back dressed in the native *triclot*

<sup>1</sup> B.M.C. *Ionia*, Pl. III, 4 to 7. The Milesian lion appears upon later bronze coins of Cardia, cf. *Nomisma*, i, Pl. I, 3.

<sup>2</sup> B.M.C. *l.c.* p. 199, 154.

<sup>3</sup> This type was continued upon a long series of coins in the fifth and fourth centuries. Cf. B.M.C. *Thrace*.

<sup>4</sup> Hdt. v, 103.

<sup>5</sup> Hdt. vi, 140.

<sup>6</sup> Professor P. Gardner, *Catal. Gr. Vases, Ashmolean Mus.* 1893, Pl. 13. This beautiful vase has rightly been linked with the famous fragment of a horseman found on the Acropolis, Perrot, Chipiez, *Hist. de l'Art*, viii, p. 635, fig. 324. The statue represents a rider in Thracian *triclot* costume and leather boots. Perrot, *l.c.* regards it as dedicated by some adventurous Athenian who joined Miltiades or Stesagoras in Chersonese. It may have represented Miltiades himself. Statue and kylix both probably belong to the first period (515 to 510 B.C.) of his reign when the coins with the horseman were issued. Winter (*Archaische Reiterbilder, etc.* in *Jahrb. d. K. Arch. Inst.*, 1893, p. 152 ff.), Perrot (*l.c.*) and Gardner (*l.c.*) all concur in this dating. The older idea that the figure is a Persian must be abandoned. The illustration is here figured by the kind permission of the Oxford University Press.

costume of his barbarian subjects and holding their arms, a quiver and a bow. This mounted figure instantly recalls the coins both of his uncle's and of his own mintage with the horseman type (Pl. XXIV, γ, A329, ε, ζ)—the very type which his son Cimon revived in 478 B.C. He was certainly one of the heroes of the Ionian revolt as he was later to be the hero of Marathon.

Perhaps we can best gauge the enthusiasm with which the Athenians supported their Ionian brothers in the fight against Persia by the depression which came upon them when the war collapsed and Persia triumphed. Phrynichus, the tragic poet who exhibited in 495 B.C. a play called "The capture of Miletus," was fined a thousand drachmae for his too realistic picture of the woes of the captured city<sup>1</sup>.

§ 117. Probably it was at the time when the enthusiasm for Miltiades and the Ionian cause was at its height that there was painted in Athens a splendid hydria now in the British Museum. It seems that the historic significance of this vase, the design of which is reproduced as the frontispiece of this volume<sup>2</sup>, has up to the present passed unnoticed. In a four-horse chariot stands a Greek warrior-chieftain and beside him a long-robed charioteer holding the reins and a whip; beyond the horses stands the chieftain's Greek companion fully armed and turning his head to speak; behind this companion and in front of the horses are native Thracians, while a third native brings up the rear; they carry Thracian bows and quivers with open flaps, and are dressed in the national *tricot* costume and high cap. The whole suggests a picture of the Chersonese going forth to war; the single Hellene on foot, two dots upon his shield<sup>3</sup>, the slender native Dolonci of the peninsula in the costume which Miltiades himself wears upon the kylix by Epictetos (Fig. 75), and in the chariot their Greek tyrant in full armour with two spears and a circular shield. The picture of this chieftain is surely inspired by Miltiades himself as his shield device proves; it is the lion of Miletus and of Chersonese with lashing tail, raised paw and head reverted showing the bared teeth—the very coat-of-arms stamped upon the coins.

§ 118. In 494 B.C. Miletus fell, and the Persian fleet reducing the islands of Ionia worked its way to the Hellespont, forcing Miltiades to leave in 493 B.C.<sup>4</sup> The Chersonese became Persian territory and its tyrant a private citizen of Athens. Thus fortune deprived him of a kingdom; yet three years later he was destined to win as a soldier of Athens immortal fame, such as he could scarcely have gained as lord of the Chersonese, when he led his countrymen to victory at Marathon.

<sup>1</sup> Hdt. vi, 21.

<sup>2</sup> *B.M. Vases*, 184. The date, 499 B.C., would suit the style of this hydria admirably.

<sup>3</sup> The two pellets or dots likewise seem to have some unexplained connection with the Chersonese. In *B.M.C. Thrace*, p. 183 ff. there are described 46 silver coins of that state struck between 478 and ca. 350 B.C.; of these 11 have two pellets as part of the type, 32 one pellet, leaving only 3 without pellets. A similar proportion of pellets is found upon the 84 specimens in *Berl. Mus. Beschreibung*, i, p. 251, 16 ff.

<sup>4</sup> He had been driven out for a moment in 496 B.C. by invading Scyths, but the Dolonci quickly restored him to the tyranny. Hdt. vi, 40.

§ 119. Our studies of the Athenian coinage stopped short with the year in which Salamis was fought. In the study of the Chersonesian coinage, which is, as it were, a running commentary on the money of Athens, it is needful to go one step further in order that the history of the money issued by the Philaïd Clan in Eastern Thrace may be completed.

The first act of the Athenians in the Greek fleet which had won the battle of Mycale, near Miletus, over the Persians in 479 B.C., was to sail against the Chersonese. The Peloponnesians cared little who owned the peninsula and their fleet returned home. But to the Athenians, as to the Persians, it was of supreme importance. The latter had made Sestos instead of Cardia their chief stronghold. As the Athenian fleet proceeded to invest the city the Persians threw into the peninsula all the forces they could muster in the district. After a long winter's siege Sestos fell, the Persians were exterminated and the Chersonese once again became Athenian<sup>1</sup>. Cimon, son of Miltiades, was an Athenian commander in the Hellespontine region in 478 B.C., the year which saw the fall of Sestos, and thus by a turn of the wheel of fortune he became master in the kingdom that had been his father's.

§ 120.

GROUP Q v

Cimon in the Chersonese, 478 to 476 B.C.

Badge: horseman.

Pl. XXIV, A333P420 (Catalogue No. 490)

The reconquest of the Chersonese was commemorated on the coinage by a revival of the old horseman type (Pl. XXIV, A333). About thirty-five years had elapsed since didrachms (Pl. XXIV, A329) with the type had appeared, and in consequence the Cimonian issue shows a marked artistic advance<sup>2</sup>. The horseman carries two short spears and wears a helmet of Corinthian shape, while the two diamond-shaped incuse squares upon the reverse both contain a small type. In the upper one—indistinct on most of the extant specimens<sup>3</sup>—is the rampant lion with head reverted, in the lower diamond is the head of a lion as on some of the earlier coins (Pl. XXIV, i).

The weight of these rare didrachms varies greatly, but is definitely heavier than that of the earlier pieces of Persic weight. They seem indeed to be struck upon the Pheidonian standard. In the year in which they were issued there was at Byzantium a great Peloponnesian contingent under the Spartan regent Pausanias. Financially for a brief period the Peloponnesians dominated the Hellespont and Bosphorus and brought its coin-standard with it; for this reason the Aeginetic Pheidonian weight left its impress on the Chersonesian coinage.

<sup>1</sup> Hdt. ix, 114 to 121. For Cimon's part in the Campaign cf. Wells, *Studies in Hdt.*, 1923, p. 130, and Plut. *v. Cim.* 6 and 9.

<sup>2</sup> As an artistic parallel we may cite the money of Alexander I, king of Macedon, whose coinage began in 480 B.C., and had a horseman as its principal type. *H.N.*<sup>2</sup>, p. 218.

<sup>3</sup> E.g. Mionnet, *Descr. de Méd. Ant.* Suppl. ix, p. 235, 54, where it is described as a goat.

On these coins the type reverts to that of some of the earliest money of the peninsula, representing probably the semi-divine Founder of the Chersonese—the elder Miltiades, grand-uncle of the great Cimon under whom these coins were struck. On the Oxford kylix (Fig. 75) is the father of Cimon depicted likewise as an equestrian figure.

Cimon reclaimed for Athens the all-important key of the Euxine and from that day forward her Empire grew apace.

When Herodotus had recorded the Athenian conquest of Sestos he laid down his pen, knowing that with this achievement the Empire of Athens was assured. We cannot do better than end our studies where Herodotus ended his History.

# APPENDIX

## ANALYSIS OF FINDS

### I. COUSINÉRY'S FIND from ATHENS. Early Nineteenth Century

(Beulé, *Monn. d'Ath.* p. 17. Mommsen, *Röm. Münzw.* p. 52 ff.)

Issue and Group	Type	Tetradr.	Didr.	Fractions	Catalogue No.
Eupatrid Mint B	Triskeles	—	—	I	—
	Astragalos	—	I	—	22
	Horse	—	I	—	25
	Wheel	—	—	Various	—
	Hindquarters of horse	—	—	Several	—
	D Later wheel	—	I	—	67
	Owl	—	I	I	71
	Gorgoneion	—	2	Various	79
Peisistratus	G i	—	—	—	—
Isagoras	K	—	—	—	326

### II. ELEUSIS FIND, 1833. (E. of Telesterion)

(*Ath. Mitt.* ix, 1884)

Eupatrid Mint D	Wheel	—	—	Several	—
	Gorgoneion	—	—	"	—
	Bull's head	—	—	I	—
Isagoras	K	—	I	—	—
Cleisthenes	L	—	—	I	—
Eretria	—	—	I	—	—

### III. PASHA FIND, 1883. (S.W. of Cyme in Euboea)

(*Ath. Mitt.* ix, 1884)

Eupatrid Mint B	Horse	—	I	—	25
	Forepart of horse	—	I	—	26
	Hindquarters	—	I	—	39
	D Later wheel	—	I	—	65
	Owl	—	I	—	68
	Gorgoneion	—	I	—	77
	"	—	I	—	89
Peisistratus	G i	—	Many	—	—
Hippias	H	—	Several	—	—
Eretria	—	—	Various	Various	I

IV. SAKHA FIND, 1897. (Egyptian Delta)

(*Z.f.N.* xxii, p. 247)

Issue and Group	Type	Tetradr.	Didr.	Fractions	Catalogue No.
Eupatrid Mint B	Horse	—	1	—	25
	Forepart of horse	—	1	—	29

Further, coins of many states including three of Aegina and of Corinth and Chios.

V. NAUCRATIS FINDS

(*N.C.* 1886, p. 8)

Cleisthenes	L	—	1	—	337
Athens after Salamis		—	79	—	—

VI. ISLAND FIND, 1889 (?)

(*N.C.* 1890, p. 13)

Pre-Solonian	A	Amphora	—	4	1 ff.
Aegina		—	—	114	—

And various other Island pieces.

VII. ACROPOLIS FIND, 1886. (In the Persian débris)

(*J.I.A.N.* i, 1898, p. 370. Svoronos, *Trésor des Monn. d'Athènes*, Pl. 3, 1 to 47, 49 to 53<sup>1</sup>)

Eupatrid Mint B	Wheel	—	—	13 various	—
Eupatrid Mint D	"	—	—	2 obols	—
Peisistratus	E With ☼	17 (+ 13 <sup>?</sup> )	—	—	93 ff.
Peisistratus	F " "	4	—	—	132, 137 to 139
Peisistratus	Gi " ☉	2	—	Several	149, 161

VIII. TARANTO FIND, 1911

(*Rev. Num.* 1912, p. 1 ff.)

Eupatrid Mint D	Wheel	—	1	—	65
Hippias	H	4	—	—	285 to 287
Isagoras	K	1	—	—	318
Chalcis and Boeotia		1	—	—	(Fig. 57a)

Besides coins of Aegina, Corinth, Thracio-Macedonian issues, Island issues, Cyrene, Phocaea, Corcyra and coins of Magna Graecian and Sicilian cities minted before 510 B.C.

<sup>1</sup> A careful examination of these coins in the Numismatic Museum at Athens has convinced me that Svoronos, T. Pl. 3, 48, 54, cannot possibly be a part of the hoard, but are later additions. Those two coins show no sign of having passed through a fire as do all the other 52 specimens.

## IX. SCHUBIN FIND, 1824. (In Posen, Germany)

(Z.f.N. v, p. 213. Z. d. Hist. Gesellsch. f. Prov. Posen, xxiv, 2, p. 197)

Issue and Group	Type	Tetradr.	Didr.	Fractions	Catalogue No.
Eupatrid Mint B D	Wheel	—	1	Various	37
	Later wheel	—	—	”	—
	Gorgoneion	—	1	”	77

## X. CHIOS FIND, 1919

Peisistratus	Gi	—	2 at least	—	—   183, 190
Chios		—	—	1	As Mavrogordato, <i>N.C.</i> 1915, Pl. I, 10
Chios		—	—	6 (and more)	As Mavrogordato, <i>N.C.</i> 1915, Pl. II, 4 to 6

A C A T A L O G U E  
O F A T H E N I A N C O I N S  
*issued before the* P E R S I A N I N V A S I O N

A CATALOGUE OF ATHENIAN COINS  
ISSUED BEFORE THE PERSIAN INVASION

The relative positions of the obv. and rev. dies are nowhere indicated in the following catalogue because the positions are always irregular.

The system of numeration employed in the catalogue is described in the "NOTE" on the page preceding p. 1 above.

The section numbers in brackets [ ] at the head of each group refer to the corresponding sections in the text.

The abbreviations most frequently employed are:

B.M.C. = *Catalogue of Greek Coins in the British Museum.*

B.T.II. = E. Babelon, *Traité des Monnaies Grecques et Romaines, II<sup>e</sup> partie, Description historique*, 1907, etc.

Cat. H. = various sale catalogues issued by Dr J. Hirsch in Munich.

Cat. N. = various sale catalogues issued by M. Naville in Geneva.

*J.I.A.N.* = *Journal International d'Archéologie Numismatique*, Athens, 1898, etc.

N.C. = *Numismatic Chronicle*, London.

T. = J. Svoronos, *Trésor de la Numismatique Grecque ancienne, Les Monnaies d'Athènes*, Munich, 1923.

*Z.f.N.* = *Zeitschrift für Numismatik*, Berlin.

## GROUP A

## THE CIVIC MINT

Ca. 610-595 B.C.

## PHEIDONIAN STANDARD

## DIDRACHMS

[§ 5] REVERSE, deep incuse square divided by intersecting lines.

OBVERSE, amphora of "Tyrrhenian" shape with ovoid body in high relief, thick neck surrounded sometimes by a raised collar, clumsy handles attached to the underside of the lip, which is thick, slightly spreading foot.

NO.	PUNCH			ANVIL
1	P1 Plate I	☒ 10.3 millimetres square a. Berlin: 12.35 g. (190.6 grains); <i>J.I.A.N.</i> i, 1898, Pl. IB', 4. Flaw to l. of punch b. Cat. H. xxix, Pl. X, 601: 12.15 g. (187.5). Similar flaw c. Cat. N. 1920 (Pozzi), Pl. LXI, 2013; 12.18 g. (188). Flaw larger d. Berlin: 11.26 g. (173.8); Imhoof, <i>Griech. Münzen</i> , Pl. I, 21. Flaw larger still	Amphora	A1 Plate I
2	P1	Same die a. Paris: 12.03 g. (185.7); B.T.II. i, Pl. LX, 1. Punch flaw very wide	Amphora slightly taller	A2 Pl. I
3	P2 Pl. I	Similar. 9.5 mm. sq. a. Giesecke, Leipzig: 12.26 g. (189.2); Cat. H. xiii (Rhusopoulos), Pl. XXXV, 3108	Same die	A2 Pl. I
4	P3 Pl. I	☒ 10.5 mm. sq. a. Mathey, Paris. Triangular flaw in die b. Berlin: 11.93 g. (184.1); <i>J.I.A.N.</i> i, 1898, Pl. IB', 2. Triangular and another flaw in die	Same die	A2 Pl. I
5	P3	Same die a. Berlin: 11.13 g. (171.8); <i>J.I.A.N.</i> i, 1898, Pl. IB', 3. Both flaws extensive	Similar	A3 Pl. I
6	P4 Pl. I	☒ 9.5 mm. sq. a. Boston: 12.27 g. (189.4); Regling, <i>Cat. Warren Coll.</i> No. 964 b. Cat. N. iv (1922), Pl. XXV, 643; 12.35 g. (190.6). Square half blocked c. London: 12.07 g. (186.2); B.M.C. <i>Crete, etc.</i> , p. 90, 14; <i>J.I.A.N.</i> i, 1898, Pl. IB', 7. Square largely blocked d. Berlin: 12.37 g. (191). Square largely blocked	Same die	A3 Pl. I

NO.	PUNCH			ANVIL
7	P4	Same die <i>a.</i> Cat. H. xxv (Philipsen), Pl. XIX, 1566 = Cat. H. xxxiii, Pl. XVIII, 792: 12.06 g. (186.1). Square mostly filled in <i>b.</i> Cat. N. 1920 (Pozzi), Pl. LXI, 2014: 12.15 g. (187.5). Square mostly filled in <i>c.</i> Cat. H. xxxi, Pl. XI, 437 [wrongly described as from Cat. H. xxi (Cons. Weber), No. 2209]: 12.35 g. (190.6) = Bement Coll. Cat. Pl. XV, 227. Square mostly filled in	Similar	A4 Pl. I
8	P5 Pl. I	☒ 11 mm. sq. <i>a.</i> Cat. H. xxi (Cons. Weber), Pl. XXX, 2209: 12.35 g. (190.6). Three triangles in square filled in. Large flaw on obv.	Same die	A4 Pl. I
9	P6	☒ 9 mm. sq. <i>a.</i> Athens: 12.30 g. (189.8); <i>J.I.A.N.</i> i, 1898, Pl. IB', 10. Flaw on obv.	Same die	A4 Pl. I
10	P6 Pl. I	Same die <i>a.</i> Jameson, Paris: 12.36 g. (190.8); Catal. Pl. LXV, 1277; Cat. Egger, Jan. 1908, Pl. XV, 526 <i>b.</i> Berlin: 11.95 g. (184.4); <i>J.I.A.N.</i> i, 1898, Pl. IB', 9. Slight filling in of triangles <i>c.</i> Cat. N. 1920 (Pozzi), Pl. LXI, 2012: 11.79 g. (182). Further filling in <i>d.</i> Seltman, Cambridge: 11.94 g. (184.2); B.M.C. <i>Crete, etc.</i> , p. 90, 15, Pl. XXI, 7; <i>J.I.A.N.</i> i, 1898, Pl. IB', 5; Cat. N. v, 1923, Pl. LXIV, 2292. Incuse filled in more <i>e.</i> Berlin: 11.67 g. (180.1); <i>J.I.A.N.</i> i, 1898, Pl. IB', 6. Incuse largely filled in	Very neat amphora	A5 Pl. I

## FRACTIONS

## DRACHM

Same types; collar around neck.

Pl. IV, *a.* London: 6.11 g. (94.3); *J.I.A.N.* i, 1898, Pl. IB', 12.

## OBOL

Same types.

Pl. IV, *ι.* London: 0.99 g. (15.3); B.M.C. *Crete, etc.*, p. 90, 19, Pl. XXI, 10. —Copenhagen: 1.10 g. (17); *J.I.A.N.* i, Pl. IB', 18. —Cambridge: 0.97 g. (15); Leake, *Num. Hell.* Suppl. 157. —Munich: 0.97 g. (15); B.T.II. i, Pl. LX, 3. —Newell, New York.

## GROUP B

## THE CIVIC MINT

594-562 B.C.

## ATTIC STANDARD

## DIDRACHMS

[§§ 12, 13, 16-21, 23, 25] REVERSE, deep incuse square divided by intersecting lines.

OBVERSE, a shield bearing a device, or a plain device.

NO.	PUNCH			ANVIL
11	P7	☒ 10.5 mm. sq.	Shield, indicated by linear circle; upon it amphora of "Tyrrhenian" shape as in last group but neck slightly shorter and handles more slender	A6
	Pl. I	a. Seltman, Cambridge: 8.60 g. (132.7) b. Berlin: 8.38 g. (129.4); T. Pl. I, 34 c. London: 8.34 g. (128.7); B.M.C. <i>Central Greece</i> , p. 137, 2; T. Pl. I, 32. P. die impression much choked		Pl. I
12	P8	☒ 11 mm. sq.	Same die	A6
	Pl. I	a. London: 7.97 g. (123); B.M.C. <i>Cent. Gr.</i> p. 137, 3; T. Pl. I, 33. Pierced		Pl. I
13	P9	☒ 10 mm. sq.	Similar; amphora more graceful	A7
	Pl. I	a. London: 8.23 g. (127); B.M.C. <i>Cent. Gr.</i> p. 137, 1, Pl. XXIV, 21; B.T.II. i, Pl. XXXIII, 9; B.M. <i>Guide, Coins of Ancients</i> , Pl. 5, 22; T. Pl. I, 31. Formerly Burgon Collection, he having obtained it in Athens. Cf. P. O. Brøndsted, <i>On Panath. Vases</i> , London, 1832, pp. 111, 135, Fig. Pierced. P. die, flaws in four corners		Pl. I
14	P9	Same die	Shield, indicated by linear circle, upon it triskeles of three bent legs moving to right around central pellet as axis, toes and knees touch the circumference	A8
		a. Berlin: 8.11 g. (125.2); B.T.II. i, Pl. XXXIII, 11; N.C. 1888, Pl. V, 1; T. Pl. I, 29. P. die, flaw in corners as before. Found in Athens		Pl. I

NO.	PUNCH			ANVIL
15	P10	☒ 11.5 mm. sq.	Shield, indicated by linear circle, upon it forepart of horse to left, bridled, the head large, the mane hogged	A9
	Pl. I	a. Paris (Luynes): 8.48 g. (130.9); B.T.II. i, Pl. XXXIII, 6; T. Pl. 1, 19		Pl. I
16	P11	Similar. 11 mm. sq.	(A10) Similar; two bars on the shoulder	A10
	Pl. I	a. Cat. N. 1920 (Pozzi), Pl. XLVII, 1509: 8.23 g. (127)		Pl. I
17	P11	Same die	(A11) Similar	A11
		a. Seltman, Cambridge: 8.48 g. (130.9)		Pl. I
18	P12	Similar. 11 mm. sq.	Similar	A12
	Pl. I	a. Athens: 8.4 g. (129.7); T. Pl. 1, 20. Found in Athens		Pl. I
19	P13	Similar. 11 mm. sq.	Similar	A13
	Pl. I	a. London: 8.29 g. (128)		Pl. I
20	P13	Same die	Beetle—the sacred scarabaeus—seen from above, the front pair of legs in front of head, the other pairs hanging down	A14
		a. London: 8.25 g. (127.3), formerly Sir H. Weber (not Consul Weber); B.T.II. i, 1112; Cat. Photiadès Pacha (Paris), 1900, Pl. III, 495; T. Pl. 1, 38. Punch-die more filled in		Pl. I
21	P13	Same die	Shield, indicated by linear circle, upon it astragalos	A15
		a. London: 8.42 g. (130); N.C. 1903, p. 322, 7, Pl. X, 6; T. Pl. 1, 13. Punch-die more filled in b. Boston: 7.80 g. (120.4); Regling, <i>Cat. Warren Coll.</i> Berlin, 1906, Pl. XVIII, 799. Corroded, but punch-die less filled in than on 20 a		Pl. I
22	P14	Similar. 12.5 mm. sq.	Same die	A15
	Pl. I	a. Paris: 8.45 g. (130.4); B.T.II. i, 1101, Pl. XXXIII, 15; T. Pl. 1, 14. From Cousinéry's Find (Athens)		Pl. I
23	P15	Similar. 10.5 mm. sq.	Cross-bar cart-wheel with protruding hub; axle pin and tyre shown	A16
	Pl. I	a. Berlin: 8.40 g. (129.7); Cat. H. xiii, 1905 (Rhusopoulos), Pl. XXIII, 1863; T. Pl. 1, 49. Flaw in punch-die below b. Paris: 8.50 g. (131.2); B.T.II. i, Pl. XXXIII, 14. Flaw in punch-die below c. Newell, New York: 8.43 g. (130.1). Flaw in punch-die large		Pl. I

NO.	PUNCH			ANVIL
24	<b>P16</b>	Similar. 10.5 × 10 mm.	Bull standing to l. Traces of linear circle, indicating a shield	<b>A17</b>
	Pl. I	<i>a.</i> Seltman, Cambridge: 7.74 g. (119.5). Corroded		Pl. I
25	<b>P17</b>	Similar. 10.5 × 10 mm.	Shield, indicated by linear circle, upon it bridled horse l. upon ground-line, off foreleg advanced, mane hogged	<b>A18</b>
	Pl. I	<i>a.</i> Berlin: 8.45 g. (130.4); <i>Z.f.N.</i> xxii, 1900, Pl. VIII, 15; T. Pl. I, 15. From the Sakha Hoard (Egypt) <i>b.</i> Paris: 8.17 g. (126.1); B.T.II. 1, Pl. XXXIII, 3; T. Pl. I, 16. Flaw in punch-die below. From Cousinéry's Find (Athens)		Pl. I
26	<b>P17</b>	Same die	Forepart of bridled horse with hogged mane r.; the rein ornamented with three disks ("horse's money")	<b>A19</b>
		<i>a.</i> The Hague: 8.43 g. (130.1); <i>Z.f.N.</i> iii, 1876, Pl. VI, 5, p. 275, 4. Flawless; therefore struck before No. 25 <i>b</i>		Pl. I
27	<b>P18</b>	Similar. 9 mm. sq.	Similar	<b>A20</b>
	Pl. II	<i>a.</i> Cook, Cambridge: 8.41 g. (129.8); Cat. N. 1920 (Pozzi), Pl. XLVII, 1508		Pl. II
28	<b>P19</b>	Similar. 9.5 mm. sq.	Same die	<b>A20</b>
	Pl. II	<i>a.</i> London: 8.20 g. (126.6); formerly Sir H. Weber, T. Pl. I, 18		Pl. II
29	<b>P19</b>	Same die	Similar; horse's head smaller	<b>A21</b>
		<i>a.</i> Berlin: 8.56 g. (132.1); <i>Z.f.N.</i> xxii, 1900, Pl. VIII, 16; T. Pl. I, 17. From the Sakha Hoard (Egypt)		Pl. II
30	<b>P19</b>	Same die	Similar	<b>A22</b>
		<i>a.</i> Cat. H. xiii, 1905 (Rhousopoulos), Pl. XXIV, 1932: 8.5 g. (131.2)		Pl. II
31	<b>P20</b>	Similar. 11 mm. sq.	Four-spoke wheel with hub; stays spring from each spoke curving outwards to meet the rim; the main spokes protrude in sharp points beyond the rim	<b>A23</b>
	Pl. II	<i>a.</i> Paris: 8.29 g. (128). Wheel slightly double-struck. Pierced		Pl. II

NO.	PUNCH			ANVIL
32	<b>P21</b> Pl. II	Similar. 11 mm. sq. <i>a.</i> Paris, Luynes: 8.35 g. (128.9);	Similar, but no protruding points B.T.II. i, Pl. XXXIII, 17	<b>A24</b> Pl. II
33	<b>P22</b> Pl. II	Similar. 11 mm. sq. <i>a.</i> Munich: 8.45 g. (130.4);	Same die T. Pl. I, 52	<b>A24</b> Pl. II
34	<b>P23</b> Pl. II	Similar. 12.5 mm. sq. <i>a.</i> Berlin: 8.56 g. (132.1);	Similar; well-marked hub T. Pl. I, 51	<b>A25</b> Pl. II
35	<b>P24</b> Pl. II	Similar. 12 mm. sq. <i>a.</i> Berlin: 8.19 g. (126.4) <i>b.</i> London: 8.16 g. (126); B.M.C. <i>Cent. Gr.</i> p. 107, 8, Pl. XX, 4; T. Pl. I, 57; N.C. 1875, Pl. IX, 9 <i>c.</i> Mathey, Paris: 8.16 g. (126); Cat. N. 1920 (Pozzi), Pl. XLVII, 1512. Flaws in punch-die <i>d.</i> The Hague: 8.55 g. (132). Increasing flaws in punch-die	Similar; hub smaller, stays more spreading	<b>A26</b> Pl. II
36	<b>P25</b> Pl. II	Similar. 12 × 11 mm. <i>a.</i> London: 8.51 g. (131.4);	Same die B.M.C. <i>Cent. Gr.</i> p. 107, 6	<b>A26</b> Pl. II
37	<b>P26</b> Pl. II	Similar. 11 × 10 mm. <i>a.</i> Berlin: 8.47 g. (130.7).	Similar From the Schubin Find	<b>A27</b> Pl. II
38	<b>P27</b> Pl. II	Similar. 12 mm. sq. <i>a.</i> Paris: 8.51 g. (131.4)	Similar	<b>A28</b> Pl. II
39	<b>P27</b>	Same die <i>a.</i> Cambridge: 7.56 g. (116.7). Pierced. Punch-die with flaws	Shield indicated by linear circle; upon it hindquarters of a horse with long tail to r.	<b>A29</b> Pl. II
40	<b>P28</b> Pl. II	Similar. 11 mm. sq. <i>a.</i> Berlin: 8.42 g. (130); B.T.II. i, Pl. XXXIII, 7 <i>b.</i> Berlin: 8.72 g. (134.5); T. Pl. I, 25 <i>c.</i> London: 8.42 g. (130)	Same die	<b>A29</b> Pl. II
41	<b>P29</b> Pl. II	Similar. 11 mm. sq. (?) <i>a.</i> Berlin: 9.07 g. (140). Thick oxide <i>b.</i> Empedocles, Athens: 8.26 g. (127.5); Cat. H. xxv (Philipsen), Pl. XI, 946 = Cat. Egger, xl (Prowe, 1912), Pl. XVII, 931 = T. Pl. I, 23	Same die	<b>A29</b> Pl. II
42	<b>P30</b> Pl. II	Similar. 10.5 mm. sq. <i>a.</i> Newell, New York: 8.60 g. (132.7); Cat. H. xiii, 1905 (Rhou-sopoulos), Pl. xxiv, 1929; T. Pl. I, 22 <i>b.</i> Athens: 8.47 g. (130.7); T. Pl. I, 24	Similar; legs and tail longer	<b>A30</b> Pl. II

## FRACTIONS

Belonging to Nos. 11 to 13

## OBOL

Amphora, collar around neck.

- Pl. IV,  $\kappa$ . London: 0.62 g. (9.5); B.M.C. *Crete, etc.* p. 91, 23, Pl. XXI, 12.—  
Munich: 0.60 g. (9.2); *J.I.A.N.* i, 1898, Pl. IB', 17.—Cambridge: 0.58 g.  
(8.9); Leake.—Margaritis, Athens: 0.68 g. (10.5); B.T.II. i, p. 709, 1100.  
—Others: 0.70, 0.60, 0.55 g. (10.8, 9.2, 8.5).

Olpé on shield.

- Pl. IV,  $\lambda$ . London: 0.64 g. (9.8); B.M.C. *Caria*, p. 59, 2, Pl. X, 2.

Belonging to No. 14

## DRACHM

Triskeles to left on shield.

- Pl. IV,  $\beta$ . Paris: 4.0 g. (61.8); B.T.II. i, Pl. XXXIII, 10; T. Pl. I, 30. Worn.  
From Cousinéry's Find (Athens).

Belonging to Nos. 15 to 19

## DRACHM

Forepart of horse l. on shield.

- Pl. IV,  $\gamma$ . Athens: 3.79 g. (58.5); T. Pl. I, 21.

Belonging to No. 20

## OBOL

Beetle.

- Pl. IV,  $\mu$ . Sir H. Weber (formerly): 0.79 g. (12.2); T. Pl. I, 40.—Paris, Luynes:  
0.70 g. (10.8); found in Attica, B.T.II. i, Pl. XXXIII, 24.—Athens: 0.5 g.  
(7.7).—Margaritis, Athens: 0.66 g. (10.2).—Seltman, Cambridge: 0.73 g.  
(11.2).—Berlin: various, 0.70 g. (10.8), 0.62 g. (9.5).

Belonging to Nos. 25 to 30

## HEMIOBOL

Forepart of horse r.

- Pl. IV,  $\chi$ . Berlin.

Eye.

- Pl. IV,  $\phi$ . Seltman, Cambridge: 0.32 g. (5).

## QUARTER OBOL

Eye.

- Pl. IV,  $\omega$ . Berlin: 0.17 g. (2.7), 0.16 g. (2.5), 0.14 g. (2.2).—Athens: 0.17 g.  
(2.7).

Belonging to Nos. 31 to 38

DRACHM

Wheel.

- Pl. IV,  $\delta$ . Copenhagen: 4.19 g., 4.02 g. (64.7, 62.1).—Berlin: 4.33 g., 4.30 g., 4.11 g., 4.18 g. (66.8, 66.4, 63.5, 64.5).—Jameson, Paris: 4.35 g. (67.2); Cat. Pl. LX, 1179.—Athens: 4.11 g., 4.32 g. (63.5, 66.8).—Munich: 4.28 g., 3.52 g. (66.1, 54.3).—Giesecke, Leipzig: 4.02 g. (62.1).—Paris: 4.25 g. (65.6); B.T.II. i, Pl. XXXIII, 20.—London: 4.22 g. (65.2); B.M.C. *Cent. Gr.* p. 107, 11, Pl. XX, 5.—Berlin: 4.24 g., 4.14 g. (65.5, 64); both from Schubin Find; both worn.—Hague: 4.20 g., 4.15 g. (64.8, 64.1).—Paris, Luynes: 4.08 g. (63); B.T.II. i, Pl. XXXIII, 18.
- Pl. IV,  $\epsilon$ . Berlin: 4.21 g. (65). Same punch-die as Pl. IV,  $\zeta$ .

OBOL

Wheel.

- Pl. IV,  $\nu$ . Berlin: 0.59 g. (9.1), 0.57 g. (8.8), and (15 coins) 0.71 to 0.49 g. (10.9 to 7.5); all from Schubin Find.—Copenhagen (3 coins).—Athens (6 coins).—Vienna (4) 0.78 to 0.46 g. (12.1 to 7.1).—Cat. N. 1920 (Pozzi), Pl. XLVII, 1514: 0.75 g. (11.5).—McClellan, Cambridge: (4).—London: B.M.C. *Central Gr.* p. 108 f.—Seltman, Cambridge: 0.71 to 0.58 g. (10.9 to 9).
- Pl. IV,  $\xi$ . Berlin: 1.0 g. (15.4) (*sic*).

HEMIOBOL

Wheel.

- Pl. IV, *aa*. Berlin: 0.35 g. (5.4).—The Hague: 0.20 g. (3.1).

Belonging to Nos. 39 to 42

DRACHM

Hindquarters of horse.

- Pl. IV,  $\eta$ . Newell, New York.

- Pl. IV,  $\zeta$ . Cambridge, McClellan: Same punch-die as Pl. IV,  $\epsilon$ .—London: 4.21 g. (64.9); B.M.C. *Cent. Gr.* p. 136, 2.—4.39 g. (67.7); B.M.C. *Cent. Gr.* p. 136, 1.—3.88 g. (59.9); *ibid.* 3, Pl. XXIV, 20.—Cambridge: 2.54 g. (39.2); Fourée (?).—Berlin: 4.24 g., 3.89 g. (65.5, 60.1).—Paris: (3 coins), one probably from Cousinéry's Find (Athens).—Athens: 3.71 g. (57.3).—Munich: 4.22 g. (65.2).—The Hague: 3.95 g. (61); pierced.—Copenhagen: 3.71 g. (57.3).—Seltman, Cambridge: 3.87 g. (59.8), Cat. N. 1920 (Pozzi), Pl. XLVII, 1510.—Vienna: 4.17 g. (64.4).

## GROUP C

## THE IMPERIAL MINT

Ca. 561-556 B.C.

## TETRADRACHMS

[§ 28] **OBVERSE**, head of Athena to right; eye large and full, iris (and sometimes pupil) indicated; lips thick; ear large with  $\odot$  ear-ring; hair indicated by lines or dots or both. She wears close-fitting Athenian helmet with neck-piece and crest, the crest-support ornamented with dots between chevrons; on the back of helmet above neck-piece a small volute.

**REVERSE**,  $\Lambda\Theta\epsilon$  to r. downwards. Owl to right, head facing, *upright, legs close together, tail short, head large*; body plumage of dots, wing plumage of lines or lines and dots. In field above left hanging downwards an olive on stalk between two leaves. Incuse square.

NO.	ANVIL			PUNCH
43	<b>A31</b> Pl. II	Hair in two rows of dots <i>a.</i> Brussels: 16.82 g. (259.6); T. Pl. 2, 35	$\Lambda\Theta\epsilon$ ; only one leg of owl shown	<b>P31</b> Pl. II
44	<b>A32</b> Pl. II	Hair in lines with fringe of dots <i>a.</i> Cat. N. v, 1923, Pl. LVI, 1965: 16.29 g. (251.4)	Similar	<b>P32</b> Pl. II
45	<b>A33</b> Pl. II	Similar <i>a.</i> Empedocles, Athens	Similar; both legs shown	<b>P33</b> Pl. II
46	<b>A34</b> Pl. II	Hair, curved lines ending in dots <i>a.</i> Boston: 16.98 g. (262); Perkins Coll. No. 282 <i>b.</i> Comte Chandon de Briailles, Paris	Similar	<b>P34</b> Pl. II
47	<b>A34</b>	Same die <i>a.</i> Empedocles, Athens: 17.12 g. (264.2) <i>b.</i> Madame Mavrocordato, Athens: 15.83 g. (244.3); <i>J.I.A.N.</i> 1912, Pl. A', 17; T. Pl. 2, 27	Similar	<b>P35</b> Pl. II
48	<b>A34</b>	Same die <i>a.</i> Boston: 16.91 g. (261); Perkins Coll. No. 281	Similar	<b>P36</b> Pl. II
49	<b>A35</b> Pl. II	Hair in lines over forehead and in dots on cheek <i>a.</i> Seltman, Cambridge: 16.57 g. (255.7)	$\Lambda\Theta\epsilon$ similar	<b>P37</b> Pl. II

NO.	ANVIL			PUNCH
50	A36 Pl. III	Similar* <i>a.</i> London: 17.0 g. (262.4); T. Pl. 2, 22	ΑΘΕ similar, owl very neatly drawn	P38 Pl. III
51	A37 Pl. III	Similar; the crest-support very narrow* <i>a.</i> Jameson, Paris: 16.25 g. (250.8); Catal. Pl. LXI, 1182 = Cat. H. xiii, 1905 (Rhousesopoulos), Pl. XXIV, 1933 = T. Pl. 2, 19 and 36, the same coin being twice figured	Similar	P39 Pl. III
52	A38	Hair in lines; large crest-support <i>a.</i> Athens: 16.81 g. (259.4); T. Pl. 2, 31 <i>b.</i> Berlin: 16.67 g. (257.3)	ΠΘΕ similar	P40 Pl. III
53	A38 Pl. III	Same die <i>a.</i> Gedney Beatty, New York	ΠΘΕ similar	P41 Pl. III
54	A39	Similar <i>a.</i> Berlin: 17.04 g. (263). From the Aegean Hoard of 1900	Similar	P42 Pl. III
55	A39 Pl. III	Same die <i>a.</i> Seltman, Cambridge: 17.57 g. (271.2)	Similar; owl's legs longer	P43 Pl. III
56	A39	Same die <i>a.</i> Berlin: 16.92 g. (261.1)	ΠΘΕ similar	P44 Pl. III
57	A40	Similar <i>a.</i> Gotha: 16.62 g. (256.5)	Same die	P44 Pl. III
58	A40 Pl. III	Same die <i>a.</i> Brussels: 16.89 g. (260.7); T. Pl. 2, 21	Similar	P45 Pl. III
59	A41 Pl. III	Similar* <i>a.</i> Petrograd: 16.82 g. (259.6); T. Pl. 2, 20	Similar	P46 Pl. III
60	A42 Pl. III	Similar* <i>a.</i> Berlin: 16.72 g. (258.1); T. Pl. 2, 24	ΠΘΕ (letters close); owl very short and dumpy	P47 Pl. III
61	A43 Pl. III	Similar <i>a.</i> London: 17.67 g. (272.7); B.M.C. <i>Attica</i> , p. 1, 3, Pl. I, 3	Similar	P48 Pl. III
62	A43	Same die <i>a.</i> Copenhagen: 16.79 g. (259.1)	Similar	P49 Pl. III

\* Probably from same hub.

NO.	ANVIL			PUNCH
63	A44 Pl. III	Hair in lines with fringe of dots <i>a.</i> Woodward, London	A ⊙ E (letters apart); owl less dumpy	P50 Pl. III
64	A45 Pl. III	Similar <i>a.</i> Berlin: 17·16 g. (264·8); T. Pl. 2, 23	Similar	P51 Pl. III

## FRACTIONS

## OBOL

Same types.

Pl. IV,  $\alpha$ ,  $\pi$ . Berlin: 0·575 g., 0·63 g. (8·9, 9·7).

## HEMIOBOL

Same types.

Pl. IV,  $\beta\beta$ . Paris: 0·30 g. (4·65).

## GROUP D

## THE CIVIC MINT

Ca. 561-546 B.C.

## DIDRACHMS

[§§ 32-34, 36, 37] REVERSE, deep incuse square divided by intersecting lines.  
 OBVERSE, a shield bearing a device, or a plain device.

NO.	PUNCH			ANVIL
65	P52	☒ 10 mm. sq.	Four-spoke wheel with hub; small stays spring from each spoke outward to meet rim	A46
	Pl. III	a. London: 8.29 g. (128); B.M.C. <i>Cent. Gr.</i> p. 107, 7 b. London: 7.97 g. (123); B.M.C. <i>Cent. Gr.</i> p. 107, 9. Pierced c. Athens: 8.24 g. (127.2)		Pl. III
66	P52	Same die (?) a. Sir H. Weber. Large flaws in punch	Similar; no stays	A47 Pl. III
67	P53 Pl. III	Similar. 11 mm. sq. a. Paris: 8.46 g. (130.6); B.T.II. i, Pl. XXXIV, 16. Flaws in punch b. Cat. N. 1920 (Pozzi), Pl. XLVII, 1511: 8.55 g. (132). Large flaws in punch c. Cambridge, McClean: 8.42 g. (130). Large flaws in punch d. Bement: 8.50 g. (131.2). Cat. Pl. XIII, 187 e. Cat. H. XXI (Weber), Pl. XXI, 1628 = Cat. Merzbacher, 1910, Pl. 9, 472: 8.38 g. (129.4)	Same die	A47 Pl. III
68	P54	Similar. 11 mm. sq.	Shield indicated by linear circle; upon it owl to l., head facing, feathers indicated by pellets, wing long, claws curved	A48
	Pl. III	a. Berlin: 8.48 g. (131); <i>Z.f.N.</i> xx, Pl. V, 1; T. Pl. 1, 9. Flaws in punch b. London: 8.04 g. (124); B.M.C. <i>Cent. Gr.</i> p. 136, 1, Pl. XXIV, 18. Flaws in punch. Pierced		Pl. III
69	P55	Similar. 11 mm. sq.	Facing head of shorthorn bull, ears at r.-angles to head, hair indicated between horns, "star" of hair between eyes	A49
	Pl. III	a. Jameson, Paris: 8.40 g. (129.7), Cat. Pl. LX, 1180 = Cat. H. xxi (Weber), Pl. XXI, 1638 = T. Pl. 1, 37. Flaws in punch. Partly pierced		Pl. III

NO.	PUNCH		ANVIL
70	P56	Similar. 10.5 mm. sq. <i>a.</i> Berlin: 8.48 g. (131); T. Pl. 1, 36. Roughness in punch <i>b.</i> Boston, Warren: 8.21 g. (126.7); Catal. Regling, Pl. XVIII, 801. Flaws in punch <i>c.</i> Berlin: 8.56 g. (132.1). Very large flaws in punch. Struck later than No. 71 <i>c</i> , but before No. 71 <i>d</i> <i>d.</i> Copenhagen: 8.42 g. (130). Very large flaws. Struck after No. 71 <i>c</i> , but before 71 <i>d</i>	Same die A49 Pl. III
71	P56 Pl. III	Same die <i>a.</i> Jameson, Paris: 8.34 g. (128.7) = T. Pl. 1, 7. Biggish flaws in punch <i>b.</i> Empedocles, Athens: 7.76 g. (119.8). Flaws in punch <i>c.</i> Berlin: 8.10 g. (125). Large flaws in punch <i>a, c</i> were struck before 70 <i>c, d</i> <i>d.</i> Paris, Luynes: 8.42 (130) = Hill, <i>Hist. Gr. Coins</i> , Pl. I, 5 = T. Pl. 1, 6. Punch almost filled in with flaws. Struck after 70 <i>c, d</i> , and after 72 <i>a, b</i> . From Cousinéry's Find (Athens)	Same anvil die as No. 68. Owl A48 Pl. III
72	P56	Same die <i>a.</i> Seltman, Cambridge: 8.47 g. (130.7) = Cat. N. 1920 (Pozzi), Pl. XLVII, 1507. Flaws in punch <i>b.</i> Paris, Luynes: 8.47 g. (130.7); B.T.II. i, Pl. XXXIII, 1; T. Pl. 1, 8. Large flaws in punch <i>a, b</i> were struck before 70 <i>c, d</i>	Shield with owl similar to No. 68, but claws straight A50 Pl. III
73	P57 Pl. IV	Similar. 10.5 mm. sq. <i>a.</i> Comte de Nanteuil, Paris: 8.48 g. (131) = T. Pl. 1, 35. Flaws in punch	Bull's head as on No. 69, but locks on forehead A51 Pl. IV
74	P58 Pl. IV	Similar. 9 × 8.5 mm. <i>a.</i> Athens: 8.46 g. (130.6)	Four-spoke wheel as on No. 66, but with pellet as central hub A52 Pl. IV
75	P59 Pl. IV	Similar. 9 mm. sq. <i>a.</i> Meletopoulos, Athens	Similar. No distinct hub A53 Pl. IV
76	P60 Pl. IV	Similar. 10 mm. sq. <i>a.</i> Glasgow: 8.31 g. (128.3); Cat. Hunter Coll. ii, p. 47, 1	Gorgoneion facing; tongue protruding; long incisors and 4 teeth in upper jaw; hair indicated by straight thick lines A54 Pl. IV

NO.	PUNCH			ANVIL
77	P61 Pl. IV	Similar. 9 mm. sq. <i>a.</i> Berlin: 8.45 g. (130.4). Flaws in punch. <i>b.</i> Berlin: 7.70 g. (118.9). Flaws in punch and flaws at Gorgon's l. ear <i>c.</i> Berlin: 8.40 g. (129.7). Same flaws. From the Schubin Find	Same die	A54 Pl. IV
78	P61	Same die <i>a.</i> London: 8.65 g. (133.5); B.M.C. <i>Cent. Gr.</i> p. 119, 1. Larger flaws in punch <i>b.</i> London: 8.10 g. (125.3); B.M.C. <i>Cent. Gr.</i> p. 119, 5. Same flaws <i>c.</i> Cat. H. xxxiii (1913), Pl. XVII, 716. Same flaws	Similar; nose slightly wrinkled	A55 Pl. IV
79	P62	Similar. 9 mm. sq. <i>a.</i> Paris: 8.50 g. (131.2); B.T.II. i, Pl. XXXI, 8. Small flaws in punch. From Cousinéry's Find (Athens) <i>b.</i> Seltman, Cambridge: 8.49 g. (131) = Cat. Benson (London), 1909, Pl. XVII, 522 = Cat. H. xiii, 1905 (Rhousopoulos), Pl. XXIII, 1888. Larger flaws	Similar; long incisors and 5 teeth in upper jaw; hair ends in curls	A56 Pl. IV
80	P62 Pl. IV	Same die <i>a.</i> Newell, New York: 8.44 g. (130.3) = Cat. N. 1922, Pl. XXI, 544. Flaws larger <i>b.</i> London: 8.53 g. (131.7); B.M.C. <i>Cent. Gr.</i> p. 119, 2, Pl. XXII, 1; T. Pl. 1, 63. Big flaws	Similar; nose less flat	A57 Pl. IV
81	P62	Same die <i>a.</i> London: 8.66 g. (133.7); B.M.C. <i>Cent. Gr.</i> p. 120, 13, Pl. XXII, 5. Flaws very big <i>b.</i> Cat. H. xxv, 1909 (Philipsen), Pl. XII, 951: 8.44 g. (130.3). Flaws very big <i>c.</i> Paris: 8.66 g. (133.7); B.T.II. i, Pl. XXXI, 12. Flaws almost filling two triangular fields	(A38) Facing bull's head similar to No. 69. Hair on forehead straight	A58 Pl. IV
82	P62	Same die <i>a.</i> Paris: 8.46 g. (130.6); T. Pl. 1, 50. Flaws almost filling two triangular fields	Wheel, as on No. 66. Different die	A59 Pl. IV
83	P63 Pl. IV	Similar. 9 mm. sq. <i>a.</i> Berlin: 8.26 g. (127.5) <i>b.</i> Berlin: 8.58 g. (132.4); T. Pl. 1, 62 <i>c.</i> London: 8.33 g. (128.5); B.M.C. <i>Cent. Gr.</i> p. 119, 3. Flaws in punch <i>d.</i> Munich: 8.72 g. (134.6). Flaws in punch. Flaw over Gorgoneion	Gorgoneion; same die as No. 79	A56 Pl. IV

NO.	PUNCH		ANVIL
84	P64	Similar. 10 mm. sq.	Similar; same die as No. 78
	Pl. IV	<p><i>a.</i> Jameson, Paris: 8.37 g. (129.2); Cat. Pl. XCIV, 1169 <i>b</i> = Cat. Merzbacher (Munich), Nov. 1910, No. 476</p> <p><i>b.</i> Cat. H. xxx (Evans), Pl. XVI, 490 = Cat. H. xxv (Philipsen), Pl. XII, 949: 8.54 g. (131.8)</p> <p><i>c.</i> Berlin: 8.30 g. (128.1); T. Pl. 1, 64. Small flaw in punch</p> <p><i>d.</i> Copenhagen: 8.42 g. (130). Flaw in punch. Pierced</p> <p><i>e.</i> London: 8.20 g. (126.5); B.M.C. <i>Cent. Gr.</i> Pl. XXII, 2. Flaw in punch</p>	A55 Pl. IV
85	P64	Same die	Similar; long incisors and 5 teeth in upper jaw; hair indicated by straight thin lines
		<i>a.</i> The Hague: 8.50 g. (131.2). Large flaw in punch. Pierced	Pl. IV
86	P64	Same die	Wheel; same die as No. 82
		<i>a.</i> Berlin: 8.50 g. (131.2). Flaw in punch almost filling one triangular field	A59 Pl. IV
87	P65	Similar. 10 mm. sq.	Gorgoneion; same die as No. 85
	Pl. IV	<i>a.</i> Newell, New York: 7.45 g. (115) = Cat. H. xxi (Weber), Pl. XXI, 1635. Worn	A60 Pl. IV
[§37] 88	P66	Similar. 10 mm. sq., in the upper triangle a small panther's head facing	Same die
		<i>a.</i> Seltman, Cambridge: 8.01 g. (123.6) = Cat. N. 1920 (Pozzi), Pl. XLVII, 1485. Flaws in punch	A60 Pl. IV
89	P66	Same die	Similar; long incisors and 7 teeth in upper jaw; hair in tight curls
	Pl. IV	<p><i>a.</i> London: 8.53 g. (131.6); B.M.C. <i>Cent. Gr.</i> p. 119, 6, Pl. XXII, 3; T. Pl. 1, 65. Flaws in punch</p> <p><i>b.</i> Paris: 8.50 g. (131.2). Flaws in punch larger</p> <p><i>c.</i> Boston: Perkins Coll. No. 272</p> <p><i>d.</i> Bement, Philadelphia: 8.52 g. (131.5); Cat. Pl. XII, 180</p>	A61 Pl. IV
90	P67	Similar. 10 mm. sq. Panther's head in lower relief	Same die as No. 88
	Pl. IV	<i>a.</i> Jameson, Paris: 8.45 g. (130.4) = <i>J.I.A.N.</i> 1912, Pl. A', 2. Flaws in punch	A60 Pl. IV
91	P67	Same die	Same die as No. 89
		<p><i>a.</i> Paris, Luynes: 8.22 g. (126.9); B.T.II. i, Pl. XXXI, 7. Flaws in punch</p> <p><i>b.</i> Seltman, Cambridge: 8.02 g. (123.8). Flaws in punch</p>	A61 Pl. IV

## FRACTIONS

Belonging to Nos. 65 to 67, 74, 75, 82, 86

## DRACHM

Wheel.

Pl. IV,  $\theta$ . Paris: 4.36 g. (67.3); B.T.II. i, Pl. XXXIII, 15.

## OBOL

Wheel.

Pl. IV,  $\rho$ . London: 0.60 g. (9.3); B.M.C. *Cent. Gr.* p. 108, 24, Pl. XX, 6.—  
London: 0.60 g. (9.3).—Copenhagen.—Athens: (3 pieces).—Berlin: (10  
pieces) 0.66 to 0.52 g. (10.2 to 8.1).—Berlin: (6 pieces) 0.66 to 0.55 g.  
(10.2 to 8.5). All from the Schubin Find.—Vienna: 0.46 g. (7.1).—  
Copenhagen: 0.68 g. (10.5) and 0.52 g. (8.1).

Belonging to Nos. 68, 71, 72

## OBOL

Owl on shield.

Pl. IV,  $\sigma$ . London: 0.73 g. (11.2); B.M.C. *Cent. Gr.* p. 136, 2, Pl. XXIV, 19.  
—Athens: 0.65, 0.60 g. (10.1, 9.3).—Paris: 0.60 g. (9.3); B.T.II. i, Pl.  
XXXIII, 2.—Cambridge, McClean: 0.56 g. (8.7).

Belonging to Nos. 69, 70, 73, 81

## OBOL

Facing bull's head on shield.

Pl. IV,  $\tau$ . Berlin: 0.70 g. (10.8).

## HEMIOBOL

Pl. IV,  $\gamma\gamma$ . Copenhagen: 0.31 g. (4.8).—Athens: 0.33 g. (5.1).

Belonging to Nos. 76 to 80, 83 to 85, 87

## OBOL

Gorgoneion.

Pl. IV,  $\nu$ . London: 0.62 g. (9.6). 5 others, 0.62 to 0.51 g. (9.6 to 7.8); cf. B.M.C.  
*Cent. Gr.* p. 119 f., Pl. XXII, 4.—Berlin: (7 pieces) 0.62 to 0.50 g. (9.6 to  
7.7).—Berlin: (6 pieces) 0.64 to 0.57 g. (10 to 8.8). All from the Schubin  
Find.—Paris: 0.65 g. (10.1); B.T.II. i, Pl. XXXI, 9. From Cousinéry's  
Find (Athens).—Copenhagen: 0.60 g. (9.3).—Sir H. Weber.—Munich:  
0.68 and 0.60 g. (10.5 and 9.3).—Athens: 0.66 g., 0.61 g., 0.58 g. (10.2,  
9.4, 9).—Seltman: (3 pieces) 0.62 to 0.56 g. (9.6 to 8.7).

## TETARTEMORION

Gorgoneion.

Pl. IV,  $\delta\delta$ . Berlin: 0.16 g. (2.5).—Paris: 0.20 g. (3.1); B.T.II. i, Pl. XXXI, 10.  
From Cousinéry's Find.

## OTHER TYPES

## OBOL

Frog.

Pl. IV,  $\phi$ . Berlin: 0.66 g. (10.2).—London: Sir H. Weber.—Paris: 0.70 g. (10.8); B.T.II. i, Pl. XXXIII, 21.—Paris: 0.71 g. (11); *l.c.* No. 22.

## HEMIOBOL

Apple.

Pl. IV,  $\zeta\zeta$ . Berlin: (5 pieces) 0.30 to 0.28 g. (4.7 to 4.3).—Paris: 0.32 g. (4.9); B.T.II. i, Pl. XXXIII, 23.—Athens: 0.30 g., 0.28 g., 0.27 g. (4.7, 4.3, 4.2).  
—Seltman: (4 pieces) 0.36 to 0.27 g. (5.6 to 4.2).

Leaf.

Pl. IV,  $\epsilon\epsilon$ . Berlin: 0.25 g. (4).

## GROUP E

## THE IMPERIAL MINT IN PAEONIA

555-546 B.C.

## TETRADRACHMS

[§ 42] **OBVERSE**, head of Athena to right; eye, eyeball and eyebrow shown as raised lines on a cheek devoid of modelling; lips generally thick; ear large, ear-ring  $\odot$  or  $\bullet$ ; hair indicated by lines. Helmet as in Group C, but the volute is rarely present.

**REVERSE**, (i)  $\triangleleft \text{⋈} \text{E}$ , or (ii)  $\triangleleft \text{⊙} \text{E}$ , or (iii) rarely  $\triangleleft \text{⊙} \text{E}$  to r. downwards. Owl to r. head facing, *upright, legs close together, tail short, head large; plumage generally of coarse dots and lines*. In field above left hanging downwards two olive leaves with, or without, a berry. Incuse square.

NO.	ANVIL			PUNCH
92	A62	Snub nose, big chin, long thick neck <i>a.</i> The Hague: 16.5 g. (254.7); T. Pl. 2, 6	Legend i. Small leaves and berry	P68 Pl. V
93	A62 Pl. V	Same die <i>a.</i> Seltman, Cambridge: 16.66 g. (257.1) <i>b.</i> Athens: 16.87 g. (260.4); T. Pl. 3, 21. From the Acropolis Find	Similar	P69 Pl. V
94	A63 Pl. V	Similar <i>a.</i> Athens: 17.5 g. (270.1); <i>J.I.A.N.</i> 1898, Pl. IA', 9 = T. Pl. 3, 24. From the Acropolis Find	Similar; leaves longer	P70 Pl. V
95	A64 Pl. V	Similar, nose larger, ear rather small <i>a.</i> Athens: 17.1 g. (264); <i>J.I.A.N.</i> 1898, Pl. IA', 5 = T. Pl. 3, 15. From the Acropolis Find <i>b.</i> Athens: 16.72 (258.1); <i>J.I.A.N.</i> 1898, Pl. IA', 16 = T. Pl. 3, 14. From the Acropolis Find	Similar; owl smaller	P71 Pl. V
96	A64 bis Pl. V	Similar; nose smaller, chin smaller. Trace of volute on helmet <i>a.</i> Athens: 17.04 g. (263); T. Pl. 3, 19. From the Acropolis Find	Legend ii. Owl larger	P72 Pl. V
97	A65	Chin large; no forehead <i>a.</i> In the Trade: 16.6 g. (256.2) <i>b.</i> Mavrogordato, Hove: 16.82 g. (259.6) = Cat. Egger, 1914 (Prowe), 483	Same die	P72 Pl. V

NO.	ANVIL			PUNCH
98	A65 Pl. V	Same die <i>a.</i> Berlin: 16.1 g. (248.5) <i>b.</i> Petsalis, Athens	Similar. Owl smaller	P73 Pl. V
99	A66	Similar. Lips thicker <i>a.</i> Comte Chandon de Briailles, Paris: 16.67 g. (257.3); Cat. N. 1920 (Pozzi), Pl. XLVIII, 1518	Same die	P73 Pl. V
100	A66 Pl. V	Same die <i>a.</i> Athens: 17.23 g. (266); <i>J.I.A.N.</i> 1898, Pl. IA', 1 = T. Pl. 3, 27. From the Acropolis Find <i>b.</i> Athens: 16.73 g. (258.2); <i>J.I.A.N.</i> 1898, Pl. IA', 6 = T. Pl. 3, 16. From the Acropolis Find <i>c.</i> Feuardent, Paris: 17.7 g. (273.2) = T. Pl. 2, 4. Thick oxide	Similar	P74 Pl. V
101	A67 Pl. V	Similar. Lips rather less thick <i>a.</i> Berlin: 17.2 g. (265.5)	Legend iii. Similar owl	P75 Pl. V
102	A68 Pl. V	Similar. Jaw more rounded <i>a.</i> Athens: 16.91 g. (261); <i>J.I.A.N.</i> 1898, Pl. IA', 11 = T. Pl. 3, 12. From the Acropolis Find	Same die	P75 Pl. V
103	A68	Same die <i>a.</i> Athens: 17.0 g. (262.4); T. Pl. 3, 36. From the Acropolis Find	Similar; owl smaller	P76 Pl. V
104	A68	Same die <i>a.</i> Athens: 15.45 g. (238.5); T. Pl. 3, 37. From the Acropolis Find <i>b.</i> Athens: 16.35 g. (252.3); T. Pl. 3, 29. From the Acropolis Find	Legend ii. Similar	P77 Pl. V
105	A69 Pl. V	Features sharper. Lower relief <i>a.</i> Athens: 17.1 g. (264); <i>J.I.A.N.</i> 1898, Pl. IA', 12 = T. Pl. 3, 18. From the Acropolis Find	Same die	P77 Pl. V
106	A70 Pl. V	Coarser head. High relief <i>a.</i> Cook, Cambridge: 16.8 g. (259.3)	Similar. Owl larger	P78 Pl. V
107	A71 Pl. V	Similar. Eye very large <i>a.</i> Athens: 16.73 g. (258.2); T. Pl. 3, 17. From the Acropolis Find	Similar	P79 Pl. V
108	A71	Same die <i>a.</i> Seltman, Cambridge: 16.32 g. (252); <i>J.I.A.N.</i> 1912, Pl. A, 16 = T. Pl. 2, 5	Similar. Leaves very small	P80 Pl. V
109	A71	Same die <i>a.</i> Dr Bernhard, St Moritz: 16.82 g. (259.6); T. Pl. 2, 1	Owl larger and coarser	P81 Pl. V
110	A72 Pl. V	Prognathous jaw; lumpy nose <i>a.</i> Cat. N. 1920 (Pozzi), Pl. XLVIII, 1516: 16.66 g. (257)	Same die	P81 Pl. V

NO.	ANVIL			PUNCH
111	A73 Pl. V	Long nose; smaller chin	Broad owl <i>a.</i> Empedocles, Athens: 16.94 g. (261.5); Cat. H. xiii, 1905 (Rhusopoulos), Pl. XXIV, 1934 = Cat. H. xxv, 1909 (Philipsen), Pl. XII, 953 = Cat. H. xxxiii, 1913, Pl. XVII, 720 = T. Pl. 2, 8	P82 Pl. V
112	A74	Hooked nose; lips large and drawn up at corner	Similar <i>a.</i> Athens: 17.22 g. (265.8); T. Pl. 3, 41. From the Acropolis Find	P83 Pl. V
113	A74 Pl. V	Same die	Legend i. Similar* <i>a.</i> Athens: 16.66 g. (257); T. Pl. 2, 3 <i>b.</i> Seltman, Cambridge: 17.64 g. (272.3)	P84 Pl. V
114	A75 Pl. V	Long nose; well shaped jaw	Legend ii. Owl as last* <i>a.</i> Empedocles, Athens: 16.32 g. (251.9)	P85 Pl. V
115	A76 Pl. V	Very big eye; thick lips; chin smaller	Smaller owl; fine feathering <i>a.</i> Newell, New York: 16.55 g. (255.4) <i>b.</i> Athens: 17.12 g. (264.2); T. Pl. 3, 38. From the Acropolis Find	P86 Pl. V
116	A77 Pl. VI	Lips rather less thick	Similar; coarse feathering <i>a.</i> London: 16.71 g. (257.9)	P87 Pl. VI
117	A78 Pl. VI	Large chin, thick lips	Legend i. Similar <i>a.</i> Paris: 16.81 g. (259.4); B.T.II. i, Pl. XXXIX, 1 = T. Pl. 2, 2	P88 Pl. VI
118	A79 Pl. VI	Small chin	Similar. Leaves larger† <i>a.</i> Athens: 16.72 g. (258.1); <i>J.I.A.N.</i> 1898, Pl. IA', 7 = T. Pl. 3, 13. From the Acropolis Find	P89 Pl. VI
119	A80 Pl. VI	Smaller head; long nose; lips drawn up at corner	Legend ii. Similar; finer feathering† <i>a.</i> Athens: 17.08 g. (263.6); <i>J.I.A.N.</i> 1898, Pl. IA', 2 = T. Pl. 3, 45. From the Acropolis Find <i>b.</i> Parma: T. Pl. 2, 9	P90 Pl. VI
120	A81 Pl. VI	Similar. Features smaller	Same die <i>a.</i> Empedocles, Athens: 16.72 g. (258.1); Cat. Feuardent (Paris), June, 1913, Pl. VII, 212 = T. Pl. 2, 10	P90 Pl. VI
121	A82 Pl. VI	Hair not in lines, but in rows of dots. Face small and plump	Same die <i>a.</i> Empedocles, Athens: 16.86 g. (259.6)	P90 Pl. VI

\* From same hub.

† From same hub.

NO.	ANVIL			PUNCH
122	A83 Pl. VI	Hair in lines. Mouth thick <i>a.</i> Berlin: 17.36 g. (268)	Similar. Leaves small	P91 Pl. VI
123	A84 Pl. VI	Similar <i>a.</i> Berlin: 16.74 g. (258.4)	Similar. Thin awkward owl. Large leaves	P92 Pl. VI
124	A85	Very small face with large nose <i>a.</i> Cat. N. 1920 (Pozzi), Pl. XLVIII, 1517: 17.08 g. (263.6)	Same die	P92 Pl. VI
125	A85 Pl. VI	Same die <i>a.</i> Boston: 17.11 g. (264); Perkins	Similar; fine feathering Coll. No. 279	P93 Pl. VI
126	A86 Pl. VI	Larger head. Long nose <i>a.</i> Boston: 17.11 g. (264); Perkins	Legend iii. Owl with neat plumage. Leaves very large Coll. No. 278	P94 Pl. VI
127	A87 Pl. VI	Similar <i>a.</i> Paris: 16.67 g. (257.3) = Cat. H. xviii, 1907, Pl. XXXV, 2371 <i>b.</i> Newell, New York: 16.87 (260.4)	Legend ii. Similar owl and leaves	P95 Pl. VI

## FRACTIONS

## DRACHM

Closely resembling No. 127, but with single leaf in field of rev. legend i.  
Pl. XXII,  $\alpha$ . Boston, Perkins Coll.—Munich: 4.35 g. (67.2).—Athens: 3.86 g. (59.6). All same pair of dies.

Similar, but legend iii.

Pl. XXII,  $\beta$ . Cambridge, McClean: 4.32 g. (66.7).—Mavrogordato, Hove: 3.77 g. (58.2) = Cat. N. 1920 (Pozzi), 1527.—Gotha: 4.08 g. (63). All same pair of dies.

Pl. XXII,  $\gamma$ . Boston, Perkins Coll. Different anvil-, same punch-die.

## OBOL

Similar. Legend i.

Pl. XXII,  $\delta$ . Berlin: 0.57 g. (8.8).

Similar. Legend iii.

London: 0.67 g. (10.4).—Boston, Perkins Coll.—Newell, New York.—Oxford, Ashmolean.

## HEMIOBOL

Similar.

Pl. XXII,  $\epsilon$ . Berlin: 0.43 g., 0.32 g., 0.28 g. (6.7, 5, 4.3).

## GROUP F

## THE IMPERIAL MINT IN PAEONIA

After 546 to *ca.* 536 B.C.

## TETRADRACHMS

[§ 45] **OBVERSE**, head of Athena to right; eye of large dimensions; more modelling of cheek and chin than in the last Group E; lips thick; ear large, ear-ring  $\odot$  or  $\bullet$ ; hair indicated by lines. Helmet as in Group C, volute shown, and generally a series of dots running over the bulge of the helmet.

**REVERSE**, (i)  $A\odot E$ , or (ii)  $A\odot E$ , or (iii)  $\leftarrow \ddot{\cdot} E$ , or (iv)  $A\ddot{\cdot} E$  to r. downwards. Owl to r. head facing, *upright, legs fairly close together, tail short, head large*; plumage of lines and large dots. In field above l. two olive-leaves with berry. Incuse square.

NO.	ANVIL			PUNCH
128	A88	Bulgy eye; thick nose and chin <i>a.</i> Giesecke, Leipsic: 17.18 g. (265.2)	Legend i. Owl broad. Berry between the leaves	P96 Pl. VI
129	A88 Pl. VI	Same die* <i>a.</i> London: 16.89 g. (260.7); B.M.C. <i>Attica</i> , p. 2, 5, Pl. I, 5 <i>b.</i> Cat. Ciani (Paris), Dec. 1921, Pl. III, 33	Legend ii. Similar	P97 Pl. VI
130	A89 Pl. VI	Similar* <i>a.</i> Noe, New York. From Constantinople	Similar. Berry lower than leaves	P98 Pl. VI
131	A90 Pl. VI	Similar <i>a.</i> London: 16.56 g. (255.5)	Legend iii. Owl broad	P99 Pl. VI
132	A91	Similar. Four dots on the bulge of helmet <i>a.</i> Mavrogordato, Hove: 17.17 g. (264.9) <i>b.</i> Athens: 16.54 g. (255.3); <i>J.I.A.N.</i> 1898, Pl. IA', 13 = T. Pl. 3, 40. From the Acropolis Find	Legend iv. Owl similar	P100 Pl. VI
133	A91 Pl. VI	Same die <i>a.</i> Berlin: 17.45 g. (269.4). From the Aegean Find, 1900 <i>b.</i> Berlin: 17.27 g. (266.5). From the Aegean Find, 1900 <i>c.</i> In the Trade: 17.0 g. (262.4)	Legend iii. Similar. Leaves small	P101 Pl. VI
134	A91	Same die <i>a.</i> Brussels: 17.02 g. (262.7); T. Pl. 2, 7	Similar. Berry lower than small leaves	P102 Pl. VI

\* From same hub.

NO.	ANVIL			PUNCH
135	A92 Pl. VI	Similar. Protruding lips <i>a.</i> Empedocles, Athens: 17.13 g. (264.4)	Legend i. Similar owl. Berry between leaves	P103 Pl. VI
136	A93 Pl. VI	Similar. Four dots on helmet <i>a.</i> Mathey, Paris = Cat. S. June, 1911 (Sandemann), Pl. IV, 182 <i>b.</i> Berlin: 16.96 g. (261.8); <i>Z.f.N.</i> xx, Pl. V, 4, obv.	Similar. Leaves hang lower than berry	P104 Pl. VI
137	A94	Similar. Small sharp chin <i>a.</i> Athens: 17.22 g. (265.8); <i>J.I.A.N.</i> 1898, Pl. IA', 14 = T. Pl. 3, 44. From the Acropolis Find	Legend i. Neat plumage. Berry between leaves	P105 Pl. VII
138	A94 Pl. VII	Same die <i>a.</i> Athens: 16.5 g. (254.7); <i>J.I.A.N.</i> 1898, Pl. IA', 8 = T. Pl. 3, 33. From the Acropolis Find	Similar. Owl more clumsy	P106 Pl. VII
139	A95 Pl. VII	Similar. Smaller face <i>a.</i> Athens: 16.92 g. (261.1); T. Pl. 3, 30. From the Acropolis Find	Same die	P106 Pl. VII
140	A96 Pl. VII	Lines of hair in four groups. Ten dots on bulge of helmet <i>a.</i> Berlin: 16.86 g. (260.2). From the Aegean Find, 1900	Legend ii. Owl long-legged. Berry between small leaves	P107 Pl. VII
141	A97 Pl. VII	Hair in lines. Four dots on bulge of helmet <i>a.</i> London: 16.92 g. (261.1)	Similar	P108 Pl. VII
142	A98 Pl. VII	Hair in lines with fringe of dots. Sharp nose; smallish lips. Five dots on bulge of helmet* <i>a.</i> Feuarent, Paris	Legend iv. Owl with shorter legs	P109 Pl. VII
143	A99 Pl. VII	Similar; eye more bulgy. Lips thicker* <i>a.</i> Boston: 16.23 g. (250.5); Cat. Warren Coll. Pl. XIX, 806	Legend ii. Similar owl	P110 Pl. VII
144	A99	Same die <i>a.</i> Woodward, London: 17.12 g. (264.2) = Cat. H. xiii, 1905 (Rhosopoulos), Pl. XXIV, 1941 = T. Pl. 2, 34	Similar	P111 Pl. VII
145	A99	Same die <i>a.</i> Paris: 17.2 g. (265.5); B.T.II. i, Pl. XXXIV, 12	Similar; owl rather smaller	P112 Pl. VII

\* From same hub.

NO.	ANVIL			PUNCH
146	A100 Pl. VII	Hair in lines; eye less bulging. Six dots on the bulge of helmet <i>a.</i> London: 16.65 g. (257); B.M.C. <i>Attica</i> , p. 2, 8, Pl. I, 6 = T. Pl. 2, 26	Similar	P113 Pl. VII
147	A101 Pl. VII	Similar. Thick nose <i>a.</i> Boston: 17.11 g. (264); Perkins Coll. No. 280	Similar	P114 Pl. VII
148	A102 Pl. VII	Similar. No. of dots on bulge of helmet uncertain <i>a.</i> Berlin: 17.16 g. (264.8)	Similar. Leaves very small	P115 Pl. VII

## FRACTIONS

None.

**GROUP G**  
THE IMPERIAL MINT

**GROUP Gi**  
IONIC STYLE

546-527 B.C.

TETRADRACHMS

[§ 48] **OBVERSE**, head of Athena to right, generally of small dimensions; eye full, iris indicated; lips thin, nose pointed; features generally well proportioned; ear-ring  $\odot$ . Hair dressed in varied fashion and indicated by (i) lines; (ii) lines with fringe of dots; (iii) dots; (iv) lines ending in small tight curls; (v) waves along forehead with a strand looped over temple in front of ear. Helmet exactly as in Group C.

**REVERSE**,  $\Lambda\Theta E$  to r. downwards. Owl to r. head facing, *legs generally long, feet large, tail short, head large*; body plumage of dots or lines, wing plumage of lines. *The whole like an owlet rather than an owl.* In field l. above an olive on stalk between two leaves. Incuse square.

NO.	ANVIL			PUNCH
149	A103	Eye large; nose rather thick. Hair style i	Little owl, plumage of dots. Berry between the leaves	P116
	Pl. VII	a. Cat. Ciani (Paris), Dec. 1921, Pl. III, 36 b. Athens: 16.85 g. (260.7); T. Pl. 3, 43. From the Acropolis Find		Pl. VII
150	A104	Similar; nose less thick. Hair style ii	Same die	P116
	Pl. VII	a. Cat. N. iv (1922), Pl. XXI, 554 = Cat. H. xxxi (1911), Pl. IX, 299 = T. Pl. 4, 20: 17.4 g. (268.5)		Pl. VII
151	A105	Similar	Same die	P116
	Pl. VII	a. Boston: 17.2 g. (265.5); Cat. Warren Coll. Pl. XIX, 804		Pl. VII
152	A105	Same die. Line of dots added along neck-piece of helmet	Similar. Olive twig lower	P117
		a. Sir Herman Weber Coll.		Pl. VII
153	A105	Same die	Similar. Twig with short stalk	P118
		a. Oxford, Ashmolean Museum		Pl. VII

NO.	ANVIL			PUNCH
154	A106	Similar. Line along neck-piece	Owl quite small. Twig low	P119
	Pl. VII	a. Gedney Beatty, New York b. Mavrocordato, Athens: 16.23 g. (250.5); <i>J.I.A.N.</i> 1912, Pl. A', 27		Pl. VII
155	A107	Head slightly larger	Same die	P119
		a. Cat. Egger (May, 1912), Pl. XVII, 934: 17.18 g. (265.2)		Pl. VII
156	A107	Same die	Similar. Plumage of curved lines. Delicate engraving	P120
	Pl. VII	a. Locker-Lampson, Rowfant: 17.14 g. (264.5) = Cat. H. xxv, 1909 (Philipsen), Pl. XII, 955 = Cat. Egger (May, 1912), Pl. XVII, 933 = T. Pl. 4, 12		Pl. VII
157	A108	Similar. Hair style iii	Same die as Nos. 154, 155	P119
		a. Cat. H. xviii (1907), Pl. XXXV, 2370 = T. Pl. 4, 14: 16.55 g. (255.4)		Pl. VII
158	A108	Same die	Closely resembling die P120	P121
	Pl. VII	a. Cook, Cambridge: 16.63 g. (256.7)		Pl. VII
159	A109	Similar	Similar. Plumage of dots. Berry lower than the leaves	P122
	Pl. VII	a. London: 17.04 g. (262)		Pl. VII
160	A110	Similar. Hair style ii	AOE set low. Owl similar. Berry between leaves. Twig set high	P123
	Pl. VIII	a. Newell, New York: 17.1 g. (264)		Pl. VIII
161	A111	Similar. Small chin	Legend normal. Owl a little larger. Twig as last	P124
	Pl. VIII	a. Athens: 17.05 g. (263.1); <i>J.I.A.N.</i> 1898, Pl. IA', 3 = T. Pl. 3, 47. From the Acropolis Find		Pl. VIII
162	A112	Similar	Similar. Twig lower	P125
	Pl. VIII	a. Comte Chandon de Briailles, Paris: 17.09 g. (263.5); Cat. N. 1921 (Pozzi), Pl. XLVIII, 1520 = T. Pl. 2, 37		Pl. VIII
163	A113	Similar. Hair style i	Same die	P125
	Pl. VIII	a. Empedocles, Athens: 17.2 g. (265.5) = Cat. N. iv (1922), Pl. XXI, 555 = Cat. H. xxxi (1911), Pl. IX, 300 = T. Pl. 4, 25		Pl. VIII
164	A113	Same die	Owl less slender; feet smaller; left leg more advanced. Twig high	P126
		a. Empedocles, Athens: 16.98 g. (262.1) b. Copenhagen: 17.18 g. (265.2) c. Cat. H. vii (1902), Pl. IV, 270		Pl. VIII

NO.	ANVIL			PUNCH
165	A113	Same die	Owl as on No. 162, but taller. Twig set low	P127
		<i>a.</i> Cambridge, Leake: 17.13 g. (264.4); T. Pl. 2, 28		Pl. VIII
166	A114	Similar. Hair style ii	Same die	P127
		<i>a.</i> Miss Lamb, London: 16.6 g. (256.2)		Pl. VIII
167	A114	Same die	Similar. Owl less tall	P128
	Pl. VIII	<i>a.</i> Cat. N. 1921 (Pozzi), Pl. XLVIII, 1525: 16.8 g. (259.3)		Pl. VIII
168	A115	Similar. Hair style i	Similar. Owl somewhat sketchy	P129
	Pl. VIII	<i>a.</i> Empedocles, Athens: 16.63 g. (256.7)		Pl. VIII
169	A116	Similar. Hair style ii	Owl small. Twig higher	P130
	Pl. VIII	<i>a.</i> Boston: 16.86 g. (260.2); Cat. Warren Coll. 805		Pl. VIII
170	A117	Similar	Similar. Plumage delicate	P131
	Pl. VIII	<i>a.</i> Berlin: 17.08 g. (263.6). From the Aegean Find, 1900		Pl. VIII
171	A117	Same die	Legend set low. Owl as last. Twig rather lower	P132
		<i>a.</i> Glasgow: 17.36 g. (267.9); Cat. Hunter Coll. Pl. XXXIII, 18 <i>b.</i> Cat. Santamaria, Rome, 1910 (Hartwig), Pl. XIII, 762: 17.3 g. (267)		Pl. VIII
172	A118	Head rather smaller. Hair style iv	Legend normal. Owl as last	P133
	Pl. VIII	<i>a.</i> Seltman, Cambridge: 16.9 g. (260.8); <i>J.I.A.N.</i> 1912, Pl. A', 22 <i>b.</i> Cat. Walcher v. Molthein (Paris), 1895, Pl. XI, 1433: 17.68 g. (272.9) <i>c.</i> Cat. H. xxi, 1906 (Consul Weber), Pl. XXI, 1642 = T. Pl. 4, 33: 16.92 g. (261.1)		Pl. VIII
173	A119	Similar. Head slightly smaller. Hair style ii. The die itself has been double-struck with the hub that was used to impress the outline of the head	Letters very small. Owl as last. Twig set higher	P134
	Pl. VIII	<i>a.</i> Cat. N. 1921 (Pozzi), Pl. XLVIII, 1524 = T. Pl. 4, 27: 17.15 g. (264.7) <i>b.</i> Madame de S. Marceaux, Paris: 17.06 g. (263) = Cat. Sotheby, London, 1907 (Delbeke), Pl. V, 133		Pl. VIII
174	A120	Similar. Face smaller. Hair style iv*	Same die	P134
	Pl. VIII	<i>a.</i> Cat. N. 1921 (Pozzi), Pl. XLVIII, 1521 = Cat. H. xiii, 1905 (Rhousopoulos), Pl. XXIV, 1936 = Cat. H. xxix, 1910, Pl. VIII, 445 = T. Pl. 4, 41: 16.63 g. (256.7)		Pl. VIII

\* From same hub as next die.

NO.	ANVIL			PUNCH
175	A121 Pl. VIII	Almost identical. Crest of helmet rather higher* <i>a.</i> Berlin: 16.67 g. (257.3); T. Pl. 4, 42	Similar	P135 Pl. VIII
176	A122	Similar, but hair style ii <i>a.</i> Newell, New York: 16.53 g. (255.1)	Same die	P135 Pl. VIII
177	A122 Pl. VIII	Same die <i>a.</i> Berlin: 17.31 g. (267.2); T. Pl. 4, 28	Similar. Owl's head big and body dumpy	P136 Pl. VIII
178	A122	Same die <i>a.</i> Boston: 17.0 g. (262.4); Cat. Warren Coll. 807	Similar, but body rather less squat	P137 Pl. VIII
179	A122	Same die <i>a.</i> Giesecke, Leipsic: 17.02 g. (262.7)	Owl as last two, in size, but more of same shape as previous coins	P138 Pl. VIII
180	A123 Pl. VIII	Head closely resembling those of Nos. 174, 175. Hair style iv <i>a.</i> Cat. N. v (1923), Pl. LVII, 1969 = Cat. Sotheby, May, 1916 (Headlam), Pl. IX, 357: 16.82 g. (259.6)	Similar	P139 Pl. VIII
181	A123	Same die <i>a.</i> Copenhagen: 16.93 g. (261.3)	Similar, but legs longer	P140 Pl. VIII
182	A124 Pl. VIII	Very similar <i>a.</i> London: 16.85 g. (260)	Similar; legs not so long. Twig set a little lower	P141 Pl. VIII
183	A125 Pl. IX	Very similar <i>a.</i> Empedocles, Athens: 17.05 g. (263.1). From the Chios Find	Similar	P142 Pl. IX
184	A126 Pl. IX	Similar, but hair style i <i>a.</i> Seltman, Cambridge: 16.8 g. (259.3); <i>J.I.A.N.</i> 1912, Pl. A', 21 = T. Pl. 4, 21	Similar; owl slightly more dumpy	P143 Pl. IX
185	A127 Pl. IX	Similar head. Hair style iv <i>a.</i> Cambridge, McClean: 16.9 g. (260.8); T. Pl. 4, 38	Similar owl	P144 Pl. IX
186	A127	Same die <i>a.</i> Cat. Hoffmann, Paris, 1890 (Photiades Pasha), Pl. III, 499 = Cat. Feuarent, Paris, May, 1910, Pl. X, 397	Similar, but owl's head bigger	P145 Pl. IX

\* From same hub as last.

NO.	ANVIL			PUNCH
187	A128	Similar. Nose long. Hair style i <i>a.</i> Cambridge, McClean: 17.1 g. (264)	Similar. Owl much thinner	P146 Pl. IX
188	A128	Same die Pl. IX <i>a.</i> London: 17.15 g. (264.7); B.M.C. <i>Attica</i> , p. 1, 4, Pl. I, 4 = B.M. <i>Guide Coins of Ancients</i> , Pl. 6, 27 = Hill, <i>Hist. Gr. Coins</i> , Pl. I, 6 = Hill, <i>Handbook Gr. and Ro. Coins</i> , Pl. II, 2 = T. Pl. 4, 26	Owl rather wider; legs long	P147 Pl. IX
189	A129	Similar. Hair style iv Pl. IX <i>a.</i> Bernhard, St Moritz: 17.45 g. (269.3); T. Pl. 4, 39 <i>b.</i> Munich: 17.27 g. (266.5)	Same die	P147 Pl. IX
190	A129	Same die <i>a.</i> Empedocles, Athens. From the	Similar. Owl wide. Legs shorter Chios Find	P148 Pl. IX
191	A129	Same die <i>a.</i> Berlin: 17.07 g. (263.5); T. Pl. 4, 37	Similar	P149 Pl. IX
192	A130	Similar. Lips thin Pl. IX <i>a.</i> Berlin: 17.33 g. (267.5); T. Pl. 4, 35	Same die	P149 Pl. IX
193	A130	Same die <i>a.</i> London: 16.89 g. (260.7)	Similar. Owl thinner	P150 Pl. IX
194	A131	Similar. Hair style ii Pl. IX <i>a.</i> Newell, New York: 16.9 g. (260.8)	Same die	P150 Pl. IX
195	A131	Same die <i>a.</i> Munich: 16.8 g. (259.3); T. Pl. 5, 19	Owl wide	P151 Pl. IX
196	A132	Head rather larger. Hair as last Pl. IX <i>a.</i> Sir C. Oman, Oxford = T. Pl. 4, 5	Owl exactly like owl of P150	P152 Pl. IX
197	A133	Similar; mouth and chin small Pl. IX <i>a.</i> Berlin: 16.94 g. (261.5); T. Pl. 4, 16. Big flaw over bird's head	Owl broad and short-legged	P153 Pl. IX
198	A134	Very similar Pl. IX <i>a.</i> Frankfort a/M. <i>b.</i> Cat. N. v (1923), Pl. LVII, 1968: 17.44 g. (269.2) <i>c.</i> Cat. Feuarent, 1913 (Burel), Pl. IV, 178 <i>d.</i> Sir C. Oman, Oxford: 16.98 g. (262)	Owl similar. Twig rather higher	P154 Pl. IX
199	A135	Similar, but hair style v Pl. IX <i>a.</i> Berlin: 17.04 g. (263)	Owl similar. Twig lower	P155 Pl. IX

NO.	ANVIL			PUNCH
200	A136 Pl. IX	Similar <i>a.</i> Berlin: 16.825 g. (259.6)	Similar	P156 Pl. IX
201	A137	Similar <i>a.</i> London: 16.85 g. (260)	Similar. Owl's legs longer	P157 Pl. IX
202	A137 Pl. IX	Same die <i>a.</i> Seltman, Cambridge: 17.0 g. (262.4); <i>J.I.A.N.</i> 1912, Pl. A', 20 = T. Pl. 5, 28	Legend set low. Owl, etc. Similar	P158 Pl. IX
203	A138 Pl. IX	Head as on Nos. 195, 196. Hair style ii <i>a.</i> Newell, New York: 16.78 g. (259)	Legend normal. Owl like owl of No. 198	P159 Pl. IX
204	A139 Pl. IX	Similar* <i>a.</i> Gedney Beatty, New York	Similar. Owl as on No. 201	P160 Pl. IX
205	A140	Similar. Nose longer* <i>a.</i> Gotha: 16.84 g. (260)	Owl broad and with large head	P161 Pl. IX
206	A140 Pl. IX	Same die <i>a.</i> London: 16.83 g. (259.8)	Owl and twig smaller	P162 Pl. IX
207	A140	Same die <i>a.</i> Cat. Ratto (Genoa), 1909, Pl. XI, 2489: 16.98 g. (262.1)	Owl slightly wider	P163 Pl. IX
208	A141 Pl. X	Similar† <i>a.</i> Comte de Nanteuil, Paris: 17.1 g. (264)	Similar, but slightly smaller. Legs long	P164 Pl. X
209	A142 Pl. X	Similar head and face; but hair style v† <i>a.</i> In the Trade: 16.78 g. (259) = T. Pl. 2, 39 <i>b.</i> Feuarent, Paris: 16.9 g. (260.8) = T. Pl. 5, 35	Similar	P165 Pl. X
210	A143 Pl. X	Similar face. Hair style ii <i>a.</i> Cat. N. 1921 (Pozzi), Pl. LXVIII, 1522: 16.86 g. (260.2)	Similar. Owl thinner	P166 Pl. X
211	A144	Similar; but hair style i <i>a.</i> Meletopoulos, Athens	Owl as on P160. Twig set low in field	P167 Pl. X

\* Probably from same hub.

† From same hub.

NO.	ANVIL			PUNCH
212	A144	Same die	Legend set low. Owl as on P162. Twig set high and having 3 leaves instead of berry between leaves	P168
	Pl. X	a. London: 17.2 g. (265.5); B.M.C. <i>Attica</i> , p. 2, 11 = T. Pl. 4, 7		Pl. X

## FRACTIONS

## DRACHM

Exactly like No. 188. Hair style i.

Pl. XXII, ζ. London: 4.37 g. (67.5); B.M.C. *Attica*, p. 4, 27, Pl. II, 8 = T. Pl. 7, 24.

## OBOL

Same.

Pl. XXII, η. Paris: 0.71 g. (11); B.T.II. i, Pl. XXXV, 4.—Berlin: 0.505 (7.8).

## HEMIOBOL

Similar.

Pl. XXII, θ. Berlin: 0.34 g. (5.25).—Copenhagen: 0.27 g. (4.15).—Boston.

## TETARTEMORION

Similar.

Pl. XXII, ι. Berlin: 0.175 g. (2.65).

## THE IMPERIAL MINT

## GROUP G ii

## DORIC STYLE

527-510 B.C.

## TETRADRACHMS

[§ 50] **OBVERSE**, head of Athena to right, generally of larger dimension than that in Group G i; features rather heavy, eye full, iris indicated; ear-ring  $\odot$ . Hair dressed in varied fashion and indicated by (i) lines; (ii) lines with fringe of dots; (iii) dots; (iv) lines ending in small tight curls; (v) waves along forehead with a strand looped over temple in front of ear. Helmet as in Group C.

**REVERSE**,  $\Lambda\Theta E$  to r. downwards. *Owl etc., as in Group G i.*

NO.	ANVIL			PUNCH
213	A145 Pl. X	Eye large; chin heavy. Hair style ii*	Medium owl. Twig fairly low	P169 Pl. X
		a. Jameson, Paris: 16.92 g. (261.1); Cat. Pl. LXI, 1183 = Cat. Sotheby, April, 1907 (Delbeke), Pl. V, 135 = T. Pl. 4, 6		
214	A146 Pl. X	Similar. Hair style v	Same die	P169 Pl. X
		a. Meletopoulos, Athens = T. Pl. 2, 40		
215	A147 Pl. X	Similar. Hair style ii*	Owl very clumsy, with ragged plumage	P170 Pl. X
		a. Berlin: 16.15 g. (249.3); T. Pl. 4, 15 b. Cat. Feuarent, May, 1910 (Duruffé), Pl. X, 399		
216	A147	Same die	Similar untidy owl	P171 Pl. X
		a. Munich: 16.87 g. (260.4)		
217	A147	Same die	Legend set low. Owl as on P169. Twig rather higher	P172 Pl. X
		a. In the Trade: 17.1 g. (264) = T. Pl. 4, 13		
218	A147	Same die	Similar. Twig set low	P173 Pl. X
		a. Tübingen: 17.14 g. (264.5) = T. Pl. 4, 11		
219	A147	Same die	Legend normal. Owl thinner	P174 Pl. X
		a. Feuarent, Paris: 16.62 g. (256.5) = T. Pl. 4, 18		

\* From same hub.

NO.	ANVIL		PUNCH
220	A147	Same die a. Seltman, Cambridge: 17.01 g. (262.5); <i>J.I.A.N.</i> 1912, Pl. A', 19	Similar. Owl wider P175 Pl. X
221	A148 Pl. X	Similar. Head slightly larger a. Frankfort a/M. b. Mathey, Paris: 16.96 g. (262.1) = Cat. Ratto (Genoa, 1909), Pl. XI, 2487 c. In the Trade: 17.0 g. (262.4)	Same die P175 Pl. X
222	A148	Same die a. Meletopoulos, Athens = T. Pl. 2, 25	Similar. Owl's legs shorter. Twig higher P176 Pl. X
223	A148	Same die a. Cambridge: 17.5 g. (270.1) b. Mavrogordato, Hove: 16.98 g. (262.1)	Owl, etc., as on P175 P177 Pl. X
224	A148	Same die a. Woodward, London = Cat. Feuarent, May, 1910 (Durufflé), Pl. X, 400	Similar. Owl with longer legs. Twig rather higher P178 Pl. X
225	A148	Same die a. Meletopoulos, Athens	Similar. Legs of owl a little shorter P179 Pl. X
226	A148	Same die a. Cat. H. xiii, 1905 (Rhousopoulos), Pl. XXIV, 1938 = T. Pl. 4, 1: 16.98 g. (262.1)	Similar. Twig lower P180 Pl. X
227	A149 Pl. X	Similar a. Meletopoulos, Athens: T. Pl. 4, 3 b. Meletopoulos, Athens c. Munich: 16.75 g. (258.5)	Similar P181 Pl. X
228	A150 Pl. X	Similar a. Meletopoulos, Athens	Similar. Twig slightly lower P182 Pl. X
229	A151 Pl. X	Head rather smaller. Hair style i a. Munich: 17.2 g. (265.5) = T. Pl. 4, 17	Similar P183 Pl. X
230	A152 Pl. X	Head larger. Hair style v a. Paris, Luynes: 17.4 g. (268.5); B.T.II. i, Pl. XXXIV, 14 = <i>Rev. Num.</i> 1895, Pl. X, 2 = T. Pl. 5, 32	Similar; owl thinner. Twig apparently with 3 berries, an effect due to faulty hubbing P184 Pl. X

NO.	ANVIL			PUNCH
231	A153 Pl. X	Similar. Hair style ii <i>a.</i> Meletopoulos, Athens <i>b.</i> Seltman, Cambridge: 16.85 g. (260.1)	Similar. Twig normal. In- scription set low	P185 Pl. X
232	A153	Same die <i>a.</i> Cat. H. xiv (1905), Pl. XI, 382: 17.06 g. (263.3)	Similar	P186 Pl. X
232 <i>bis</i>	A153	Same die* <i>a.</i> Bement, Philadelphia	Similar	P186 <i>bis</i> Pl. X
233	A154 Pl. XI	Similar* <i>a.</i> Cook, Cambridge: 16.83 g. (259.8)	Similar. Owl more dumpy. Leaves rather long. Inscription normal	P187 Pl. XI
234	A155	Similar. Eye very large <i>a.</i> Athens: 17.12 g. (264.2): T. Pl. 2, 32	Owl with longer legs which are rather more apart. Leaves longish	P188 Pl. XI
235	A155 Pl. XI	Same die <i>a.</i> Paris	Similar	P189 Pl. XI
236	A155	Same die <i>a.</i> The Hague: 17.3 g. (267)	Similar	P190 Pl. XI
237	A156	Similar. Eye less bulgy <i>a.</i> Cambridge, McClean: 17.18 g. (265.2) = T. Pl. 4, 2	Similar	P191 Pl. XI
238	A156 Pl. XI	Same die <i>a.</i> Sir H. Weber Coll.: 16.90 g. (260.8) = Cat. Ciani (Paris, 12 Dec. 1921), Pl. III, 34 = T. Pl. 4, 4	Similar	P192 Pl. XI
239	A157 Pl. XI	Similar. Hair style v <i>a.</i> Frankfurt a/M. <i>b.</i> Berlin: 17.01 g. (262.5)	Similar	P193 Pl. XI
240	A158 Pl. XI	Similar <i>a.</i> Cat. Ciani (Paris, 12 Dec. 1921), Pl. III, 35	Similar. Owl wider. Twig low†	P194 Pl. XI
241	A159	Similar. Hair style ii <i>a.</i> Beatty, New York	Similar†	P195 Pl. XI
242	A159	Same die <i>a.</i> Athens: 16.94 g. (261.5) = T. Pl. 4, 10 <i>b.</i> Beatty, New York	Similar owl more slender	P196 Pl. XI

\* From same hub.

† From same hub.

NO.	ANVIL			PUNCH
243	A159 Pl. XI	Same die <i>a.</i> Berlin: 16.93 g. (261.3) = T. Pl. 4, 23 <i>b.</i> Petsalis, Athens <i>c.</i> Cat. H. xxv, 1909 (Philipsen), Pl. XII, 954 = Cat. H. xxx (1911), Pl. XVI, 492 = T. Pl. 4, 19: 16.58 g. (256)	Similar	P197 Pl. XI
244	A160 Pl. XI	Similar <i>a.</i> The Hague: 17.1 g. (264) = T. Pl. 4, 8	Similar	P198 Pl. XI
245	A161 Pl. XI	Similar. Nose rather long* <i>a.</i> Empedocles, Athens: 16.85 g. (260.1)	Similar. Neat owl	P199 Pl. XI
246	A162 Pl. XI	Similar* <i>a.</i> Robinson, Newport	Similar. Legend set lower	P200 Pl. XI
247	A163	Similar. Hair style iv <i>a.</i> Boston, Perkins: 16.98 g. (262); Cat. No. 284	Same die	P200 Pl. XI
248	A163 Pl. XI	Same die <i>a.</i> London: 17.85 g. (275.5); N.C. 1885, Pl. VIII, 4	Similar. Legend normal	P201 Pl. XI
249	A164 Pl. XI	Similar. Hair style ii <i>a.</i> Berlin: 17.05 g. (263.1) = T. Pl. 4, 9	Similar. Owl slightly broader	P202 Pl. XI
250	A165 Pl. XI	Similar. Big eye; thick lips <i>a.</i> The Hague: 17.20 g. (265.5) = T. Pl. 2, 30	Same die	P202 Pl. XI
251	A165	Same die <i>a.</i> Cat. N. v, 1923 (Lucerne), Pl. LVI, 1966: 17.23 g. (266)	Similar. Twig high and small; legend set low	P203 Pl. XI
252	A165	Same die <i>a.</i> Beatty, New York	Similar	P204 Pl. XI
253	A166	Similar <i>a.</i> Athens: 16.55 g. (255.4) = T. Pl. 2, 33	Same die	P204 Pl. XI
253 <i>bis</i>	A166 Pl. XI	Same die <i>a.</i> Sir C. Oman, Oxford: 17.29 g. (266.9)	Similar. Legend spaced	P204 <i>bis</i> Pl. XI
254	A167 Pl. XI	Similar. Biggish nose. Hair style v <i>a.</i> Mathey, Paris: 16.98 g. (262) = Cat. Sotheby, May, 1897 (H. Smith), Pl. II, 79 = Cat. Sotheby, Feb. 1909 (Benson), Pl. XVII, 527 = T. Pl. 5, 31	Similar. Twig longer and lower. Legend normal	P205 Pl. XI

\* From same hub.



NO.	ANVIL			PUNCH
267	A176 Pl. XII	Similar. Head and features larger <i>a.</i> Athens: 16.93 g. (261.3) = T. Pl. 5, 6	Similar	P216 Pl. XII
268	A177 Pl. XII	Similar. Better proportions* <i>a.</i> Berlin: 18.47 g. (285.2 <i>sic!</i> ) = T. Pl. 5, 17	Similar. Legend set low	P217 Pl. XII
269	A178 Pl. XII	Similar* <i>a.</i> Seltman, Cambridge: 16.88 g. (260.5) = <i>J.I.A.N.</i> 1912, Pl. A', 26 = T. Pl. 5, 13	Similar. Legend normal	P218 Pl. XII
270	A178	Same die <i>a.</i> Berlin: 16.70 g. (257.7)	Similar	P219 Pl. XII
271	A178	Same die <i>a.</i> Seltman, Cambridge: 16.97 g. (262) = <i>J.I.A.N.</i> 1912, Pl. A', 18 = T. Pl. 5, 11 <i>b.</i> Feuarent, Paris: 17.35 g. (267.8) = T. Pl. 5, 15	Similar	P220 Pl. XII
272	A178	Same die <i>a.</i> Cat. H. xiii, 1905 (Rhousopoulos), Pl. XXIV, 1940 = T. Pl. 5, 2: 16.70 g. (257.7)	Similar. Twig higher	P221 Pl. XII
273	A178	Same die <i>a.</i> Munich: 15.90 g. (245.4) = T. Pl. 5, 7	Similar. Large E in legend	P222 Pl. XII
274	A179 Pl. XII	Similar. Eye large; nose prominent <i>a.</i> Comte de Nanteuil, Paris: 16.62 g. (256.5)	Similar. Legend normal	P223 Pl. XII
275	A180 Pl. XII	Head resembling that of No. 268 <i>a.</i> Petrograd: 17.30 g. (267) = T. Pl. 5, 5	Same die	P223 Pl. XII
276	A181	Similar. Head large; high relief; nose with high bridge <i>a.</i> Seltman, Cambridge: 16.85 g. (260.1) = <i>J.I.A.N.</i> 1912, Pl. A', 25 = T. Pl. 5, 14	Similar. Twig rather lower	P224 Pl. XII
277	A181 Pl. XII	Same die <i>a.</i> Seltman, Cambridge: 16.75 g. (258.5) = <i>J.I.A.N.</i> 1912, Pl. A', 23 = T. Pl. 5, 10	Similar. Twig widespread	P225 Pl. XII
278	A182	Similar <i>a.</i> Athens, from the Chios Find	Similar. Twig normal and rather low	P226 Pl. XII

\* Probably from same hub.

NO.	ANVIL			PUNCH
279	A182 Pl. XII	Same die <i>a.</i> Cambridge, McClean: 17.97 g. (277.3 <i>sic!</i> ) = T. Pl. 5, 3 <i>b.</i> Munich: 16.31 g. (251.7)	Similar	P227 Pl. XII
280	A182	Same die <i>a.</i> Copenhagen: 16.70 g. (257.7) = T. Pl. 5, 4	Similar	P228 Pl. XII
281	A182	Same die <i>a.</i> Munich: 16.56 g. (255.6) <i>b.</i> Vatican: 17.20 g. (265.5) = T. Pl. 5, 1	Similar	P229 Pl. XII
282	A183 Pl. XII	Similar. Lower relief. Nose straight <i>a.</i> Cat. N. 1920 (Pozzi), Pl. XLVIII, 1534 = Cat. Sambon, Rome, 1907 (Strozzi), Pl. XI, 1516: 17.46 g. (269.5)	Same die	P229 Pl. XII
282 <i>bis</i>	A183	Same die ( <i>recut?</i> ) <i>a.</i> Bement, Philadelphia	Similar	P229 <i>bis</i>
283	A184 Pl. XII	Similar <i>a.</i> Bement, Philadelphia: 17.70 g. (273.2) = Catal. Pl. XIII, 184	Similar. Twig widespread	P230 Pl. XII

*Saturday's sale 27/11/70 L.150*

## FRACTIONS

## OBOL

Similar to Nos. 259 ff. Hair style iii.  
Pl. XXII,  $\kappa$ . Boston, Perkins.—Vienna: 0.60 g., 0.50 g. (9.3, 7.7).—Gotha:  
0.48 g. (7.4).

## HEMIOBOL

Similar.  
Pl. XXII,  $\lambda$ . Berlin: 0.40 g. (6.2).

## TETARTEMORION

Similar.  
Pl. XXII,  $\mu$ . Berlin: 0.245 g. (3.75).

## GROUP H

## THE CIVIC MINT

Between 527 and 510 B.C.

## TETRADRACHMS

[§ 55] **OBVERSE**, head of Athena to right in high relief; eye full, iris sometimes indicated; lips small and drawn up at corner, features generally well modelled; ear-ring  $\odot$ . Hair dressed in varied fashion indicated by (i) lines; (ii) waved lines; (iii) waved lines ending in curls; (iv) waved band of hair across forehead and temple. Helmet generally as in Group C, but no chevrons.

**REVERSE**, (i)  $\Lambda\odot E$ , (ii)  $\Xi\odot A$ , (iii)  $\Lambda\oplus E$ , or (iv)  $\Xi\oplus A$ , variously disposed. Owl to r. or l. head facing and *well proportioned, legs short to medium, wing in high relief*; body plumage of dots (2 first dies), then omitted, lines on later dies, wing plumage of lines. Generally olive-twig with varied number of leaves variously disposed. Incuse square deep.

**FLAN**, generally broad; edges on incuse square flat or bevelled.

NO.	ANVIL			PUNCH
284	A185	Iris shown. Hair style i. 5 dots on raised rim at base of neckpiece*	Legend i downwards r. Owl r. dots on body; legs short. Small twig, 2 leaves and berry above high l. Bevelled punch†	P231
	Pl. XIII	a. Boston, Perkins: 17.17 g. (265); Cat. Pl. IV, 285 = N.C. 1881, Pl. IV, 2		Pl. XIII
285	A186	Similar. Iris not shown. Hair style ii*	Similar†	P232
	Pl. XIII	a. Berlin: 16.96 g. (261.8); <i>Z.f.N.</i> xx, Pl. V, 16 (obv.) = T. Pl. 7, 1 b. Cat. N. 1920 (Pozzi), Pl. XLVIII, 1529 = <i>Rev. Num.</i> 1912, Pl. I, 9: 17.26 g. (266.4). From the Taranto Find c. Paris: 16.05 g. (247.7); <i>Rev. Num.</i> 1912, Pl. I, 10 = T. Pl. 7, 2. From the Taranto Find		Pl. XIII
286	A187	Similar. Head smaller. No dots on neckpiece	Legend i downwards, below l. Owl l. Body plain. No twig. Crescent moon, the horns curving up, in field above r. Bevelled punch	P233
	Pl. XIII	a. Paris: 17.1 g. (264 before cleaning); <i>Rev. Num.</i> 1912, Pl. I, 11 = T. Pl. 7, 9. From the Taranto Find		Pl. XIII

\* From same hub.

† From same hub.

NO.	ANVIL			PUNCH
287	A188	Similar. Hair style iv	Same types and legend, the latter to l. downwards	P234
	Pl. XIII	<i>a.</i> Seltman, Cambridge: 17.0 g. (262.4). From the Taranto Find <i>b.</i> Paris: 17.2 g. (265.5 before cleaning); <i>Rev. Num.</i> 1912, Pl. I, 12 = T. Pl. 7, 10. From the Taranto Find		Pl. XIII
288	A189	Similar. Smaller head	Similar. Legend i upwards, below l. Punch flat and bevelled	P235
	Pl. XIII	<i>a.</i> Gotha: 17.08 g. (263.6) = T. Pl. 7, 13		Pl. XIII
289	A190	Similar; iris shown. Hair style ii	Same die	P235
	Pl. XIII	<i>a.</i> Berlin: 17.13 g. (264.4); <i>Z.f.N.</i> xx, Pl. V, 15 = T. Pl. 7, 11 <i>b.</i> Jameson, Paris: 17.02 g. (262.7) = T. Pl. 7, 12. Pierced		Pl. XIII
290	A191	Similar. Hair indicated by five curls. Crest support decorated with three ornamental bands	Legend iv to l. upwards. Owl as last, legs longer. No crescent or twig. Flat punch	P236
	Pl. XIII	<i>a.</i> London: 16.94 g. (261.5); B.M.C. <i>Attica</i> , p. 4, 26, Pl. II, 17 = T. Pl. 7, 14. Pierced		Pl. XIII
291	A191	Same die	Legend iii below, l., downwards. Owl as last. Twig with 2 leaves (?) and berry to r. above. Punch bevelled	P237
		<i>a.</i> Athens: 16.88 g. (260.5) = T. Pl. 7, 15. Pierced		Pl. XIII
292	A192	Similar. Hair style ii. Dots on crest support	Legend i below, r., downwards. Owl as last but to r. Twig as last to l. above. Punch as last	P238
	Pl. XIII	<i>a.</i> Munich: 17.25 g. (266.2) = T. Pl. 6, 15		Pl. XIII
293	A193	Similar. Hair style iii	Legend i above, l., upwards. Owl as last. Twig below, r., growing up	P239
		<i>a.</i> Berlin: 17.10 g. (264) = T. Pl. 6, 27. Pierced <i>b.</i> Berlin: 17.75 g. (274) = T. Pl. 6, 29 <i>c.</i> Gotha: 17.29 g. (266.9) = T. Pl. 6, 28		Pl. XIII
294	A193	Same die	Similar. Legend to l. upwards. Owl better proportioned	P240
	Pl. XIII	<i>a.</i> Berlin: 17.24 g. (266.1) = Cat. Hoffmann, Paris, 1890 (Photiadès Pacha), Pl. III, 518 = T. Pl. 6, 26		Pl. XIII

NO.	ANVIL			PUNCH
295	A194	Similar. Hair style iv	Similar. Legend to r. downwards. Twig as last but above l.	P241
		<i>a.</i> Paris, Luynes: 17.28 g. (266.7); B.T.II. i, Pl. XXXV, 1 = T. Pl. 7, 4. Rev. die fractured above		Pl. XIII
		<i>b.</i> Jameson, Paris: 17.41 g. (268.7); Cat. Pl. LX, 1184 = Cat. Hoffmann, Paris, 1890 (Photiadès Pacha), Pl. IV, 528. Fracture larger		
		<i>c.</i> London: 17.14 g. (264.5); B.M.C. <i>Attica</i> , p. 3, 19, Pl. II, 1 = T. Pl. 7, 3. Fracture extensive		
296	A194	Same die	Type as No. 294	P242
		<i>a.</i> The Hague: 16.90 g. (260.8) = T. Pl. 7, 5. Pierced		Pl. XIII
		<i>b.</i> Cat. Egger, Vienna, 1904 (Prowe), Pl. V, 735		
		<i>c.</i> Cat. Feuarent, Paris, May, 1910, Pl. X, 401		
297	A194	Same die	Legend iii below, r., downwards. Owl r. very well proportioned. Plumage on body. Small neat twig, berry and 2 leaves above l. Same die as No. 299	P243
	Pl. XIII	<i>a.</i> Berlin = 17.15 g. (264.7) = T. Pl. 7, 6. Pierced		Pl. XIII
		<i>b.</i> Seltman, Cambridge: 17.10 g. (264)		
298	A195	Similar. Eye large. Hair style ii	Legend i. Similar, but rather coarser. Plumage on body	P244
	Pl. XIII	<i>a.</i> Seltman, Cambridge: 16.90 g. (260.8)		Pl. XIII
299	A196	Similar. Finer work. Hair style iii	Same die as No. 297	P243
		<i>a.</i> Frankfort a/M.		Pl. XIII
300	A196	Same die	Legend ii to l. downwards. Owl as last but more slender and to l. Twig of 3 leaves above r.	P245
		<i>a.</i> London: 17.19 g. (265.3); B.M.C. <i>Attica</i> , p. 3, 22, Pl. II, 3 = T. Pl. 6, 25		Pl. XIII
		<i>b.</i> Berlin: 16.82 g. (259.6) = T. Pl. 6, 24. Pierced		
301	A196	Same die	Legend i to r. downwards. Owl r. legs long. Large twig above l. with 4 leaves and 3 berries	P246
		<i>a.</i> London: 17.31 g. (267.1) = T. Pl. 6, 9		Pl. XIII

NO.	ANVIL			PUNCH
302	A196 Pl. XIII	Same die* <i>a.</i> London: 17.30 g. (267); B.M.C. <i>Attica</i> , p. 3, 20, Pl. II, 2 = T. Pl. 6, 21 <i>b.</i> London: 16.95 g. (261.6); B.M.C. <i>Attica</i> , p. 3, 21 = T. Pl. 6, 22. Pierced <i>c.</i> Cambridge, McClean: 17.50 g. (270.1) = T. Pl. 6, 23 <i>d.</i> Cat. Sotheby, London, July, 1910 (Warren), Pl. I, 13: 17.07 g. (263.5)	Similar; legs longish	P247 Pl. XIII
303	A197  Pl. XIV	Similar but with addition of a loop of hair over temple, and second volute on helmet over ear* <i>a.</i> Locker-Lampson, Rowfant: 17.36 g. (268) = T. Pl. 6, 20 <i>b.</i> London: 17.24 g. (266); B.M.C. <i>Attica</i> , p. 3, 23, Pl. II, 4 = T. Pl. 6, 18	Similar; legs long	P248  Pl. XIV
304	A198	Small head in high relief, iris indicated. Hair style iii. The close-fitting helmet with 2 volutes, the crest, raised above it, is double. Behind neck 2 serpents' heads and necks, in front 1 serpent. Necklace of pearls above truncation [see p. 72, fig. 45 for restoration of complete design] <i>a.</i> London: 17.35 g. (267.8); B.M.C. <i>Attica</i> , p. 4, 25, Pl. II, 6 = T. Pl. 7, 8	Legend iii. Exactly like Nos. 297, 299 (die P243 emanating from same hub)	P249  Pl. XIV
305	A198  Pl. XIV	Same die <i>a.</i> London: 16.74 g. (258.4); N.C. 1881, Pl. IV, 1 = T. Pl. 7, 7	Legend i above 1. ☉ in angle. Owl and twig as on No. 296	P250  Pl. XIV

\* From same hub.

#### FRACTIONS

##### OBOL

Pl. XXII, *v*. Exactly like No. 300. Hair style i. London: 0.58 g. (8.9).—London. —Berlin (4): 0.57, 0.55, 0.59, 0.60 g. (8.8, 8.5, 9.1, 9.3).—Vienna: 0.60 g. (9.3).—Paris (2).

##### HEMIOBOL

Similar.  
Pl. XXII, *ξ*. Berlin: 0.35 g. (5.3).

## GROUP J

Ca. 514 (or earlier?)–510 B.C.


## GROUP Ji

[§ 61]

## ELECTRUM

NO.	PUNCH			ANVIL
306	P251 Pl. XIV	Shallow incuse square within which ▷	Owl to l. head facing; wings and tail horizontal	A199 Pl. XIV
		a. Berlin: 1.31 g. (20.2) = T. Pl. I, 4. U. Koehler Coll. found in the bed of the Ilissos		
		b. London: 1.36 g. (21); B.M.C. <i>Attica</i> , p. 1, 1, Pl. I, 1 = T. Pl. I, 2 = Hill, <i>Hist. Gr. Coins</i> , Pl. I, 4		
		c. Athens: 1.34 g. (20.7) = T. Pl. I, 1		
307	P252 Pl. XIV	Similar*	Similar	A200 Pl. XIV
		a. Paris: 1.36 g. (21); B.T.II. i, Pl. V, 23 = <i>Rev. Num.</i> 1895, Pl. I, 22. Found in Attica		
		b. Berlin: 1.35 g. (20.9); <i>Z.f.N.</i> xx, Pl. V, 2 = T. Pl. 1, 5. Found in Attica		
		c. Comte de Nanteuil, Paris: 1.37 g. (21.2) = T. Pl. I, 3		
		d. Meletopoulos, Athens: 1.33 g. (20.5). Found in Athens. Pierced		
308	P253 Pl. XIV	Shallow incuse square	Wheel; similar to wheels of Nos. 32 to 38	A201 Pl. XIV
		a. Seltman, Cambridge: 1.35 g. (20.9) = Cat. N. 1920 (Pozzi), Pl. LXXI, 2377		
309	P254 Pl. XIV	Similar	Similar	A202 Pl. XIV
		a. London: 1.35 g. (20.9); B.M.C. <i>Cent. Gr.</i> p. 106, 5, Pl. XX, 3 = N.C. 1875, Pl. IX, 7		
		b. London: 1.41 g. (21.7); <i>l.c.</i> p. 106, 4		
310	P255 Pl. XIV	Similar	Bull's head facing; similar to heads of Nos. 69, 73, 81	A203 Pl. XIV
		a. Seltman, Cambridge: 0.68 g. (10.5)		
		b. Berlin: 0.67 g. (10.3); U. Koehler Coll. Found in Attica		
		c. Paris: 0.65 g. (10.1); B.T.II. i, Pl. V, 33		
		d. Sir H. Weber Coll.		
		e. London: 0.67 g. (10.3); N.C. 1899, p. 111, Pl. VIII, 12. Found in Euboea		
		f. Boston, Warren: 0.67 g. (10.3); Regling, Cat. Pl. XXXVII, 1758 = N.C. 1897, p. 268, 5, Pl. XII, 5		





\* Another exists in Turin, cf. Koehler in *Mitth. d. D. arch. Inst.* ix, 1884, p. 359.

NO.	PUNCH			ANVIL
[§ 62] 311	P256 Pl. XIV	Shallow incuse square divided 	Human leg with thigh and foot to right	A204 Pl. XIV
		a. Boston, Warren: 0.65 g. (10.1); Regling, Cat. Pl. XXXVII, 1748 = N.C. 1897, p. 263, 2, Pl. XI, 21 [see p. 82, Fig. 48]		

## GROUP J ii

[§ 62]

## ELECTRUM AND SILVER

312	P257 Pl. XIV	Similar 	Shield indicated by linear circle, upon it triskeles of 3 bent legs moving to left around central pellet; toes and knees touching the circumference close to one knee 	A205 Pl. XIV
		a. Brussels, Hirsch Coll.: 7.19 g. (111). Found in Arcadia b. The Hague, Six Coll.: 7.2 g. (111.1); N.C. 1888, p. 97, Pl. V, 2 = B.T.II. i, Pl. XXXIII, 12. Found in Attica		
313	P258 Pl. XIV	Similar 	Same type to right	A206 Pl. XIV
		a. London: 7.16 g. (110.6); N.C. 1888, p. 98, Pl. V, 3		
314	P259 Pl. XIV	Similar 	Same type; no circle	A207 Pl. XIV
		a. Berlin, 7.05 g. (108.8) = Cat. Egger, Vienna, Nov. 1913, Pl. XVII, 526. Flaw prolonging bar of $\phi$		

## FRACTIONS

## DIOBOL

Like No. 311 (leg).

Pl. XIV, a. London: 1.03 g. (15.9); N.C. 1890, Pl. XIX, 21.—Berlin: 1.16 g. (18); Imhoof Blumer, *Griech. Münz.* p. 769, 805, Pl. XIII, 24.—Berlin.—Waddington, *Rev. Num.* 1898, Pl. XVII, 14.

## GROUP K

## THE CIVIC MINT

510-507 B.C.

## TETRADRACHMS

[§ 66] **OBVERSE**, Gorgoneion facing, tongue protruding.  
**REVERSE**, incuse square within which device.

NO.	ANVIL			PUNCH
315	A208	Hair in tight curls	Bull's head facing similar to heads of Nos. 69, 73, 81, 310. Punch bevelled	P260
	Pl. XIV	a. London: 16.48 g. (254.3); B.M.C. <i>Cent. Gr.</i> p. 120, 14, Pl. XXII, 6 = B.T.II. i, Pl. XXXI, 13 = Hill, <i>Handbook of Gr. Ro. Coins</i> Pl. II, 4 = T. Pl. 1, 75		Pl. XIV
316	A208	Same die	Facing head and forepaws of panther, or lion; small ears	P261
		a. London: 16.52 g. (255); B.M.C. <i>Cent. Gr.</i> p. 121, 18. Flaw over animal's r. ear. Pierced		Pl. XIV
317	A208	Same die	Similar; over the paws ●●	P262
		a. London: 17.36 g. (268.5); B.M.C. <i>Cent. Gr.</i> p. 121, 19, Pl. XXII, 10 = B.T.II. i, Pl. XXXI, 14 = T. Pl. 1, 72. Partly pierced		Pl. XIV
318	A208	Same die	Similar; over the ears ●●	P263
		a. Jameson, Paris: 17.18 g. (265.2); Cat. Pl. XCVI, 1169 c; <i>Rev. Num.</i> 1912, Pl. I, 13. Anvil-die worn. From the Taranto Find b. Paris, Luynes: 16.87 g. (260.4); B.T.II. i, Pl. XXXI, 16 = T. Pl. 1, 73 c. Giesecke, Leipzig: 16.83 g. (259.8) = Cat. H. xxi, 1906 (Weber), Pl. XXI, 1640 = Cat. Egger, Vienna, Jan. 1912, Pl. IX, 281 B. Anvil die worn		Pl. XIV
319	A209	Similar; hair waved	Similar; no dots; ears downwards	P264
	Pl. XIV	a. Jameson, Paris: 16.68 g. (257.4); Cat. Pl. LX, 1170 = Cat. Hoffmann, Paris, 1890 (Photiadès Pacha), Pl. III, 477 b. Berlin: 15.49 g. (239.1); T. Pl. 1, 70. Oxidized		Pl. XIV

NO.	ANVIL			PUNCH
320	A209	Same die a. Berlin: 17.01 g. (262.5) b. Boston, Perkins: 16.91 g. (261); Cat. 273 = Cat. Sotheby, London, June, 1896 (Bunbury), Pl. VII, 964. Pierced c. Cambridge, McClean: 16.57 g. (255.7) = Cat. Hess, Frankfort, 1906, Pl. III, 608 = Cat. Sotheby, London, 1894, (Carfrae), Pl. VI, 20 d. Cat. Sotheby, London, July, 1910 (Warren), Pl. I, 27: 17.23 g. (266)	Similar	P265 Pl. XIV
321	A209	Same die a. London: 16.82 g. (259.5); B.M.C. <i>Cent. Gr.</i> p. 121, 17, Pl. XXII, 9. Big flaw over nose on anvil-die. Pierced	Similar; smaller head*	P266 Pl. XIV
322	A209	Same die a. Boston, Warren: 16.87 g. (260.4); Regling, Cat. Pl. XVIII, 798. Big flaw over nose on anvil-die. Pierced	Similar*	P267 Pl. XIV
323	A210 Pl. XIV	Similar a. London: 17.01 g. (262.5); B.M.C. <i>Cent. Gr.</i> p. 120, 16, Pl. XXII, 8 = T. Pl. 1, 71 b. Cat. N. 1920 (Pozzi), Pl. XLVII, 1488: 16.26 g. (250.9). Deep cut	Similar; larger head, ears more upright	P268 Pl. XIV
324	A211 Pl. XIV	Similar; hair standing on end a. Jameson, Paris: 16.95 g. (261.6); Cat. Pl. LX, 1171	Similar; small head and ears	P269 Pl. XIV
325	A211	Same die a. Berlin: 17.37 g. (266.5) b. Cat. N. 1920 (Pozzi), Pl. LXVII, 1487 = Cat. H. xiii, 1905 (Rhousopoulos), Pl. XXIII, 1894: 16.76 g. (258.7). Flaws in punch-die c. London: 17.40 g. (268.5); B.M.C. <i>Cent. Gr.</i> p. 120, 15, Pl. XXII, 7 = B.T.II. i, Pl. XXXI, 15 = T. Pl. 1, 69	Similar	P270 Pl. XIV
326	A212 Pl. XIV	Similar; hair indicated by thin lines a. Paris: 17.03 g. (262.8); B.T.II. i, Pl. XXXI, 17. Flaw over beast's head. From Cousinéry's Find b. Churchill, Blockley: 16.38 g. (252.8) = Cat. N. iv, 1922 (Evans-Weber), Pl. XXI, 545. Oxidized, but <i>not</i> , as stated in Catal., fourrée. Flaw over beast's head	Similar; very small head	P271 Pl. XIV
327	A213 Pl. XIV	Similar, the hair-lines end in pellets above a. Athens: 16.51 g. (254.8); T. Pl. 1, 74. The chin of a Gorgoneion from another anvil-die appears at the top of the flan	Similar. A double-linear square within the incuse square	P272 Pl. XIV

\* Perhaps from same hub.

## GROUP L

## THE CIVIC MINT

Between 506 and 490 B.C.

## TETRADRACHMS

[§ 74] **OBVERSE**, head of Athena to right as in Group H, hair dressed in varied fashion indicated by (i) lines, (ii) waved lines, (iii) close curls, (iv) waved band of hair across forehead and temple. Helmet as in Group H, but generally with line of small chevrons and dots on crest-support.

**REVERSE**, (i)  $\Lambda\Theta E$ , (ii)  $\Lambda\oplus E$ , (iii)  $\Xi\oplus A$ , variously disposed. Owl to r. head facing and *well proportioned*, body and wing plumage of dots and lines. Olive twig with varied number of leaves to l. above (except on first die). Incuse square generally deep.

**FLAN**, often broad, edges no longer flat or bevelled.

NO.	ANVIL			PUNCH
328	A214	Iris shown. Hair style iii. Large head	Legend i to l. upwards. Owl in high relief. Twig of 3 leaves to r. below growing upwards	P273
	Pl. XV	a. Berlin: 17.16 g. (264.8) = T. Pl. 6, 7		Pl. XV
329	A214	Same die	Legend i to r. downwards. Owl, long-legged, leans back as though startled. Twig of 3 leaves to l. above hanging down	P274
		a. Milan: 17.15 g. (264.7) = T. Pl. 6, 10. Flaw over owl b. Cat. H. xiii, 1905 (Rhusopoulos), Pl. XXIV, 1945 = Cat. H. xxv, 1909 (Philipsen), Pl. XII, 957 = T. Pl. 6, 9: 17.20 g. (265.5). Flaw over owl		Pl. XV
330	A214	Same die	Similar. Owl broader	P275
		a. Fox, London: T. Pl. 6, 11. Flaw on Athena's helmet		Pl. XV
331	A215	Similar; head smaller	Types as No. 329	P276
	Pl. XV	a. Berlin: 17.03 g. (262.8) = T. Pl. 6, 8		Pl. XV
332	A216	Similar; head larger*	Similar	P277
	Pl. XV	a. Spink, London: 17.17 g. (264.9)		Pl. XV

\* From same hub as next die.

NO.	ANVIL			PUNCH
333	A217 Pl. XV	Similar, but hair style ii. Truncation of dots*	Similar; centre leaf of twig long <i>a.</i> Paris, Luynes: 17.10 g. (264); B.T.II. i, Pl. XXXIV, 18 = T. Pl. 6, 13	P278 Pl. XV
334	A218 Pl. XV	Similar; smaller head, hair style iii	Legend similar. Owl broader, raising its left claw. Twig of 4 leaves and 3 berries <i>a.</i> Berlin: 17.16 g. (264.8) = T. Pl. 6, 14. Flaw at chin	P279 Pl. XV
335	A218	Same die	Legend ii. Owl usual type. Small twig 2 leaves and 1 berry <i>a.</i> Hague: 16.90 g. (260.8) = T. Pl. 6, 3	P280 Pl. XV
336	A219 Pl. XV	Small head, lower relief. Hair style i	Legend iii. Owl as last. Twig on long stalk <i>a.</i> Berlin: 16.52 g. (255); Regling, <i>die Antiken Münzen</i> , 1922, p. 8, fig. = T. Pl. 6, 5. Flaw over owl <i>b.</i> Paris: 16.98 g. (262.1); B.T.II. i, Pl. XXXIV, 15 = T. Pl. 6, 6. Flaw over owl larger	P281 Pl. XV
337	A220 Pl. XV	Similar. Hair style (?)	Legend i. Owl similar. Twig on shorter stalk <i>a.</i> London: 15.47 g. (238.8) = N.C. 1886, Pl. I, 1 = T. Pl. 6, 12. Much oxidized; large cut. From the Naucratis Find	P282 Pl. XV
338	A221 Pl. XV	Small head, neat features, iris indicated. Hair style iv	As last <i>a.</i> Boston, Perkins: 16.98 g. (262); Cat. No. 287	P283 Pl. XV
339	A222 Pl. XV	Similar. Chin very small. Hair style iii	Legend ii. Owl small and flat-headed. Twig of 3 leaves <i>a.</i> London: 17.39 g. (268.4); B.M.C. <i>Attica</i> , p. 4, 24, Pl. II, 5 = T. Pl. 6, 2	P284 Pl. XV
340	A223	Similar. Hair style i. Dots only on crest-support	Legend iii. Owl usual type. Twig with 4 leaves <i>a.</i> Sir H. Weber Coll. = T. Pl. 6, 1	P285

\* From same hub as last.

NO.	ANVIL			PUNCH
341	A224	Similar. Hair style iv. Chin well shaped	Legend i. Owl small and thin legged. Twig with 5 leaves	P286
	Pl. XV	a. London: 16.62 g. (256.5); B.M.C. <i>Attica</i> , p. 3, 17, Pl. I, 11 = T. Pl. 6, 16. Pierced		Pl. XV
342	A224	Same die	Legend iii. Owl usual type, head flattish. Twig with 3 leaves	P287
		a. Seltman, Cambridge: 17.15 g. (264.7)		Pl. XV
343	A225	Similar; neat features; hair style iv*	Legend ii. Owl similar. Twig with 4 leaves and 1 berry*	P288
	Pl. XV	a. Cat. N. 1920 (Pozzi), Pl. XLVIII, 1532 = T. Pl. 6, 4: 16.99 g. (262.2)		Pl. XV
344	A226	Similar*	Legend i. Similar*	P289
	Pl. XV	a. Berlin: 16.94 g. (261.5) = T. Pl. 6, 17		Pl. XV
345	A227	Similar. Slightly larger	Similar*	P290
	Pl. XV	a. Cat. N. v, 1923 (Lucerne), Pl. LVII, 1971: 17.14 g. (264.5)		Pl. XV
346	A228	Similar. Larger	Similar. Owl broader and in lower relief. Twig with 4 leaves and 1 berry	P291
	Pl. XV	a. Cat. N. 1920 (Pozzi), Pl. XLVIII, 1526 = T. Pl. 5, 34: 17.0 g. (262.4)		Pl. XV

\* From same hubs.

#### FRACTIONS

[§ 75]

#### DRACHM

Head like No. 333. Owl like 333 but wings open, the l. wing shown in front. The bird is perched on a branch which ends l. in a palmette.

Pl. XXII,  $\tau$  (rev.). Berlin: 4.19 g. (64.7).—Athens: 4.02 g. (62.1). Found perhaps on Acropolis, but *not* a part of the Acropolis Find.—Cat. H. xxv, 1909 (Philipsen), 959: 3.42 g. (52.8).

Pl. XXII,  $\tau$  (obv.). Empedocles, Athens: 4.09 g. (63.1), ex-Pozzi collection. All same dies.

Head like No. 333. Owl, etc., like No. 334.

Pl. XXII,  $\nu$ . Paris: 3.82 g. (59), ex-Philipsen coll.—Cat. Egger, May, 1912 (Vienna), No. 935. Both same dies.

- Head like No. 336. Rev. like No. 338.  
 Pl. XXII,  $\phi$ . Berlin: 4.11 g. (63.5).—Berlin: 4.22 g. (65.2).—Athens: 4.02 g. (62.1), pierced.—Mavrogordato, Hove. All same dies.  
 Same obv. die. Similar rev. die.  
 Pl. XXII,  $\chi$  (rev.). Seltman, Cambridge: 4.15 g. (64.1).—Petralis, Athens: (2).  
 Similar obv. die. Same rev. as last.  
 Pl. XXII,  $\psi$ . Paris.

## HEMIDRACHM OR TRIOBOL

- Head like No. 333. Rev.:  $\text{A}\Theta\text{E}$  to left upwards. Unhelmeted head of Athena Ergane r., hair in queue. 2 olive leaves below right. Incuse square.  
 Pl. XXII,  $\omega$ . Brussels: 2.09 g. (32.3).—Berlin: 2.13 g. (32.9).—Vienna: 2.10 g. (32.4).—London: 2.13 g. (32.9).—Seltman, Cambridge: 2.05 g. (31.7).  
 All same dies.  
 Same obv. die. Rev. legend similar. *Head of curly-haired thick-lipped negro* to right. 2 olive leaves above r. Incuse sq.  
 Pl. XXII,  $\alpha\alpha$  (rev.). Berlin: 2.09 g. (32.3).  
 Same obv. die.  $\text{E}\Theta\text{A}$  around above. Head as on first triobol, but to l. 2 leaves below l. Incuse square.  
 Pl. XXII,  $\beta\beta$  (rev.). Berlin: 2.15 g. (33.2).—Glasgow: 2.07 g. (31.9).—Copenhagen: 2.05 g. (31.7).—Mavrogordato, Hove. All same dies.  
 Head like No. 344. Rev.:  $\text{A}\Theta\text{E}$  to r. downwards. Head as on first triobol to r. Twig, a berry between 2 leaves above l. Incuse square.  
 Pl. XXII,  $\gamma\gamma$ . Munich: 2.15 g. (33.2).—Berlin: 2.17 g. (33.5).—Copenhagen: 2.13 g. (32.9).—Athens: 2.05 g. (31.7).—Mavrogordato, Hove. All same dies.

## TRIHEMILOBOL

- Janiform Athena unhelmeted. Rev.:  $\text{A}\Theta\text{E}$  to l. upwards. Helmeted head of Athena r. Incuse square.  
 Pl. XXII,  $\delta\delta$  (rev.). Paris: 0.98 g. (15.2).—Seltman, Cambridge: 1.00 g. (15.5).  
 Pl. XXII,  $\delta\delta$  (obv.). London: 1.09 g. (16.8).—Oxford.—Mavrogordato, Hove.  
 —Empedocles, Athens. All same dies.  
 Same obv. die. Rev. similar, but  $\text{A}\Theta\text{E}$  to r. downwards.  
 Pl. XXII,  $\epsilon\epsilon$  (rev.). Berlin: 0.97 g. (15).—Berlin: 0.99 g. (15.3).—Giesecke, Leipzig: 1.05 g. (16.2). All same dies.

## OBOL

- Types corresponding to Nos. 331 to 339.  
 Pl. XXII,  $\zeta\zeta$ . Brussels: 0.74 g. (11.4).—Seltman, Cambridge: 0.83 g. (12.8).  
 Pl. XXII,  $\eta\eta$ . London.—London (3).—Copenhagen: 0.54 g. (8.4).—Berlin (2).  
 Types corresponding to Nos. 343 to 345.  
 Pl. XXII,  $\theta\theta$ . Berlin: 0.51 g. (8).

## HEMILOBOL

- Similar.  
 Pl. XXII,  $\iota$ . Paris.—Seltman, Cambridge: 0.30 g. (4.7).

## GROUP M

## THE IMPERIAL MINT

506-490 B.C.

## TETRADRACHMS

[§ 76] **OBVERSE**, head of Athena to right, generally of large dimensions; eye full, iris indicated, features generally well proportioned; ear-ring  $\odot$ . Hair dressed in varied fashion and indicated by (i) dots; (ii) lines ending in spiral curls; (iii) lines; (iv) waved over forehead with strand over temple; (v) lines ending in dots. Helmet as in Group C.

**REVERSE**,  $\Lambda\Theta E$  to r. downwards. Owl to r. head facing, *well proportioned*, *legs short*, *tail hanging well down*, *wing long*; body plumage of dots, wing plumage of lines. In field l. above an olive on stalk between two leaves. Incuse square.

NO.	ANVIL			PUNCH
347	<b>A229</b>	Nose slightly hooked. Hair style i	Legend set low. Plumage of large dots. Twig fairly low	<b>P292</b>
	Pl. XVI	a. Berlin: 16.11 g. (248.6) = T. Pl. 5, 18 b. Seltman, Cambridge: 16.92 g. (261.1) c. Winterthur: 16.7 g. (257.7) = T. Pl. 5, 12 d. Empedocles, Athens		Pl. XVI
348	<b>A229</b>	Same die a. London: 16.59 g. (256); B.M.C. <i>Attica</i> , p. 2, 15, Pl. I, 9	Similar. Twig higher	<b>P293</b> Pl. XVI
349	<b>A230</b>	Similar. Jaw larger	Legend set high. Twig spread	<b>P294</b>
	Pl. XVI	a. Cat. N. 1920 (Pozzi), Pl. XLVIII, 1530: 17.2 g. (265.5)		Pl. XVI
350	<b>A231</b>	Similar	Same die*	<b>P294</b>
	Pl. XVI	a. Empedocles, Athens: 17.1 g. (264) b. Meletopoulos, Athens		Pl. XVI
351	<b>A232</b>	Head rather smaller. Hair style ii†	Similar*	<b>P295</b>
	Pl. XVI	a. Boston: 17.42 g. (268.9); Regling, <i>Cat. Warren Coll.</i> No. 808		Pl. XVI
352	<b>A233</b>	Similar†	Same die	<b>P295</b>
	Pl. XVI	a. Cat. Merzbacher, 1910 (Munich), Pl. 9, 482: 17 g. (262.4)		Pl. XVI

\* Perhaps from same hub.

† From same hub.

NO.	ANVIL			PUNCH
353	A234	Similar	Legend set low. Owl like P292. Twig fairly low	P296 Pl. XVI
		a. The Hague: 16.9 g. (260.8) =	T. Pl. 4, 29	
354	A234	Same die	Similar. Owl neater. Twig lower	P297 Pl. XVI
		a. London: 16.39 g. (253)		
		b. Munich: 17.35 g. (267.8) =	T. Pl. 5, 29	
355	A234	Same die	Similar	P298 Pl. XVI
		a. London: 16.91 g. (261)		
		b. Berlin: 16.75 g. (258.5) =	T. Pl. 5, 37	
356	A234 Pl. XVI	Same die	Similar	P299 Pl. XVI
		a. Giesecke, Leipzig: 16.71 g. (258) =	Cat. H. xiii, 1905 (Rhou- opoulos), Pl. XXIV, 1947 =	T. Pl. 4, 31
357	A235 Pl. XVI	Small chin. Hair style iii	Same die	P299 Pl. XVI
		a. London: 17.52 g. (270.3);	B.M.C. <i>Attica</i> , p. 2, 9	
358	A235	Same die	Similar. Twig lower	P300 Pl. XVI
		a. London: 17.43 g. (269);	B.M.C. <i>Attica</i> , p. 2, 10	
359	A235	Same die	Similar. Plumage coarser	P301 Pl. XVI
		a. Berlin: 17.18 g. (265.2)		
360	A235	Same die	Plumage finer. Twig quite low	P302 Pl. XVI
		a. Greene, Providence: 16.71 g. (258)		
361	A236 Pl. XVI	Head slightly smaller. Hair style ii	Same die	P302 Pl. XVI
		a. The Hague: 16.5 g. (254.7)		
		b. Berlin: 17.02 g. (262.7) =	T. Pl. 4, 34	
362	A237 Pl. XVI	Similar	Similar	P303 Pl. XVI
		a. Tuebingen: 17.73 g. (273.6) =	T. Pl. 4, 32	
363	A238 Pl. XVI	Similar; but hair style iv	Similar. Twig not so low	P304 Pl. XVI
		a. Spink, London: 16.70 g. (257.7)		
364	A239 Pl. XVI	Similar. Slightly larger*	E of legend large. Plum- age of large dots, wing long. Twig low	P305 Pl. XVI
		a. London: 16.85 g. (260.1);	B.M.C. <i>Attica</i> , p. 2, 12, Pl. I, 7	
365	A240	Similar, but hair style ii*	Similar. Twig higher	P306 Pl. XVI
		a. Copenhagen: 17.13 g. (264.4) =	T. Pl. 5, 27	

\* From same hub.

NO.	ANVIL			PUNCH
366	A240 Pl. XVI	Same die <i>a.</i> Paris = T. Pl. 5, 25 <i>b.</i> Petrograd: 17.02 g. (262.7) = T. Pl. 5, 26	Similar	P307 Pl. XVI
367	A240	Same die <i>a.</i> Meletopoulos, Athens: T. Pl. 4, 30	Legend set high. Plumage neater. Twig higher	P308 Pl. XVI
368	A240	Same die <i>a.</i> Munich: 16.8 g. (259.3) <i>b.</i> Berlin: 16.95 g. (261.6)	Similar. Twig lower	P309 Pl. XVI
369	A240	Same die <i>a.</i> Empedocles, Athens: 17.2 g. (265.5)	Similar	P310 Pl. XVI
370	A240	Same die <i>a.</i> Cat. N. 1920 (Pozzi), Pl. XLVIII, 1523: 17.23 g. (266)	Similar. Twig less low	P311 Pl. XVI
371	A241 Pl. XVI	Similar. Higher relief* <i>a.</i> Berlin: 17.14 g. (264.5)	Legend set low. Owl as last. Twig medium high	P312 Pl. XVI
372	A242 Pl. XVI	Similar* <i>a.</i> Cat. H. xiv (Nov. 1905), Pl. XI, 381: 16.57 g. (255.7)	Similar	P313 Pl. XVI
373	A243 Pl. XVII	Similar, but hair style iv <i>a.</i> Madame de Saint Marceaux, Paris: 16.72 g. (258) = Cat. Sotheby (April, 1907), Pl. V, 136	Similar. Twig high and with three leaves and no berry	P314 Pl. XVII
374	A244 Pl. XVII	Similar. Hair style ii† <i>a.</i> Berlin: 17.44 g. (269.2) = T. Pl. 4, 36	Type as P313	P315 Pl. XVII
375	A245 Pl. XVII	Similar† <i>a.</i> London: 17.16 g. (264.8)	Legend and twig higher	P316 Pl. XVII
376	A245	Same die <i>a.</i> Vienna: 17.05 (263.1)	Similar. Twig lower	P317 Pl. XVII
377	A246 Pl. XVII	Similar <i>a.</i> London: 17.65 g. (272.4)	Legend set low, letters uneven. Owl rather thin	P318 Pl. XVII
378	A247 Pl. XVII	Nose longish. Hair style v <i>a.</i> Comte Chandon de Briailles, Paris: 15.8 g. (243.8) = T. Pl. 4, 24	Legend with A high. Twig low	P319 Pl. XVII
379	A248 Pl. XVII	Similar <i>a.</i> Berlin: 16.73 g. (258.2)	Similar	P320 Pl. XVII

\* From same hub.

† From same hub.

NO.	ANVIL			PUNCH
380	A249	Large head and eye. Hair style ii*	Legend set low. Twig high and very small	P321
	Pl. XVII	a. London: 17.52 g. (270.3)		Pl. XVII
381	A250	Similar*	Legend set high. Otherwise similar	P322
	Pl. XVII	a. Meletopoulos, Athens		Pl. XVII
382	A251	Similar	Similar. Letters very small	P323
	Pl. XVII	a. Cat. H. xiii, 1905 (Rhusopoulos), Pl. XXIV, 1944 = T. Pl. 5, 40: 16.95 g. (261.6) b. Dr Bernhard, St Moritz: 17.1 g. (264)		Pl. XVII
383	A252	Head large. Hair style iv	A of legend high. Twig low	P324
	Pl. XVII	a. Berlin: 17.16 g. (264.8) = <i>Z.f.N.</i> xx, Pl. V, 9 (obv.)		Pl. XVII
384	A252	Same die	Similar. Twig less low	P325
		a. Greene, Providence: 17.2 g. (265.5)		Pl. XVII
385	A253	Similar, but hair style iii	Similar	P326
	Pl. XVII	a. Athens: 16.91 g. (261) = T. Pl. 5, 24		Pl. XVII
386	A254	Similar. Hair style ii	Same die	P326
	Pl. XVII	a. Newell, New York: 17.08 g. (263.6)		Pl. XVII
387	A254	Same die	Similar; whole design larger	P327
		a. Empedocles, Athens: 16.77 g. (258.8) = Cat. Sotheby, July, 1920, Pl. I, 41 b. Munich: 15.6 g. (240.8) = T. Pl. 5, 23. Worn		Pl. XVII
388	A254	Same die	Similar	P328
		a. Hindamien, Paris: 17.4 g. (268.5), Cat. H. xxxiv, 1914, Pl. XII, 338		Pl. XVII
389	A254	Same die	Legend set low, otherwise similar	P329
		a. Berlin: 17.42 g. (268.9); <i>Z.f.N.</i> xx, Pl. V, 7 = T. Pl. 5, 38		Pl. XVII
390	A255	Similar. Hair style iii†	Same die	P329
	Pl. XVII	a. Miss Lamb, London: 16.95 g. (261.6)		Pl. XVII
391	A256	Similar. Hair style ii†	A of legend high. Similar‡	P331
	Pl. XVII	a. Berlin: 16.91 g. (261); <i>Z.f.N.</i> xx, Pl. V, 6 (obv.)		Pl. XVII
392	A257	Large head finely modelled. Hair style ii	Legend high. Similar‡	P332
	Pl. XVII	a. Madame de Saint Marceaux, Paris: 16.59 g. (256) = Cat. Sotheby, April, 1907 (Delbeke), Pl. V, 134		Pl. XVII

\* From same hub.

† From same hub.

‡ From same hub.

NO.	ANVIL			PUNCH
393	A258 Pl. XVIII	Similar, but hair style iii <i>a.</i> Vienna: 16.87 g. (260.4) = T. Pl. 5, 22	Same die	P332 Pl. XVIII
394	A258	Same die <i>a.</i> Comte de Nanteuil, Paris: 17.13 g. (264.4) = Cat. H. xxv, 1909 (Philipsen), Pl. XII, 956 = T. Pl. 5, 21. Flaw on cheek	Similar	P333 Pl. XVIII
395	A259 Pl. XVIII	Similar <i>a.</i> Empedocles, Athens: 16.35 g. (252.3)	Similar	P334 Pl. XVIII
396	A259	Same die* <i>a.</i> In the Trade: 16.97 g. (262) = T. Pl. 5, 30	Similar	P335 Pl. XVIII
397	A260 Pl. XVIII	Similar. Hair style v* <i>a.</i> Seltman, Cambridge: 16.43 g. (253.6)	Similar. Twig small and high	P336 Pl. XVIII
398	A261 Pl. XVIII	Similar <i>a.</i> London: 17.13 g. (264.3)	Legend low. Twig with three leaves and no berry	P337 Pl. XVIII
399	A262 Pl. XVIII	Smaller head. Hair style iv <i>a.</i> Berlin: 16.77 g. (258.8) = T. Pl. 5, 33	Legend spaced wide. Twig normal and high	P338 Pl. XVIII
400	A262	Same die <i>a.</i> Cat. N. v, 1923 (Lucerne), Pl. LVII, 1970: 16.55 g. (255.4)	Legend set low. Otherwise normal	P339 Pl. XVIII
401	A263 Pl. XVIII	Similar. Hair style iii <i>a.</i> London: 17.43 g. (269). Plugged	Similar. Owl very well modelled. Twig spreading	P340 Pl. XVIII
402	A264 Pl. XVIII	Similar. Hair style v† <i>a.</i> London: 16.85 g. (260); B.M.C. <i>Attica</i> , p. 2, 16, Pl. I, 10	Legend spaced similar	P341 Pl. XVIII
403	A265 Pl. XVIII	Similar† <i>a.</i> Beatty, New York	Similar. High relief	P342 Pl. XVIII
404	A266 Pl. XVIII	Slightly smaller head. Hair style iv‡ <i>a.</i> Boston: 16.91 g. (261); Cat. Perkins, 286 <i>b.</i> Comte Chandon de Briailles, Paris	Legend set low. Owl similar. Twig low	P343 Pl. XVIII
405	A267 Pl. XVIII	Similar‡ <i>a.</i> Mavrogordato, Hove: 17.08 g. (263.6) <i>b.</i> Cat. N. v (Lucerne), 1923, Pl. LVI, 1967: 17.0 g. (262.4). Tooled	Similar, but twig small and high	P344 Pl. XVIII

\* From same hub.

† From same hub.

‡ From same hub.

NO.	ANVIL			PUNCH
406	A268	Smallish head, finely modelled. Hair style ii	Legend set low. Owl plump and upright. Twig as last	P345
	Pl. XVIII	<i>a.</i> Newell, New York: 17.06 g. (263.3)		Pl. XVIII
407	A269	Similar	Same die	P345
	Pl. XVIII	<i>a.</i> London: 16.85 g. (260)		Pl. XVIII
408	A270	Rather larger. Fine modelling. Hair style iv*	Similar. Twig larger	P346
	Pl. XVIII	<i>a.</i> Empedocles, Athens.		Pl. XVIII
409	A271	Similar*	Similar	P347
	Pl. XVIII	<i>a.</i> Paris: 16.99 g. (262.2); B.T.II. i, Pl. XXXV, 2 = T. Pl. 5, 39		Pl. XVIII

\* From same hub.

#### FRACTIONS

#### DRACHM

Head with hair style iii. Owl, etc., corresponding to general type of the group. Pl. XXII, κκ. Berlin: 3.94 g. (60.8).—Petrograd: 3.88 g. (60).—Copenhagen: 3.92 g. (60.5).—Mavrogordato: 4.11 g. (63.5), ex-Pozzi. All same dies.

Variety.

Pl. XXII, λλ. Berlin: 3.82 g. (59).

## GROUP N

## THE IMPERIAL MINT

490-480 B.C.

*"The Marathon issue."*

## TETRADRACHMS

[§ 79] **OBVERSE**, head of Athena to right, eye full, iris indicated, features always well proportioned; ear-ring  $\odot$ . Hair dressed in varied fashion and indicated by (i) lines of dots; (ii) lines; (iii) waves over forehead with strand looped over temple. Helmet as in all the foregoing groups, but *with the addition of first four, then three upright olive leaves above the forehead*. The crest at first with chevrons and dots, as formerly; then with row of dots and horsehair of plume indicated.

**REVERSE**,  $\Lambda\Theta E$  to r. downwards. Owl r. head facing, well proportioned; *at first plump and upright, then more triangular with long wing*. To left close to owl's neck *a tiny waning moon*. In field l. above an olive on stalk between two leaves. Incuse square.

NO.	ANVIL			PUNCH
410	A272	Hair style i. 4 leaves on helmet. Crest with chevrons and dots	Legend fairly low. Olive on short stalk, leaves on long stalks and hanging vertically, low	P348
	Pl. XVIII	a. Berlin: 17.08 g. (263.6) = T. Pl. 8, 5		Pl. XVIII
411	A273	Similar*	Similar. Leaves as last, but stalks shorter	P349
	Pl. XVIII	a. London: 17.14 g. (264.5) = T. Pl. 8, 1		Pl. XVIII
412	A274	Similar*	Same die	P349
	Pl. XVIII	a. Seltman, Cambridge: 16.83 g. (259.8)		Pl. XVIII
413	A275	Similar†	Similar. Owl broad. Leaves as on P348†	P350
	Pl. XVIII	a. Berlin: 16.9 g. (260.8) = T. Pl. 8, 4		Pl. XVIII
414	A276	Similar†	Similar. Twig as on P349†	P351
	Pl. XVIII	a. Paris: 16.95 g. (261.6) = T. Pl. 8, 2		Pl. XVIII
415	A277	Similar. Features smaller	Same die	P351
		a. Athens: 17.1 g. (264); <i>J.I.A.N.</i> 1906, Pl. XIII, 9 = T. Pl. 8, 3		Pl. XIX
416	A277	Same die	Similar	P352
	Pl. XIX	a. Berlin: 17.04 g. (263) = T. Pl. 8, 6		Pl. XIX

\* From same hub.

† From same hub.

NO.	ANVIL			PUNCH
417	A278 Pl. XIX	Head smaller <i>a.</i> Cat. Ciani, Oct. 1920 (Paris), Pl. 2, 55	Similar	P353 Pl. XIX
418	A279  Pl. XIX	Head larger. Hair style ii. 3 leaves on helmet. Crest with row of dots and horse- hair plume. A scroll end- ing in palmette over back of helmet <i>a.</i> Paris: 17.11 g. (264.1) = T. Pl. 8, 9	Similar. Twig higher; 1 leaf hangs down	P354  Pl. XIX
419	A280 Pl. XIX	Similar. Hair style iii. Head small <i>a.</i> Berlin: 16.98 g. (262.1) = T. Pl. 8, 23	Similar	P355 Pl. XIX
420	A281 Pl. XIX	Similar <i>a.</i> Athens: 17.04 g. (263); <i>J.I.A.N.</i> 1908, Pl. XIV, 5 = T. Pl. 8, 20	Similar. Leaves of twig wider	P356 Pl. XIX
421	A282 Pl. XIX	Head larger <i>a.</i> Bologna: T. Pl. 9, 2	Similar*	P357 Pl. XIX
422	A283 Pl. XIX	Similar <i>a.</i> Empedocles, Athens <i>b.</i> Cat. Egger, May, 1914 (Vienna), Pl. IX, 484: 17.21 g. (265.6)	Similar*	P358 Pl. XIX
423	A284 Pl. XIX	Similar. Higher relief <i>a.</i> Paris: 17.18 g. (265.2); B.T.II. i, Pl. XXXV, 13 = T. Pl. 8, 19	Twig high on short stalk. Owl less broad	P359 Pl. XIX
424	A285 Pl. XIX	Similar <i>a.</i> Sir H. Weber Coll.: 16.93 g. (261.3) = T. Pl. 8, 18	Same die	P359 Pl. XIX
425	A286 Pl. XIX	Similar. Smaller head <i>a.</i> Boston: 17.13 g. (264.4); Regling, <i>Cat. Warren Coll.</i> Pl. XIX, 812	Similar	P360 Pl. XIX
426	A286	Same die <i>a.</i> Athens: 17.05 g. (263.1); <i>J.I.A.N.</i> 1908, Pl. XIV, 6 = T. Pl. 8, 21	Similar. Leaves slightly longer†	P361 Pl. XIX
427	A287 Pl. XIX	Similar <i>a.</i> Athens: 17.36 g. (268); <i>J.I.A.N.</i> 1908, Pl. XIV, 7 = T. Pl. 8, 22	Similar†	P362 Pl. XIX
428	A288 Pl. XIX	Similar. A parting be- tween the strands of hair <i>a.</i> Mavrogordato, Hove = 17.06 g. (263.3) = Cat. N. 1920 (Pozzi), Pl. XLVIII, 1539 = T. Pl. 9, 1	Similar. Downward leaf long	P363 Pl. XIX

\* Perhaps from same hub.

† From same hub.

NO.	ANVIL			PUNCH
429	A289 Pl. XIX	Large head. Hair style iii <i>a.</i> Empedocles, Athens	Similar	P364 Pl. XIX
430	A289	Same die <i>a.</i> Meletopoulos, Athens = T. Pl. 9, 11	Similar	P365 Pl. XIX
431	A290 Pl. XIX	Similar <i>a.</i> Cat. N. 1920 (Pozzi), Pl. XLVIII, 1543: 17.1 g. (264)	Similar. Owl broader	P366 Pl. XIX
432	A290	Same die* <i>a.</i> Mavrogordato, Hove: 16.8 g. (259.3)	Similar. Twig as on P354	P367 Pl. XIX
433	A291 Pl. XIX	Similar* <i>a.</i> In the Trade: 17.36 g. (268) = T. Pl. 9, 3	Design rather larger. Twig high, leaves spreading	P368 Pl. XIX
434	A292 Pl. XIX	Similar, larger† <i>a.</i> Formerly Rhousopoulos: 17.11 g. (264.1) = T. Pl. 9, 5	Similar. Twig large, the leaves filling the corner of the field	P369 Pl. XIX
435	A293 Pl. XIX	Similar† <i>a.</i> Munich: 17.15 g. (264.7) = T. Pl. 9, 6	Similar	P370 Pl. XIX
436	A294	Similar <i>a.</i> Mavrogordato, Hove: 16.6 g. (256.2)	Similar. Owl more slender	P371 Pl. XX
437	A294 Pl. XX	Same die <i>a.</i> Seltman, Cambridge: 16.93 g. (261.3)	Similar	P372 Pl. XX
438	A294	Same die <i>a.</i> Cat. N. 1920 (Pozzi), Pl. XLVIII, 1540 = T. Pl. 9, 8: 17.07 g. (263.5)	Similar	P373 Pl. XX
439	A295 Pl. XX	Similar* <i>a.</i> Gotha: 17.1 g. (264)	Similar. Broad leaves	P374 Pl. XX
440	A296 Pl. XX	Similar* <i>a.</i> Mavrogordato, Hove: 16.7 g. (257.7)	Similar. Big owl	P375 Pl. XX
441	A296	Same die* <i>a.</i> Athens: 16.7 g. (257.7) = T. Pl. 9, 9 <i>b.</i> Formerly Rhousopoulos: 17.12 g. (264.2) = T. Pl. 9, 10	Similar. Owl more slender	P376 Pl. XX
442	A297 Pl. XX	Similar* <i>a.</i> Cook, Cambridge: 16.77 (258.8)	Owl long and slender	P377 Pl. XX
443	A298 Pl. XX	Similar† <i>a.</i> Berlin: 17.15 g. (264.7) = T. Pl. 9, 12	Similar	P378 Pl. XX
444	A299 Pl. XX	Similar† <i>a.</i> Meletopoulos, Athens <i>b.</i> Mavrogordato, Hove: 17.03 g. (262.8) = Cat. Egger, 1912 (Vienna), Pl. XVIII, 939	Similar	P379 Pl. XX

\* From same hub.

† From same hub.

## FRACTIONS

## DRACHMS

Corresponding to Nos. 410 to 417, but 3 leaves on helmet.

Pl. XXII,  $\mu\mu$ . Corpus Christi Coll., Cambridge: 4.22 g. (65).

Pl. XXII,  $\nu\nu$ . Meletopoulos, Athens: 4.28 g. (66).—Athens: 4.13 g. (63.8).

Corresponding to No. 418.

Pl. XXII,  $\xi\xi$ . Meletopoulos, Athens: 4.28 g. (66).

Pl. XXII,  $\omicron\omicron$  (rev.). Mavrogordato, Hove: 4.22 g. (65.2).

Pl. XXII,  $\pi\pi$  (rev.). Mavrogordato, Hove: 4.26 g. (65.8).

Corresponding to Nos. 419 to 424.

Pl. XXII,  $\rho\rho$ . Vienna: 4.27 g. (65.9).—Seltman, Cambridge: 4.19 g. (64.7).—

Mavrogordato, Hove: 4.06 g. (62.7).

Pl. XXII,  $\sigma\sigma$ . Meletopoulos, Athens: 4.31 g. (66.5).

Corresponding to Nos. 425 to 428.

Pl. XXII,  $\tau\tau$ . Paris: 4.36 g. (67.3).

Pl. XXII,  $\nu\nu$  (rev.). Paris.

Pl. XXII,  $\phi\phi$  (rev.). Churchill, Blockley.

Corresponding to Nos. 429 to 444.

Pl. XXII,  $\chi\chi$ . Mavrogordato, Hove: 4.26 g. (65.8).

Pl. XXII,  $\psi\psi$ . Cambridge, McClean: 4.28 g. (66).

Pl. XXII,  $\omega\omega$ . Meletopoulos, Athens: 3.96 g. (61.1).

## OBOLS\*

Corresponding to Nos. 410–417. 2 leaves on helmet R<sub>1</sub>: one leaf behind owl.

Pl. XXII,  $\alpha\alpha\alpha$ . Seltman, Cambridge: 0.72 g. (11.1).

Corresponding to No. 418. 2 leaves R<sub>1</sub>: one leaf.

Pl. XXII,  $\beta\beta\beta$ . Brussels: 0.71 g. (10.9).—Berlin: 0.68 g. (10.5).

Corresponding to Nos. 429 to 444. 3 leaves R<sub>1</sub>: one leaf.

Pl. XXII,  $\gamma\gamma\gamma$ . Brussels: 0.69 g. (10.7).—Seltman, Cambridge: 0.71 g. (10.9).

\* Only a few typical specimens are quoted.


## GROUP O

## THE ANNUAL DOLE OF 486-484 B.C.

## DECADRACHMS AND DIDRACHMS

## DECADRACHMS

[§ 81] **OBVERSE**, head of Athena to right as in Group N. Hair waved over forehead with strand over ear. Helmet with three upright olive-leaves, elaborate floral scroll over the back of the bowl. Horsehair crest. Pendant ear-ring with two pearls and pear-shaped drop. Dotted truncation.

**REVERSE**,  Owl facing, legs apart, tail hanging between them; wings spread; body plumage of dots, wing and tail plumage of dots and lines. *No waning moon*. In field 1. above an olive on stalk between two leaves. Incuse square.

NO.	ANVIL			PUNCH
445	A300 Pl. XX	Eye large. Ear-ring small. Leaves thickish <i>a.</i> Brussels: 41.66 g. (643) = T. Pl. 8, 8	Wings drooping	P380 Pl. XX
446	A301 Pl. XX	Eye narrower. Leaves thinner <i>a.</i> Berlin: 42.65 g. (658); Regling, <i>die Antiken Münzen</i> , 1922, p. 9, fig. = T. Pl. 8, 15. Small flaw over eye	Wings more level	P381 Pl. XX
447	A302 Pl. XX	Similar. Leaves wide <i>a.</i> Seltman, Cambridge: 42.48 g. (655.6). Small flaws over eye. Found at Spata, Attica, in 1922	Similar	P382 Pl. XX
448	A303 Pl. XXI	Head slightly larger <i>a.</i> Jameson, Paris: 42.59 g. (657.2). Found between Athens and Daphne	Wings rounded at shoulders	P383 Pl. XXI
449	A304 Pl. XXI	Similar <i>a.</i> London: 42.70 g. (659); B.M.C. <i>Attica</i> , p. 6, 40, Pl. III, 1 = B.M. <i>Guide to Coins of Ancients</i> , Pl. 13, 19 = H.N. <sup>2</sup> p. 371, fig. 208 = T. Pl. 8, 16. Large cut across forehead	Similar	P384 Pl. XXI
450	A305 Pl. XXI	Leaves wider <i>a.</i> Cat. H. xiii, 1905 (Rhusopoulos), Pl. XXIV, 1965 = T. Pl. 8, 13; 40.40 g. (623.6). Corroded. Flaw over eyebrow <i>b.</i> Cat. Hoffmann, Paris, 1890 (Photiadès Pacha), Pl. IV, 532 = Cat. Sotheby, Apr. 1907 (Delbeke), Pl. V, 139: 40.60 g. (626.6). Over-cleaned. Found at Laureion	Wings held higher. The whole bird square	P385 Pl. XXI

NO.	ANVIL			PUNCH
451	A306 Pl. XXI	Similar <i>a.</i> Pierpont Morgan, New York: 39.0 g. (602) = Cat. H. xxi, 1906 (Consul Weber), Pl. XXII, 1645 = T. Pl. 8, 17. Corroded and fractured	Similar	P386 Pl. XXI
452	A307 Pl. XXI	Lower relief. Leaves wide and close together <i>a.</i> Paris, Luynes: 43.03 g. (664); B.T.II. i, Pl. XXXV, 11 = T. Pl. 8, 14. Flaws on crest and under chin	Wings rounded and very wide	P387 Pl. XXI

## DIDRACHMS

OBVERSE, head of Athena to right as on decadrachms. Scroll more simple. Ear-ring ☉.

REVERSE, AOE to r. downwards. Owl r. head facing, well proportioned, wing long. *No waning moon.* In field above l. an olive on stalk between two leaves, the left leaf at first within, then without the small incuse square.

NO.	ANVIL			PUNCH
453	A308 Pl. XX	Eye large. Leaves thickish <i>a.</i> Berlin: 8.58 g. (132.4) = T. Pl. 8, 10	Owl dumpy. Twig entirely within the square	P388 Pl. XX
454	A308	Same die <i>a.</i> Berlin: 8.49 g. (131)	Similar, but left leaf is outside the square	P389 Pl. XX
455	A309 Pl. XX	Similar <i>a.</i> Cat. H. xxi, 1906 (Cons. Weber), Pl. XXII, 1649 = T. Pl. 9, 18: 8.51 g. (131.4)	Same die	P389 Pl. XX
456	A310 Pl. XX	Similar. Leaves smaller <i>a.</i> Paris: 8.52 g. (131.5) = T. Pl. 8, 27	Similar. Legend set low	P390 Pl. XX
457	A311	Similar <i>a.</i> Paris. Pierced	Similar. Owl's head large	P391 Pl. XX
458	A311	Same die <i>a.</i> London: 8.22 g. (126.9); B.M.C. <i>Attica</i> , p. 8, 73 = T. Pl. 8, 28. Pierced	Similar. Head normal	P392 Pl. XX
459	A311	Same die <i>a.</i> Cambridge, McClean: 8.38 g. (129.3) = Cat. H. xiii, 1905 (Rhusopoulos), Pl. XXV, 1980 = T. Pl. 8, 29	Similar	P393 Pl. XX

NO.	ANVIL			PUNCH
460	A311 Pl. XX	Same die a. Boston: 8.29 g. (128); Perkins, No. 302 = Cat. Sotheby, March, 1896 (Montagu), Pl. VI, 387	Owl smaller	P394 Pl. XX
461	A312  Pl. XXI	Head larger. Eye narrower. Of the best archaic style a. London: 8.35 g. (129); B.M.C. <i>Attica</i> , p. 8, 72, Pl. IV, 4 = B.M. <i>Guide to Coins of Ancients</i> , Pl. 13, 21 = H.N. <sup>2</sup> p. 371, fig. 210 = T. Pl. 8, 25	Similar. Design very neat	P395  Pl. XXI
462	A313 Pl. XXI	Similar a. Mavrogordato, Hove: 8.53 g. (131.7)	Same die	P395 Pl. XXI
463	A314  Pl. XXI	Similar. Slightly larger a. Jameson, Paris: 8.55 g. (132); Catal. Pl. LXI, 1188 = Cat. Sotheby, April, 1907 (Delbeke), Pl. V, 144 = T. Pl. 8, 24 b. Brussels: 8.59 g. (132.6) = T. Pl. 8, 26 c. Munich: 8.52 g. (131.5) = T. Pl. 9, 17 d. Berlin: 8.43 g. (130.1)	Similar. Head larger. Leaves wider	P396  Pl. XXI
464	A314	Same die* a. Berlin: 8.34 g. (128.7) b. Winterthur: 8.40 g. (129.7) = T. Pl. 8, 30	Similar	P397 Pl. XXI
465	A315 Pl. XXI	Similar* a. Berlin: 8.38 g. (129.4)	Similar. Owl more slender	P398 Pl. XXI
466	A315	Same die a. Athens. Found in the excavations on Scyros	Similar. Small owl. Short leaves	P399  Pl. XXI
467	A316 Pl. XXI	Similar a. Meletopoulos, Athens: T. Pl. 9, 15	Same die	P399 Pl. XXI
468	A316	Same die a. Empedocles, Athens: 8.37 g. (129.2) = Cat. N. 1920 (Pozzi), Pl. II, 1550 = Cat. Sotheby, May, 1905 (Warren), Pl. I, 18	Similar. Leaves longer	P400 Pl. XXI
469	A317  Pl. XXI	Head larger. Leaves wide and set close together a. Sir H. Weber Coll.: 8.50 g. (131.2) = Cat. Hoffmann, Paris, 1890 (Photiadès Pacha), Pl. IV, 563	Legend set low. Owl long and triangular. Leaves long	P401  Pl. XXI
470	A318	Similar a. Athens: 8.5 g. (131.2) = T. Pl. 9, 13	Similar	P402 Pl. XXI

\* From same hub.

NO.	ANVIL			PUNCH
471	A318 Pl. XXI	Same die a. Boston, Perkins, No. 303 b. Churchill, Blockley: 8.56 g. (132.1); <i>J.I.A.N.</i> 1912, Pl. A', 32 = T. Pl. 9, 14	Similar	P403 Pl. XXI
472	A319 Pl. XXI	Eye more narrow. Leaves wider apart* a. Glasgow: 8.37 g. (129.3); Macdonald, <i>Cat. Hunter Coll.</i> ii, p. 52, 10, Pl. XXXIII, 21 = T. Pl. 9, 20	Same die	P403 Pl. XXI
473	A320 Pl. XXI	Similar* a. Newell, New York: 8.5 g. (131.2) = T. Pl. 9, 19 b. Copenhagen: 8.5 g. (131.2) = T. Pl. 9, 16 c. Cat. H. xiii, 1905 (Rhousesopoulos), Pl. XXV, 1979: 8.5 g. (131.2) = T. Pl. 8, 5	Owl rather larger	P404 Pl. XXI
474	A320	Same die a. Soutzos, Athens: 7.90 g. (122) = T. Pl. 8, 31	Owl smaller	P405 Pl. XXI

\* From same hub.

## GROUP P

## MINT OF ATHENIAN CLERUCHS IN EUBOEA

Between 506 and 490 B.C.

## TETRADRACHMS

Rough copies of coins in Group L

[§ 77] **OBVERSE**, head of Athena right as in Group L, hair dressed in varied fashion indicated by (i) lines, (ii) lines with fringe of dots, (iii) waved band across forehead and temple. Helmet generally as in Group L.

**REVERSE**, ΑΘΞ to r. downwards. Owl to r. head facing, *very clumsy*, body plumage of dots, wing plumage of lines. Olive twig with varied number of leaves to l. above. Incuse square.

NO.	ANVIL			PUNCH
475	A321 Pl. XXIII	Large eye, long upper lip. Hair style i. Chevrons and dots on crest-support <i>a.</i> Cat. N. 1920 (Pozzi), Pl. XLVIII, 1533 = T. Pl. 4, 22: 17.25 g. (266.2)	Upright owl. Very small twig, berry and 2 leaves	P406 Pl. XXIII
476	A322 Pl. XXIII	Lips drawn up, small chin. Hair style i. Plain ridge on crest-support <i>a.</i> Newell, New York: 17.11 g. (264.1) = Cat. H. xxix, 1910, Pl. VIII, 447	Similar. Bird broad. Tiny twig placed very high	P407 Pl. XXIII
477	A323 Pl. XXIII	Similar. Hair style ii. Chevrons and dots on crest-support <i>a.</i> Berlin: 15.76 g. (243.2) = T. Pl. 5, 41. Faulty flan	Similar. Twig larger	P408 Pl. XXIII
478	A324 Pl. XXIII	Similar; smaller. Row of large dots on crest-support <i>a.</i> Berlin: 17.36 g. (268) = T. Pl. 2, 43	Owl small, large-headed. Twig quite small	P409 Pl. XXIII
479	A325 Pl. XXIII	Similar. Hair style iii. Plain ridge on crest-support <i>a.</i> Empedocles, Athens: 17.3 g. (267) = T. Pl. 2, 42	Legend high. Owl as last but rather larger. Twig with 2 leaves to r. and berry and leaf to l.	P410 Pl. XXIII

NO.	ANVIL			PUNCH
480	A325	Same die	Similar, but legend low and twig with 4 leaves and berry	P411
		<i>a.</i> Spink, London: 16.02 g. (247.3). Large cut in rev.		Pl. XXIII
481	A326	Similar, but line of dots on crest-support	Owl similar. Legend and twig normal	P412
	Pl. XXIII	<i>a.</i> Cat. N. 1920 (Pozzi), Pl. XLVIII, 1519 = T. Pl. 2, 41: 17.19 g. (265.3)		Pl. XXIII

## FRACTIONS

Rough copies of fractions of Group L

## HEMIDRACHM OR TRIOBOL

Head like No. 479. Rev.: *No legend*. Unhelmeted head of Athena Ergane r., hair in queue, placed diagonally in incuse square.  
Pl. XXIII, *a.* Athens: 2.24 g. (34.5).—Athens.

Head like No. 478. Rev.: A☉E to l. upwards. Head, as last, in incuse square.

Pl. XXIII, *β.* Formerly Philipsen Coll.: 1.78 g. (27.5); T. Pl. 7, 47

## HEMIOBOL

Types as No. 478. One leaf behind owl.  
Pl. XXIII, *γ.* Berlin: 0.25 g. (3.9).

## ANCIENT FORGERIES OF ATHENIAN COINS

## (i) PLATED COINS

- Pl. XXIII, 1 Berlin: 6.57 g. (101.4).  
2 Copenhagen: 7.59 g. (117.1).  
3 Berlin: 7.25 g. (112).  
4 Seltman, Cambridge: 1.47 g. (22.7).  
5 Paris: 16.82 g. (259.5); B.T.II. i, Pl. XXXIV, 4.  
6 Oxford, Ashmolean.  
7 Feuardent, Paris: 14.45 g. (223); T. Pl. 5, 36. Same obv. die as last.  
8 Cat. H. xxi, 1906 (Weber), Pl. XXI, 1641 = T. Pl. 5, 42: 15.6 g. (240.7).  
9 Berlin: 3.94 g. (60.8).  
Empedocles, Athens: 3.97 g. (61.3). Same rev. die as last.

## (ii) NON-ATHENIAN and BARBAROUS

- Pl. XXIII, 10 Cambridge, McClean: 16.9 g. (260.8) = T. Pl. 2, 29.  
11 Empedocles, Athens.  
12 Mavrogordato, Hove: 16.25 g. (250.7) = T. Pl. 2, 38.  
13 London.  
14 Berlin: 12.25 g. (189.1). From the Aegean Find of 1900.  
15 Copenhagen: 15.54 g. (239.8) = T. Pl. 2, 60.

**GROUP Q**  
MINT OF THE THRACIAN CHERSONESE

**GROUP Qi**

559 to *ca.* 523 B.C.

TETRADRACHM

[§ 110] REVERSE, deep incuse square divided by intersecting lines.  
OBVERSE, a shield bearing a device.

NO.	PUNCH			ANVIL
482	P413	☒ 11 mm. sq.	Shield, indicated by linear circle; upon it quadriga facing, the inner horses turn their heads inwards, the trace horses their heads out. Charioteer looks l. and holds a straight whip. Exergual line	A327
	Pl. XXIV	<i>a.</i> London: 16.72 g. (258.8); N.C. 1892, Pl. XV, 8		Pl. XXIV

FRACTIONS

THIRD

Similar punch-die. Anvil die; shield raised; horseman leading a free horse, the group facing, horses' heads turned inwards.  
Pl. XXIV, *α*. London: 5.56 g. (85.8); N.C. 1890, Pl. XIX, 20. Empedocles, Athens: 5.59 g. (86.3); N.C. 1892, Pl. XV, 9. Both same dies.

SIXTH

As last but without the free horse.  
Pl. XXIV, *β*. London: 2.8 g. (43.2); N.C. 1892, Pl. XV, 10. Pierced.—Empedocles, Athens: 2.82 g. (43.5) = Cat. N. 1920 (Pozzi), 743. Both same dies.

SIXTH

Similar punch. Anvil-die: shield raised, the horseman now to r.  
Pl. XXIV, *γ*. London.—Berlin: 2.17 g. (33.5). Both same dies.

## GROUP Q ii

Ca. 523 to 515 B.C.

## TETRADRACHM

[§ 113] **OBVERSE**, male head left, apparently diademed. Curls over forehead, hair caught up at back of neck.

**REVERSE**, quadriga facing; inner horses looking inwards, trace horses outwards. Charioteer looks l. (?). Incuse square.

**FLAN**, broad with flat edges.

NO.	ANVIL			PUNCH
483	A328 Pl. XXIV	As described <i>a.</i> Empedocles, Athens: 15.69 g. (242.1); N.C. 1892, Pl. XV, 11. Worn	As described	P414 Pl. XXIV

## FRACTIONS

## SIXTH

Horseman facing, his own and horse's head turned r. R: shallow incuse square.

Pl. XXIV, δ. London: 2.8 g. (43.2). Paris: 2.45 g. (37.8). Both same dies.

## GROUP Q iii

Ca. 515 to 500 B.C.

## DIDRACHMS

[§ 114] **OBVERSE**, horseman to right carrying two spears. Horse with hogged mane and long tail.

**REVERSE**, three incuse depressions, two diamond-shaped and one triangular.

NO.	ANVIL			PUNCH
484	A329 Pl. XXIV	Spears held nearly upright <i>a.</i> Berlin: 11.65 g. (179.8)	Triangular depression half size of either diamond depression	P415 Pl. XXIV
485	A330 Pl. XXIV	Similar. Spears slope forward <i>a.</i> Boston: 11.48 g. (177.1); Regling, <i>Cat. Warren Coll.</i> Pl. XXXII, 1392	Same die	P415 Pl. XXIV
486	A330	Same die <i>a.</i> Jameson, Paris: 11.81 g. (182.2); Catal. Pl. LXXXII, 1649	Similar. Triangular depression smaller	P416 Pl. XXIV

## FRACTIONS

## HEMIDRACHMS

Same types as 484 to 486 by rev., generally quadripartite.

Pl. XXIV, ε. Boston, Warren: 2.75 g. (42.5).—Berlin: 2.70 g. (41.7).

Pl. XXIV, ζ. Berlin: 2.55 g. (39.4).—Berlin: 2.57 g. (39.7).—London.

## GROUP Qiv

499 to 493 B.C.

## TETRADRACHMS

[§ 115] **OBVERSE**, the lion of Miletus r. head reverted, jaws open, left forepaw raised, tail in 2 shape, on a dotted exergual line.

**REVERSE**, head of Athena copied from Athenian coins of Group L, hair indicated by (i) lines, (ii) waved band of hair across forehead. Ear-ring ⊙. Plain Athenian helmet with neckpiece and horsehair crest. Incuse square.

NO.	ANVIL			PUNCH
487	A331	Lion's head large	<b>XEP</b> in field to r. upwards. Head to r.; chevrons on crest-support	<b>P417</b>
	Pl. XXIV	a. Paris: 16.30 g. (251.6); B.T.II. i, Pl. LVII, 14 = N.C. 1895, Pl. VII, 1 = <i>J.I.A.N.</i> 1915, Pl. IV, 17		Pl. XXIV
488	A332	Lion's head well proportioned	No legend. Head to l.; plain crest-support	<b>P418</b>
	Pl. XXIV	a. Berlin: 16.76 g. (258.7) b. Cat. N. 1920 (Pozzi), Pl. XXXVII, 1101 = N.C. 1895, Pl. VII, 2 = Cat. Hess, 1906 (Frankfurt), Pl. I, 113: 17.07 g. (263.5)		Pl. XXIV
489	A332	Same die	Similar	<b>P419</b>
		a. London: 16.83 g. (259.7); N.C. 1892, Pl. XV, 5 b. Seltman, Cambridge: 16.59 g. (256) = Cat. N. 1920 (Pozzi), Pl. XXXVI, 1100		Pl. XXIV

## FRACTIONS

## SIXTHS

Forepart of lion r., resembling lion of No. 488, R: quadripartite incuse square, two of the divisions sunk deep.

Pl. XXIV, η. Seltman, Cambridge: 2.67 g. (41.2).—Paris: 2.67 g. (41.2).—

Berlin: 2.73 g. (42.2).—Berlin: 2.67 g. (41.2).—London.

## TWELFTHS

Same types.

Pl. XXIV, *θ*. Seltman, Cambridge: 1.20 g. (18.5).—Vienna: 1.23 g., 1.16 g. (19, 18).—Berlin: (5) 1.38, 1.28, 1.25, 1.20, 1.18 g. (21.3, 19.8, 19.3, 18.5, 18.2).—London.

## GROUP Q v

478–476 B.C.

## DIDRACHMS

[§ 120] **OBVERSE**, horseman as in Group Q iii. He wears crested Corinthian helmet.

**REVERSE**, two diamond-shaped incuse depressions; within the upper, lion of Miletus r. head reverted: in the lower, lion's head r. jaws open.

NO.	ANVIL			PUNCH
490	A333 Pl. XXIV	As described <i>a.</i> Berlin: 11.0 g. (169.8). Apparently <i>clipped</i> <i>b.</i> Berlin: 12.17 g. (187.8) <i>c.</i> Seltman, Cambridge: 12.83 g. (198)	As described	P420 Pl. XXIV

# INDEX

- ABDERA**, 26, 26 n. 12, 55  
**Abydos**, lion of, 116  
**Acanthus**, 55  
**Achaean**s, 122  
**Acragas**, 80 n. 5  
**Acropolis**, 11, 40, 42, 50, 61 f., 68 n. 5, 70, 84, 88, 91, 95 f., 104 finds on, 17 n. 3, 58 ff., 142 n. 6 monuments on, 93 temples on, 42, 61 n. 2, 64, 71  
**Adcock**, F. E., 15 n. 4, 43 n. 4  
**Aeacus**, 129, 136  
**Aegae Achaiae**, 128 n. 1  
**Aegae Macedoniae**, 55  
**Aegean Sea**, 10, 14, 60, 129  
**Aegina**, Aeginetan, 11 f., 15, 30 n. 8, 41, 64 n. 3, 83 n. 3, 92, 106, 117 ff., 119, 123, 128 ff.  
 "Turtle" didrachms, 6, 13, 40 f., 130 n. 3  
**Aegis of Athena**, 73  
**Aeneas**, 54 n. 3  
**Aeneia**, 54 n. 3, 55  
**Aenus**, 26 n. 12  
**Aeolis**, Aeolian, 115  
**Aeschylus**, 19, 102, 129  
**Aetna**, 26  
**Agariste**, 37  
**Agroikoi**, 27 n. 3  
**Ajax**, 136  
**Alcibiades**, 24  
**Alcmaeon**, 21, 33, 84  
**Alcmaeonidae**, 20 ff., 23, 33 ff., 36 f., 47, 57, 79 ff., 85, 136 established in Athens, 91  
**Alcmaeonid temple at Delphi**, 79 ff., 94, 97  
**Alexander I**, 144  
**Alexander the Great**, 54, 80  
**Amasis (potter)**, 24, 98  
**Amber-route**, supposed, 134  
**Amphiaraios**, 19 n. 3  
**Amphictions**, 21  
**Amphictionic League**, 79  
**Amphora**, Burgon, 27 n. 1, 42 n. 1, 74  
 "Amphora coins," 8, 18 f. *See also* Devices  
**Amphora**, Tyrrhenian, 7 f., 19 n. 8, 151, 153  
**Amphorae**, Panathenaic, 72, 94 n. 1  
**Amyntas of Macedon**, 54  
**Anacharsis**, 134  
**Anatolia**, 113 n. 6  
**Anaxilas**, 41 n. 4  
**Anchimolus**, 84  
**Andros**, 7  
**Androtion**, 6 n. 4, 15 n. 4  
**Anglo-Saxons**, 131 n. 6  
**Annual dole**, 105 ff.  
 coins classified, 108  
 number of coins issued for, 107  
**Antandrus**, 140 n. 8  
**Anthemus**, 54 n. 3  
**Antiochus of Syria**, 50  
**Antony**, Mark, 40 n. 4  
**Apollo**, 12, 34 f., 36  
 Delian, 79, 91  
 Pythian, 74, 79, 94  
 temple at Delphi, 33, 94  
**Apollonia**, 128  
**Arabia**, Arabian, 109, 131 n. 6  
**Arcadia**, 83, 96 n. 5  
**Areopagus**, 43, 107 n. 3, 108 f.  
**Argive Heraeum**, 117 f.  
**Argolis**, Argolid, 1, 3 f., 5, 119 f.  
**Argos**, Argive, 64, 128  
**Aristides**, 19 n. 3  
**Aristodemus of Argos**, 54  
**Aristogeiton**, 72 n. 1, 76  
**Aristophanes**, 19, 21, 68, 80  
**Aristotle**, 6, 14 f., 16 f., 20, 24, 27, 36, 85, 92, 106 n. 6, 108, 121, 123  
 his interest in coinage, 15 n. 4  
**Arms**. *See* Devices  
**Artemisium**, 108  
**Aryandes**, 126 n. 3  
**As and uncia**, 121  
**Aspendus**, 33  
**Assyria**, 119  
**Astragalomanteia**, 26  
**Astyra (Caria)**, 20 n. 1  
**Athena**, double, 97 f., 200  
 Ergane, 40, 76, 96 f., 200  
 helmet of, 42, 58, 72, 73, 102, 132  
 helmet with olive-leaves, 103, 207, 211  
 Janiform, 97 f., 200  
 Pallas, 97  
 Parthenos, 61  
 Polias, 26  
 Promachos, 40, 42, 96, 142  
 Sciras, 26  
 of Sunium, 68 ff.  
 statues of, 42, 58  
 treasures of, 68  
 treatment of hair, 42, 56, 62, 72, 99, 103, 159, 179, 182, 189, 197, 201, 207  
 worship of, 40, 71  
**Athenian Empire established**, 145  
**Attica**, 1, 5  
**Attic standard**. *See* Standards  
**Augustus**, 34 n. 2, 41, 54, 71  
**Axes as currency**, 1  
**Axones**, 20 n. 3  
**BABELON**, E., 75, 76, 81 n. 4  
**Babylonia**, 112  
**Babylonian system**. *See* Standards  
**Badges**. *See* Devices  
**Baltic**, 134  
**Barbarous imitations**, 56, 73 n. 4, 100, 217  
**Bas-reliefs**, 46, 62, 73, 95 f., 104, 141  
**Beloch**, 86 n. 1  
**Beulé**, E., 87  
**Biltu**, 115  
**Bi-metallism**, 124 f.  
**Bisaltae**, 55, 56 n. 3  
**Boeotia**, Boeotian, 85 n. 5, 92 f., 108, 132  
**Boeotian shield**, 93  
**Boghaz-köi**, 89  
**Bonus paid to Athenian citizens**, 107  
**Borysthenes**, 12  
**Borysthenitae**, 132, 134  
**Boutes**, 40, 49, 94 n. 2  
**Brandis**, J., 24 n. 2, 34 n. 2  
**Brasidas**, 138 n. 7  
**Brauchitsch**, G. von, 37 n. 3  
**Brauron**, 39, 40 f., 45 f., 65  
**Britain**, 122 n. 3  
**Britons**, 1  
**Bronze Age**, xix, 112  
**Brutus**, 40 n. 4  
**Bryges**, 129  
**Brygoi**, 128 f.  
**Burgon amphora**, 27 n. 1, 42 n. 1, 74  
**Bury**, J. B., 21 n. 2  
**Buschor**, E., 61 n. 2, 68 n. 5  
**Butades of Sicyon**, 13 n. 5  
**Byzantium**, 138 n. 4, 144  
**CABEIRIC worship**, 65  
**Cadmeian alphabet**, 3 n. 4  
**Caesar**, 1, 40 n. 4  
**Camarina**, 80 n. 5  
**Cambyzes**, 126  
**Campania**, 114 n. 2  
**Cardia**, 141 f., 144  
**Caria**, Carian, 85, 88 f.  
**Carolingian coinage**, 131 n. 6  
**Carthaea**, Carthaeian, 7, 12 ff.  
**Carystos**, 130 n. 1  
**Cattle**, 1, 4 f., 14, 28 f., 112 f.  
 types of, 49  
**Cean cults**, 13 n. 2  
**Ceans**, origin of, 12 f.  
**Celaino**, 97 n. 4  
**Central Europe**. *See* Europe  
**Ceos**, Cean, 12 ff., 128

- Ceramus, 88  
 Chalcidice, 28 n. 6, 55 n. 5, 137 n. 1, 138  
 Chalcis, Chalcidian, xix, 92 f., 97, 100, 130, 132, 139  
 Cleruchy in, 100  
 Chariots, 137 ff., 143  
 Chart of Eupatrid coins, 53  
 of Peisistratid and later coins, 110  
 Chersonesians on vase, *Frontispiece*, 143  
 Chersonesus, 60, 76, 115, 136-145  
 and Ionian revolt, 141 ff.  
 becomes Athenian, 132  
 regained by Athens, 144 f.  
 under Persia, 132 n. 3  
 Chios, Chian, 116, 121  
 Chronology, 43 n. 4, 53, 110  
 Cilicia, 98  
 Cimon I, 30, 139  
 Cimon II, 136 n. 2, 139, 143, 144 f.  
 regains Chersonesus, 144 f.  
 Clamps, architectural, 42 n. 3  
 Clazomenae, 83 n. 4, 141 n. 7  
 Cleisthenes of Sicyon, 37 n. 2  
 son of Megacles, 33, 34, 70, 84 ff., 130  
 and Athena, 94  
 and Delphi, 97  
 Cleisthenes' democratic scheme, 85  
 Cleisthenes follows policy of Peisistratus, 94  
 founds democracy, 92  
 his coins copied by Miltiades II, 142  
 policy of, 92, 94  
 reforms of, 92  
 rivalry with Isagoras, 85 f.  
 two mints under, 94  
 Cleitodemus, 46 n. 1  
 Cleitor, 49  
 Cleomenes, 84 ff., 91, 92  
 Cleruchy abandoned, 101  
 in Chalcis, 100 f.  
 Cnidus, 41 n. 3  
 Coiffures, 62  
 Comias, 38  
 Commodus, 88  
 "Contingent from Chersonesus," *Frontispiece*, 143  
 Cook, A. B., 21 n. 7, 33, 35 n. 4, 88 n. 6  
 Copae, 49  
 Copper, 1 ff.  
 coinage (late), 50  
 coinage of Athens, 68, 70  
 ingot talent, 2 ff., 112 ff.  
 Corcyra, 28 n. 6, 83 n. 7, 128 f.  
 Coresia, 13 n. 4  
 Corinth, Corinthian, 17 f., 92, 115, 123, 126 f., 128 ff.  
 Corinthian potters, 8  
 Cows. *See* Cattle  
 Crassipes, 21 n. 8  
 Crescent. *See* Moon  
 Crete, Cretan, 1 ff., 112, 113 n. 6  
 Crimea, 109  
 Crisa, 21  
 Croesus, 43 n. 4, 57 n. 6, 79, 82 n. 4, 116, 125, 138  
 his currency reform, 124  
 Croton, 75  
 Crowns, golden, 114 f.  
 Crus, 21 n. 8  
 Currency, cattle as, 1  
 copied by other states, 131  
 debasement of, 16 f.  
 development of, 39  
 international, 130  
 purchase of, 130  
 Cylon, 20, 40  
 Cylonian conspiracy, 86  
 Cyme Aeolidis, 115 n. 4  
 Cyme Euboeae, 1, 113, 115 n. 4  
 Cyprus, Cypriote, 1, 3 f., 113 n. 6  
 Cypselus of Corinth, 17 n. 5, 123  
 the Philaïd, 136, 139  
 Cyrene, Cyrenaic, 9, 18, 115, 123, 126 f.  
 Cyrus, 43 n. 4, 125 f.  
 Cyzicus, 38  
 DAI'MACHOS, 30 n. 5  
 Damasias, 23, 27  
 Damastium, 128 f.  
 Daphnae, 119  
 Daric, 125 f.  
 weight of, 112  
 Darius, 77, 125 f.  
 Datis, 101, 114  
 Debased currency, 68, 70  
 Deben, 18 n. 1, 119 f.  
 Decadrachm, annual distribution of, 107  
 confined to one period, 107  
 Decadrachms, 105 ff., 211  
 and contemporary tetradrachms, 105  
 date of issue established, 106  
 issue recorded by Herodotus, 106  
 Defenneh, 119  
 Delos, Delian, 1 n. 4, 12 f., 79, 81 n. 3, 114  
 coins of, 79  
 Delphi, Delphic, 21, 33 f., 35, 49, 70, 79 ff., 86, 120  
 Athenian stoa at, 93, 97  
 burning of temple at, 43 n. 4, 79  
 coinage of, 81, 83 n. 7, 97  
 rebuilding of temple at, 79 ff.  
 Siphnian treasury, 129  
 temples at, 94  
 treasures at, 80 f., 82, 82 n. 4  
 Delphos, 34, 97  
 Delta. *See* Egypt  
 Demarete, 114  
 Demareteion, 106 n. 3  
 Demes, Attic and Cean, 13 n. 1  
 Dēmiourgoi, 27 n. 3  
 Democracy, 70, 85, 94 n. 2  
 established, 92  
 Democratic tradition, 16, 39  
 Demonetisation of coinage, 77, 77 n. 3  
 Demosthenes, 115, 130  
 Derrones, 27, 55  
 Devices, amphora, xvii f., 18 ff., 22, 24, 91, 131, 151, 153, 157  
 ancestral, 24  
 apple, 27, 167  
 astragalos, xvii f., 24 ff., 130, 154  
 Athena in Chersonesus, 141 f., 220  
 beetle, xvii f., 24 ff., 154, 157  
 bull, xvii, 27 ff., 155  
 bull's head, xvii f., 28, 47 ff., 80 f., 84, 86 ff., 130, 162 f., 166, 193, 195  
 cartwheel, xvii, 24, 26 f., 131, 154  
 chariot wheels. *See* Wheel  
 civic, 19, 47 f., 50 ff., 81  
 club, 51 n. 1  
 corn-ear, 51 n. 1  
 dots. *See* Pellets  
 Eros with thunderbolt, 24  
 Etruscan imitate Athenian, 131  
 eye, 32, 157  
 family, xviii  
 forepart of horse, xvii f., 24 ff., 29 ff., 32 n. 2, 46, 130, 154, 155, 157  
 four-horse chariot facing, 137 ff., 218, 219  
 frog, 27, 167  
 Gorgoneion, xvii f., 46, 49, 50 ff., 86 ff., 131, 135, 163 f., 166, 195 f.  
 hindquarters of a horse, xvii f., 34, 37, 156, 158  
 horse, xvii f., 29 f., 155  
 horseman facing, 137 ff., 218, 219  
 horseman to right, 137 f., 140 f., 144 f., 218, 219, 221  
 horseman with second horse facing, 137 f., 218  
 leaf, 27, 166  
 leg, xvii, 22, 82 f., 194  
 lion of Miletus, 141 f., 143, 144, 220  
 lion's head, 142, 144  
 of Alcmaeonidae, 21 f., 33 ff., 47, 49, 80 f., 135  
 of Augustus, 34 n. 2  
 of Cimon II, 144 f.  
 of Eteobutadae, 49, 81, 86 f.  
 of Eupatrid families, xviii

- Devices—*contd.*  
of Isagoras, 88 f.  
of Miltiades I, 137 f.  
of Miltiades II, 140 ff.  
of Seleucus I, 34 n. 2  
of Stesagoras, 139  
of Tisander, 88  
Olbian imitate Athenian, 132 f.  
Olpē, 20, 157  
on vases, xviii, 19  
owl, xvii f., 47 ff., 80 f., 91,  
131, 162 f., 166, 193  
owl with open wing, 98  
panther's head, 51 f., 86 ff., 165  
panther's head and pellets, 89 f.,  
195  
pellets, 143  
trident, 51  
triskeles, xvii f., 20 ff., 25, 33 f.,  
82 f., 84, 153, 157, 194  
wheel, xvii f., 27, 33 ff., 45, 47,  
49, 58, 80 f., 130, 135, 156,  
158, 162 f., 166, 193  
wheel, solar, 34, 155  
white legs, 21 f.
- Diakrioi, 39 n. 4  
Dicast's tickets, 50  
Didrachm, Didrachmon, 15, 19,  
20, 22, 28, 36, 37, 47  
Didrachms of the dole, 105 ff., 212  
Die-combinations, xx  
Dies, anvil-, xx  
numbers of, 14, 20, 24, 44, 47,  
48, 49, 51, 60, 63, 64, 88, 99,  
104, 107  
numbers per annum, 44, 57, 63,  
65, 75 n. 6, 88, 99, 105, 111  
sharing punch-dies, 22, 25, 37,  
48, 48 n. 2, 49, 51, 52 n. 1, 62  
n. 4, 88  
Dies, arrangement by, xx, 62, 74, 99  
didrachm, duration of, 44 n. 1,  
63 n. 4  
fractures in, 75, 88  
sequence of, xx  
Dies, punch-, xx  
numbers of, 14, 24, 47, 88  
preponderance of, 42 f.
- Diobol. *See* Fractional currency  
Dion of Syracuse, 76 n. 5, 80 n. 5  
Dionysius of Syracuse, 80 n. 5  
Dionysus, theatre of, 50 f.  
Dipylon ware, 35  
Distatēr, 89 n. 4  
Dole, annual, 105 ff.  
Dolenci, 136, 142 f.  
Donation to crews before Salamis,  
108 f.  
Doric art, 64, 73, 95, 99  
Double-shekel, 116, 122 ff.  
Drachma. *See* Fractional currency  
Drachmai Stephanēphoroi, 46  
n. 1, 69 n. 2  
Draco, laws of, 14
- Drax, 117 f.  
Duris, 138  
Dyrrhachium, 128
- EAR of corn, 76  
Economics, 128 f.  
*Economics*, pseudo-Aristotelian, 77  
Egypt, Egyptian, 1 f., 9, 14, 18,  
26, 41, 107 n. 4, 112, 119,  
123, 126 n. 3, 130  
Eisler, R., 3  
Electrum, 22, 79, 80 f., 82  
and silver. *See* Ratios  
coinage of exiles at Delphi, 80 ff.,  
86  
of Ionian revolt, 55 n. 2, 116  
of Lydia and Ionia, 116  
of Paonia, 55 n. 2  
Eleusis, 76, 92, 136  
Hall of Initiation, 76 n. 3  
Epaminondas, 121  
Ephesus, 116  
Epictetos, 142 f.  
Epidamnus, 128  
Epigraphy. *See* Inscriptions  
Epirus, 128 f.  
Episemon. *See* Devices  
Erechtheum, 61 n. 2  
Erechtheus, 26, 40, 94 n. 2  
*Erechtheus* of Euripides, 50  
Eretria, Eretrian, xix, 28 n. 6, 54,  
57, 71, 101, 130, 131 n. 3,  
141 n. 5  
Erichthonios, 129  
Erysiichthon, 12  
Eteobutadae, 26, 49, 81, 87  
Etruria, Etruscan, 8, 18, 27, 130 f.  
81 n. 4, 93, 100, 113, 122,  
128, 130, 137 n. 1, 141 n. 5  
Euboica, Euboian, xix, 5, 49, 68,  
81 n. 4, 93, 100, 113, 122,  
128, 130, 137 n. 1, 141 n. 5  
Euboic standard. *See* Standards  
Eumolpos, 51  
Eupatridae, 7, 23, 27  
coinage of, xviii, 23 ff. *passim*,  
45 ff., 52, 61, 63, 77, 78, 124,  
130 f., 132 ff.  
Eupatrid coinage revived, 86 f.  
Euphronios, 29  
Euripides, 50  
Euripus, 92, 101  
Europe, Central, 12, 122 n. 3,  
133 ff.  
Euxine, 12, 130, 132, 163, 141, 145  
Evans, A. J., 1 n. 6, 2 ff., 4 n. 2, 113  
Evans, J., 1 n. 8  
Exchange of currencies, 124, 125  
Exiles of Peisistratus, 43 n. 4, 45
- FABRIC of coins, 75, 87, 93, 94,  
137, 139  
Factions of plain and shore, 9, 20,  
21, 23, 27, 30, 36 f., 45  
the "Hill party," 37
- Falmouth, 1 n. 8  
Finds, Acropolis, 58 ff., 147  
Cousinéry's, 146  
in Arcadia, 83  
in Attica, 81, 83  
in Chios, 148  
in Egypt, 18 n. 9, 32 n. 1, 130,  
147  
in Eleusis, 146  
Pasha, 146  
Santorin, 13  
Schubin, 133 ff., 148  
Taranto, 18 n. 9, 75, 92 n. 5,  
131 f., 147  
Vettersfelde, 134  
First fruits, 12, 132  
Flans. *See* Fabric  
Flavian emperors, 142  
Flaws in coins, 107  
Fleet, Athenian, 11, 106, 107,  
108 f.  
Foot, Aeginetan, 121  
Attic, 121  
pre-Pheidonian, 121  
Roman, 121  
Forgeries. *See* Plated coins  
Forgers, law against, 130  
Forrer, R., 4 n. 3  
Fractional currency, diobols, 22, 97  
disproves a heavy standard, 78  
drachmae, 22 n. 1, 25 n. 1, 32,  
36, 37, 47, 56, 61, 91, 96, 99,  
105  
half-drachmae, 14, 96, 100  
half-obols, 25, 32, 36, 43, 49, 56,  
61, 75, 76, 96, 100  
large issues of, 98, 105  
obol the marketing coin, 78  
obols, 7, 19, 20, 25 n. 3, 27, 36,  
43, 47, 48, 49, 51, 56, 61, 75,  
76, 96, 105  
quarter-obols, 32, 51, 61  
sixths, 138, 141, 142  
thirds, 138, 139  
trihemiobols, 96, 97  
twelfths, 142  
*See also* Fractions, p. xii
- Fractures. *See* Dies  
François vase, 43 n. 2, 74  
Frankincense, 114  
Frost, K. T., 1 n. 5
- GALSTER, G., 13 n. 6  
Gardner, P., 18, 55 n. 2  
Gaul, 122 n. 3  
Gela, 80 n. 5  
Gelo, 114  
Gold, 2 f., 5. *See also* Ratios  
coinage, occasions for, 80 f.  
coinage of Athens, 68, 70, 80 n. 5,  
122  
drachmae, Attic, 112  
talent, 112 ff.

- Gorgoneion, 50, 86 ff., 131, 133, 135  
 Groups, order of, xx  
 A, 7 ff.  
 B i, 18 ff.  
 B ii, 20 ff.  
 B iii, 24  
 B iv, 27  
 B v, 29  
 B vi, 34  
 C, 41  
 D i, 45  
 D ii, 47  
 D iii, 50  
 E, 56  
 F, 58  
 G i, 61  
 G ii, 64  
 H, 72  
 J i, 80  
 J ii, 82  
 K, 86  
 L, 94  
 M, 98  
 N, 102  
 O, 105  
 P, 100  
 Q i, 137  
 Q ii, 139  
 Q iii, 140  
 Q iv, 141  
 Q v, 144  
 Gyges, 82 n. 4  
 Gygian gold, 82 n. 4
- H**AEBERLIN, 3 n. 3  
 Half drachma. *See* Fractional currency  
 Half obol. *See* Fractional currency  
 Halicarnassus, 85  
 Hall, H. R., 1 n. 2  
 Harmodius, 72 n. 1, 76  
 Harpocraton, 126 n. 3  
 Head, B. V., 7 n. 3, 75, 77 n. 5  
 Hecatommus, 89  
 Heliopolis, 119  
 Hellenic chronology, 4 n. 1, 112 n. 6  
 Hellespont, 60, 136, 143 f.  
 Helmet with tall crest-support, 72 f., 192  
 Hemidrachm. *See* Fractional currency  
 Hemiobol. *See* Fractional currency  
 Hera of Argos, 117  
 Heracleian Tables, 24 n. 2  
 Heracleides of Pontus, 117  
 Heracles, 42  
 Heraeum, 117 ff.  
 Heraldic coins, xvii  
 money of Eupatridae, xviii
- Heraldry, 19  
 Herodotus, 12, 36, 43 n. 4, 45, 46, 51, 55, 85, 92, 93, 136, 141, 145  
 and the Athenian decadrachms, 106  
 Hesychius, 21  
 Hieron (potter), 31  
 Hill, G. F., 75, 77 n. 5, 125  
 Hipparchus, 30, 76, 79  
 Hippias, 21, 30, 33, 39, 43 n. 4, 46, 54 n. 3, 63, 64-80, 84, 96 n. 5, 101, 125, 132  
 and Cimon I, 139  
 buildings of, 58, 64, 71  
 character of, 64, 71, 76  
 expulsion of, 74, 84, 86, 91  
 goes to Sigeum, 84, 100  
 interest in coinage, 72, 77 f.  
 loses Thracian mines, 77, 84, 140  
 opens new mint, 65, 70, 71 ff.  
 policy of, 64  
 "reform" of coinage, 77 f.  
 "reform" no reform, 78  
 Hippocleides, 37  
 Hippocrates, 30  
 Hischylos, 25  
 Hittites, 89  
 Hoards. *See* Finds  
 Homer, Homeric, 1, 3, 18, 112 ff., 122  
 Homeric talent, 112 ff.  
 Horsemen, 137 ff.  
 Hub mis-strikes a die, 63  
 Hubs, hubbing, 44, 96, 99, 104  
 shared by dies, 44, 57, 59 n. 2, 62, 63, 75  
 Hultsch, F., 114  
 Hyperakrioi, 39 n. 4  
 Hyperborean offerings, 12, 132
- I**CHNAEANS, 27 n. 6, 55  
 Idalium, 26 n. 12  
 Illyria, 129  
 Imhoof Blumer, 55  
 Imitations of Athenian coins, 56, 100, 107 n. 4, 131, 133  
 Imperial mint, 41  
 "Imperial" Mint opened, 41  
 Incuse peculiar in Chersonese, 141  
 India, Indian, 109, 131 n. 6  
 Ingot talent, copper, 2 ff., 112 ff.  
 Ingots, 1 ff., 112 ff.  
 from Cyme, 113 f.  
 from Mycenae, 113 f.  
 manner of casting, 4 n. 2  
 on coins of Damastium, 129  
 Inscriptions, **AΘE**, 43, 159 ff., 179, 182, 189, 197, 201, 207  
**AΘE**, 100, 215  
**A∴E**, 58, 172
- Inscriptions—*contd.*  
**A⊕E**, 72, 94, 189, 197  
**<ΘE**, 56, 168  
**<∴E**, 55 ff., 168, 172  
**ΞΘΥ**, 105, 211  
**ΛΘE** [*valov*]**Ο ΔΗΜΟΣ**, 65  
**ΑΡΙΧ**, 132 n. 9  
**ΒΟΙ**, 93  
**Δ**, 81, 83, 93 n. 2, 193  
**ΔA** (retrogr.), 97  
**ΔΑΛΦΙΚΟΝ**, 81  
**ΔΔΔΔ ΙΩΙΑ**, 66 f.  
**ΔΕΚΑΣΤΑΤΕΡΟΝ**, 17 n. 3  
**ΔΗΛΙ**, 79 n. 4  
**ΔΠ**, 66 f.  
**Ε**, 100  
**ΕΝΦΙΛΕΤΟΣ ΚΑΙΟΣ**, 35 n. 4  
**ΙΩΙΑ**, 66 f.  
**ΗΙΠ**, 76  
**⊕**, 43 n. 2, 74, 96  
**⊙**, 55 ff.  
**∴**, 55 ff.  
**ΠΙ** (? retrogr.), 76  
**ΚΑΡ**, 14  
**ΛΑΥΡΙΑ Μ[Ε]ΤΑΛΛΑ**, 65  
**ΜΑ**, 76  
**ΜΙΛΤΙΑΔΕΣ ΚΑΙΟΣ**, 142  
**ΧΣΑΝΘΙΓΡΟΣ**, 96 n. 3  
**ΤΑ**, 93  
**⊕**, 83, 93 n. 2, 194  
**ΧΕΡ**, 142, 220  
**Ψ**, 93  
 Ionia, Ionian, 115, 123  
 friendship with, 94  
 Ionian art, 62, 64, 94, 95, 99, 134  
 revolt, 141 ff.  
 Sea, 129  
 worship, 79  
 Iron currency, 117 ff., 120 ff.  
 Isagoras, 70, 84, 85 ff., 132, 139  
 aims at tyranny, 88, 91  
 character of, 85  
 of foreign descent, 85, 88 f.  
 Island coinage, 128  
 Italy, Italian, 18, 130 f., 132  
 Central, xix n. 1, 114  
 Iulis, 13 n. 4  
 Iynx-wheels, 33
- K**ANŌN from Heraeum, 121  
 Kantharos, 26  
 Kedet (Kāt or Kite), 18 n. 1, 119 f., 123

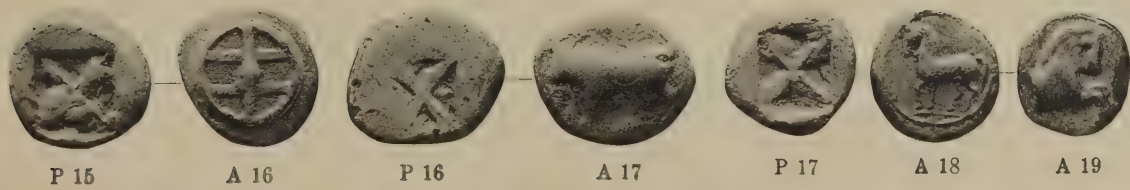
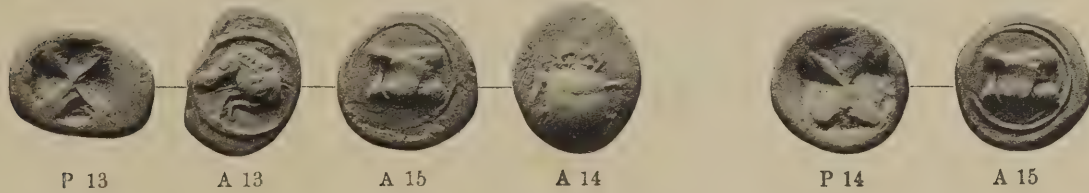
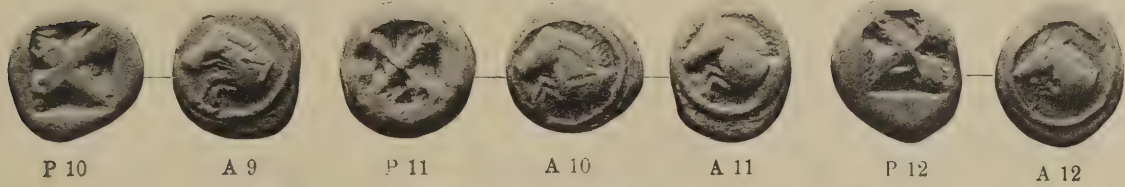
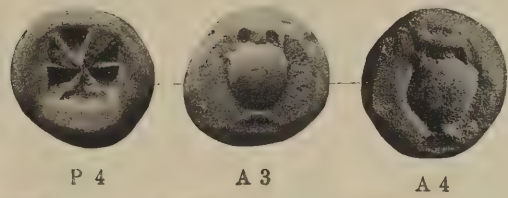
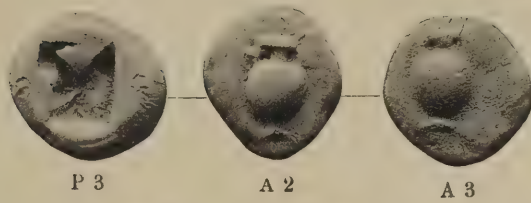
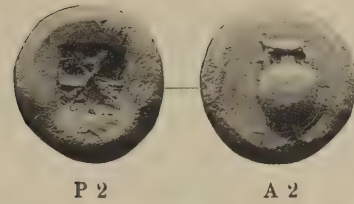
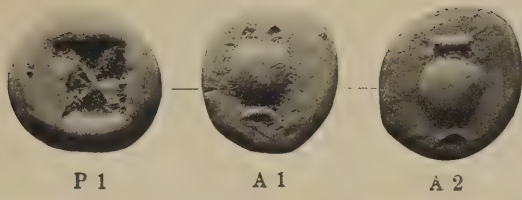
- Keftiu, 2  
 Klitias and Ergotimos, 30 n. 2  
 Knossos, 2, 12, 113 n. 6, 114  
 Kolakretai, 23 n. 3  
 Koliai, 13  
 Korai, 58, 62, 96, 104  
 Kyrbeis, 20 n. 3
- LACEDAEMON, Lacedaemonian.  
*See* Sparta  
 Laciadae, 136  
 Laispodias, 21  
 Lake-dwellings, Swiss, 135  
 Lampsacus, Lampsacene, 98, 138, 140  
 Laureion, Laureiotikē, Laurian, 39, 40 f., 44, 54 f., 61, 65 ff., 71, 74, 75, 87, 94, 98 f., 128 f.  
   age of mines at, 129  
   mines of, 106, 116 n. 4, 128 f.  
 Laurian owls, xix, 39, 45, 58, 98, 108  
 Leipsydriion, 21, 80  
 Lehmann-Haupt, 3 n. 4  
 Lelantine Plain, xix n. 1  
 Lemnos, 142  
 Leonidas, 108  
 Lesbos, 32, 83 n. 4  
 Lete, 55, 90  
 Leukopodes, 21, 34, 80  
 Lion. *See* Panther  
 Lorimer, H. L., 27  
 Lugdunum, 41  
 Lycurgus (son of Aristolaïdes), 20, 36, 43 n. 4, 45, 49, 81  
 Lycurgus (Spartan), 120 f.  
 Lydia, Lydian, 57 n. 6, 79, 82 n. 4, 85, 115, 123 ff., 138  
 Lysistrata, 21, 91
- MACDONALD, G., 19 n. 7  
 Magna Graecia, 75  
 Malean cape, 121  
 Mana. *See* Mina  
 Marathon, 46, 57, 76  
   battle of, 99, 101, 102 ff., 143  
   date of battle, 103  
   moral effect of battle, 102 ff.  
   new coin types after, 102 f., 106  
 Marathonian Tetrapolis, 12 n. 4  
 Maronea in Laureiotikē, 106 n. 6  
 Mattingly, H., 44 n. 3  
 Medes. *See* Persians  
 Medontidae, 16 n. 5, 29  
 Megacles (son of Alcmaeon), 20 f., 30, 36 f., 39, 43 n. 4, 45, 47, 49, 54, 57  
   son of Cleisthenes, 36  
 Megara, Megarian, 11 f., 30, 36, 85 n. 5  
 Melaina, 97  
 Melainis, Melantheia or Melantho, 97 n. 4  
 Melos, 27, 83 n. 3
- Mercenaries, 80, 83, 84  
   Thracian, 57  
 Merchants, 9, 16, 75  
*See also* Trade  
 Metapontum, 75  
 Metellus, 40 n. 4  
 Metrologists, Alexandrine, 112 ff.  
 Metrology. *See* Standards  
 Miletus, Milesian, 116, 119, 123 f., 132, 141 ff., 144  
   fall of, 143  
 Miltiades I, 30, 60, 76, 136 ff.  
   and Croesus, 138  
   as Founder, 136 f.  
   as hero, 138, 140, 145  
   goes to Chersonese, 136, 141  
   his coinage, 137 f.  
 Miltiades II, 103, 139-144  
   and Persia, 140 ff.  
   driven from Chersonese, 142 f.  
   goes to Chersonese, 140  
   representations of, 142 f.  
   returns to Athens, 143  
 Mina, Minae, 17, 66 f., 115 f., 118 ff., 122 f.  
 Mine-shafts, names of, 65 n. 4  
 Mines, copper, xix n. 1, 115, 122, 128, 130  
   iron, xix, 121 f., 128  
   silver, 39 n. 4, 54 ff., 58, 65 ff., 128 f.  
 Minns, E. H., 132  
 Minoan, 1 ff.  
   age, 112  
 Mint, apparatus dedicated, 122  
   at Sunium, 65 f.  
   officials, xviii, 23, 127  
   work in, 44, 49 f., 51, 57 n. 1, 65, 107, 127  
 Mints, Athenian, summary of, 70  
   Chersonesian. *See* Group Q  
   civic. *See* Groups H, K, L  
   Cleruchy. *See* Group P  
   Delphi. *See* Group J  
   at Eleusis, 76  
   Eupatrid. *See* Groups B and D  
   Eupatrid, closed, 57  
   Eupatrid, revived, 86 f.  
   Imperial. *See* Groups C, G i, G ii, M, N  
   Imperial, idle during oligarchy, 87, 98  
   Laurian. *See* Groups C, G i, G ii, M, N  
   Laurian, life of, 70  
   at Marathon, 76  
   Paeonian. *See* Groups E, F  
   Pre-Solonian. *See* Group A  
 Mionnet, T. E., 87  
 Mithradatic war, 80 n. 5  
 Mommsen, Th., 87  
 Moon, 74 n. 1  
   crescent, 73 f., 189 f.  
   full at Salamis, 104
- Moon—*contd.*  
   in third quarter, 103  
   waning, 74, 103, 106, 207  
 Mycale, battle of, 144  
 Mycenae, Mycenaean, xix, 1 ff., 12, 112 ff., 129  
   gold rings from, 112 f.  
 Mylasa, 85, 88  
 Mysia, Mysian, 85
- NAUCRATIS, 18, 119, 120, 123, 130  
 Navy, Athenian, founded, 106 f.  
 Naxos, 41 n. 3  
 Negro, head of, 97, 200  
 Nero, 71  
 Nestor, 26, 30 n. 1  
 Newell, E. T., 14 n. 3  
 Nikosthenes, 26  
 Nisaea, 30, 40  
 Nock, A. D., 19 n. 3  
 Noe, S. P., 44 n. 3  
 Numbering. *See* Numeration  
 Numeration, system of, employed, xx
- OBELOI, 117 ff.  
   found at the Heraeum, 117 f.  
   found at Sparta, 120  
 Obelos and Obolos, 117, 120 f.  
 Obol. *See* Fractional currency  
 Oil, export of, 8 f., 13, 18  
   sacred, 72  
 Olbia, 12, 132 ff.  
   coinage of, 132 ff.  
 Oligarchy, end of, 92  
   restored, 85 f.  
 Olive branches on coins, 74, 96  
 Olive-leaves on helmet, 103  
 Olive-tree, sacred, 43  
 Olive-twigs on coins, 43  
 Olympia, Olympian, 14, 51 n. 3, 80 n. 5, 130 n. 3  
 Olympiads, 28th, 119  
   47th, 20  
 Olympic victories, 20, 36, 88, 136, 138 f.  
 Olynthians, 54 n. 3  
 On, 119 f.  
 Orchomenos Boeotiae, 133, 135 n. 1  
 Orestes, 33  
 Owl, development of, 42 f., 56, 59, 63, 64, 73, 96, 99, 103, 105, 159, 179, 182, 189, 197, 201, 207  
   turned to left, 73 f., 76, 189 f.  
   with open wing, 98  
   with two bodies, 97  
 "Owls," 28  
 Ox, Oxen. *See* Cattle  
 Ox-hide, 4 f., 112

- PAEANIA**, 46  
 Paonia, Paonian, 27, 40, 41, 54 ff., 84, 98, 100, 116 n. 4, 123, 125, 128  
 Paonian engravers, 55, 57  
 mines, 51, 54 ff., 100  
 sun-god, 55  
 Paonians removed to Asia, 77  
**Paenidae**, 29  
 Painting, 42  
 Pallē, 57  
**Pamphylia**, 3 n. 3  
**Panathenaia**, Greater, 37 n. 3, 40, 72, 74 f., 87, 95, 103, 105  
**Panathenaic amphorae**, 27, 42, 43 n. 3, 72, 94  
 coinage, 72, 74 f., 95  
**Panathenaic coinage**, distribution of, 74, 95  
**Pangaean**, Pangaean, 40, 54, 57, 70. *See also* Paonia  
**Panther**, or lion, of Asiatic god, 88 f.  
**Paphos**, 26  
**Parnes**, Mount, 80  
**Parthenon**, 70, 94, 122  
 and its forerunners, 61 n. 2, 94  
 Cleisthenic, 94  
**Parties in Attica**. *See* **Factions**  
**Pausanias**, 12, 50, 88, 93  
 (Macedonian pretender), 54 n. 3  
 (Spartan regent), 144  
**Paymaster and the dole**, 107  
**Peisistratidae**, 21, 29  
**Peisistratus**, xix, 17 n. 3, 30 ff., 36 ff., 39 ff.-63, 79, 88, 91, 130  
**Peisistratus' age** a "golden age," 32, 71, 94  
**Peisistratus and Apollo**, 79  
 and Athena, 40, 42, 43 n. 4, 46 f., 61, 68, 94  
 and Cimon I, 139  
 and Megacles, 45 ff., 136  
 and Miltiades I, 136  
 and Miltiades II, 140  
 as a New Erechtheus, 47  
 attack on, 40  
 buildings of, 61, 76 n. 3  
 character of, 54, 61, 64  
 coinage of, 40 ff., 68, 124 ff.  
**Peisistratus' exiles**, dates of, 43 n. 4, 54, 125  
**Peisistratus, first tyranny**, 38, 39 ff., 43 n. 4, 45  
 in Paonia, 51, 54 ff., 57, 68, 134  
 moderation of, 45, 61  
 second tyranny, 43 n. 4, 57, 61 f.  
**Peisistratus, son of Hippias**, 74  
**Pelagic walls**, 11  
**Pellets as signs of value (?)**, 90  
 on coins, 89 f.  
**Peloponnese**, Peloponnesian, 14, 49, 84, 92, 94, 116, 120 ff., 128, 130, 144  
**Peloponnesian War**, 67  
**Pericles**, 11, 61, 92, 96 n. 3  
 and Athena, 94  
**Persia**, Persian, 68, 99, 101, 116, 125 f., 140 ff.  
**Persian invasion**, 68, 106, 108 f.  
 occupation of Thrace, 76, 140  
**Petersen**, E., 31  
**Phaistos Disk**, 4 n. 2  
**Phalerum**, 11 f., 26, 30  
**Pheidon of Argos**, 14, 15 n. 1, 116 ff.  
**Pheidonian standard**. *See* **Standards**  
**Philaidae**, 30, 37, 76, 136, 144  
**Philip II**, 54 n. 3  
**Philochorus**, 1 n. 4, 28, 50  
**Phlius**, 49, 83 n. 3  
**Phocaea**, 38, 83 n. 4, 132  
**Phocis**, 20, 49, 57, 70, 79, 81 ff., 120  
 coinage of, 83 n. 7  
**Phoenicia**, Phoenician, 3 n. 4, 115, 116 n. 4  
**Phrygians**, 128 n. 3  
**Phrynichus**, 143  
**Phyē**, 46  
**Pindar**, 36, 54, 80  
**Piraeus**, 11 f., 68  
**Pisa Elidis**, 80 n. 5, 119  
**Pisa Etruria**, 131  
**Plataea**, 104  
 battle of, 68  
**Plated coins**, 32, 68, 130, 216  
**Pliny**, 129  
**Plutarch**, 14, 21, 36, 102, 106, 117, 120 f.  
**Police in Athens**, 134  
**Pollux**, 1 n. 4, 117  
**Population of Athens**, 107  
**Poseidon**, 26, 40, 94 n. 2  
 Suniaratos, 66, 70  
**Poseidonia**, 75  
**Posen**, 133 f.  
**Pottery**, Attic, 7 f., 13, 71, 97, 130 f., 132  
 Corinthian, 8  
 Etruscan, 131  
**Prasiae**, 11 f., 30, 46, 132  
**Pre-Solonian money**, xvii n. 3, 6, 8, 13, 16, 116  
**Pridik**, E., 12 n. 8  
**Prinz**, 18 n. 8  
**Propontis**, 100, 142  
**Propylaea**, 61, 93  
**Psamtek I**, 119  
**Punches**, dimensions of, 7  
 importance of, xvii f.  
**Pythia**, 84  
**Pythian festival**, 97  
 victories, 36  
**Pythium in Athens**, 79  
**Pytho**. *See* **Delphi**  
**QUARTER obol**. *See* **Fractional currency**  
**RATIOS**, electrum and silver, 82, 124  
 gold and copper, xix, 3, 114  
 gold and silver, 116, 124  
 silver and iron, xix, 119 ff., 122  
 "Reform" of Hippias, 77 f.  
**Reigns of Peisistratus**, 43 n. 4  
**Rhaecelus**, 54, 57  
**Rhegium**, 41 n. 4  
**Rhodopis**, 120  
**Ridgeway**, W., 1 n. 5, 3, 5 n. 2, 15, 19 n. 7, 49, 112, 114  
**Robinson**, E. S. G., 20  
**Rome**, Roman, 71, 76 n. 5  
**Ruddle**, 13  
**SACRED war**, 21, 33  
**Salamis**, 11 f., 30, 32, 40  
 battle of, 43, 68, 103 ff., 106, 108 f., 144  
 (battle), after-effects in Attica, 68, 103, 106, 108  
 capture of celebrated, 30 f., 36  
**Samos**, Samian, 49 n. 11, 129  
**Sardinia**, Sardinian, 1, 4 n. 2, 113 n. 6  
**Sardis**, 43 n. 4, 57 n. 6, 101  
**Scarab**, 26  
**Sciradion**, 30 f.  
**Scirophoria**, 26  
**Sculpture**, 42, 62, 68 ff., 73, 87, 97, 104, 140, 141, 142 n. 6  
**Scyths**, Scythic, Scythian, 12, 132, 134, 143 n. 4  
**Seleucus I**, 34 n. 2  
**Selge**, 26  
**Senatorial mint**, 41  
**Serae**, 90 n. 1  
**Sestos**, 144 f.  
**Shekel**, 115 f., 122 ff., 138, 139, 141  
**Shield signs**. *See* **Devices**  
**Sicily**, Sicilian, 18, 36, 41, 130  
**Sicyon**, 121  
**Sigeum**, 59 f., 77 n. 1, 84, 100  
**Siglos**. *See* **Shekel**  
**Silphium**, 9, 18 n. 2  
**Silver**, rarity of, in bronze age, 112  
 supplies of, 44, 57, 59, 115, 119 n. 3, 128 f. *See also* **Mines**  
**Sinope**, 12, 138, 141 n. 4  
**Siphnos**, 116 n. 4, 128 f.  
**Six**, J., 1 n. 7, 29, 32, 81 n. 3, 96 n. 5, 98  
**Slaves revolt in Attica**, 65, 70  
**Smyrna**, 83 n. 4  
**Solar wheel**, 33 ff.  
**Soloi**, 3 n. 4  
**Solon and Anacharsis**, 134  
 and Peisistratus, 30, 39  
 Archonship of, 6 f., 16, 20  
 as a merchant, 9, 18

- Solon—*contd.*  
 his reform of the currency, 6,  
 13, 16 ff., 32, 39, 89 n. 4, 122,  
 123  
 legislation of, 6, 8 f., 16, 19,  
 20, 23, 36, 91, 130  
 South Italy, 18  
 Spain, 41, 109, 115, 122 n. 3  
 Sparta, Spartans, 68, 80 n. 5, 84,  
 91, 92, 96 n. 5, 121  
 Spartan iron currency, 117, 120 f.  
 Spartans leave after full moon,  
 103 n. 3  
 Spata (Attica), 11  
 Spits. *See* Obeloi  
 Stais, B., 66, 68  
 Standards, Attic, 6 ff., 13, 17 f.,  
 20, 122 ff., 140 f., 142  
 Attic, raised, 63  
 Attic, rise in, 125 ff.  
 Attic, reduced to denarius stan-  
 dard, 67  
 Babylonian, 115, 125  
 Chersonesian, 138  
 Corinthian, 17 f., 122 ff., 126 f.  
 Croesean, 124  
 Cyrenaic, 18, 122 f.  
 Euboic, xvii, xix, 6, 17, 115 ff.  
 Lydian-Milesian, 116, 122 ff.  
 Paeonian, 122 f.  
 Persian, 100, 125, 140 f., 142, 144  
 Pheidonian, xix, 6 ff., 13 ff., 16,  
 18 f., 93, 116 ff., 123, 144  
 of Asia Minor, 83. (*See* Lydian-  
 Milesian)  
 of Thrace, 83  
 rival meet at Athens, 122  
 supposed heavy and light, 16 f.  
 Stephanēphoros Herōs, 69 f., 104  
 Stesagoras, 76, 139 f., 142 n. 6  
 Strabo, 128  
 Strymon. *See* Paeonia  
 Sulla, 40 n. 4  
 Sunium, 65 ff., 104  
 Cape, 11  
 fortifications at, 65 ff.  
 mint at, 65 ff.  
 walls at, 68  
 weights from, 66 f.  
 Svoronos, J., 1 f., 55, 62 n. 5, 65 f.,  
 68, 75 n. 6  
 Sybaris, 75, 132  
 Syracuse, Syracusan, 8 n. 3, 62  
 n. 3, 76 n. 5, 80 n. 5, 98,  
 106 n. 3, 114, 138 n. 7  
 Systems. *See* Standards
- TABLES of frequency, 116, 125,  
 127  
 Taenaron, 121  
 Talent, talanton, 2 ff., 112 ff.  
 Babylonian, 115 n. 6  
 copper ingot, 112 ff.  
 Euboic, xix, 115 ff., 122 ff.  
 gold, 112 ff.  
 Homeric, 112 ff., 123  
 Lydian-Milesian, 116, 123 f.  
 Tanagra, 93  
 Taras, 140 n. 5  
 Tarentum, 80 n. 5, 140 n. 5  
 Temples. *See* Acropolis, Delphi  
 Tenedos, 98  
 Teos, 83 n. 4  
 Terracottas, 95 f.  
 Tetartemorion. *See* Fractional  
 currency, quarter obol  
 Tetradrachm introduced, 40 f., 45  
 Thebes, Theban, 47 n. 5, 80 n. 5,  
 92 f., 121, 128  
 Themistocles, 106 ff.  
 wall of, 46, 73  
 Theophrastus, 129  
 Theoria, 12  
 Therma, 54  
 Thermopylae, 108  
 Theseus, 1 ff., 12  
 Thessaly, Thessalian, 28 n. 6, 49,  
 84, 96 n. 5  
 Thiersch, H., 8  
 Thoricus, 68, 129  
 Thothmes III, 2  
 Thrace, Thracian, 55, 77, 115,  
 54 n. 3, 123, 128, 136, 143,  
 144  
 Thracio-Macedonian, 55  
 Thracio-Phrygians, 128 n. 3  
 Thucydides, 12, 55 n. 1, 92  
 Thyia, 97 n. 4  
 Timasitheus, 88  
 Timoleon, 80 n. 5, 138 n. 7  
 Tisander, 88  
 Trade, early, from Athens, 11, 14,  
 16, 18  
 with Egypt, 9, 18, 130  
 with Etruria, 18, 130 f.  
 with Euxine, 130, 132, 136  
 Treasury at Sunium, 65  
 Treaty, Athens and Carthaea, 13  
*Tricot* costumes, 57  
 Trihemiobol. *See* Fractional cur-  
 rency  
 Triobol. *See* Fractional currency,  
 half-drachma
- Triskeles, 20 ff., 25, 33 f. *And see*  
 Devices  
 Tyntenoi, 27 n. 6, 55  
 Types, first coins with two, 41  
 Tyrrhenian amphora, 7 f., 19 n. 8,  
 151, 153
- URE, P. N., 9 n. 9, 15 n. 1, 39,  
 39 n. 4, 119  
 Uxentum, 98
- VASE-PAINTERS, xviii, 19, 24, 42,  
 72, 73  
 Velia, 132  
 Viedebant, O., 3, 123, 124  
 Vlasto, M. P., 80 n. 5
- WACE, A. J. B., 4 n. 1, 68 n. 5,  
 113 n. 6  
 Waning moon. *See* Moon  
*Wappenmünzen*. *See* Heraldic  
 coins  
 Weber, H., 79 n. 4  
 Weight systems. *See* Standards  
 Weights and measures, official, 70,  
 121 f.  
 reform of, 17  
 Weights from Sunium, 66 f., 70  
 Wheels, 24, 26 f., 33 ff., 135  
 amuletic, 135  
 evolution of, 26  
 magic, 34 f.  
 Wheel, solar character, 33 ff.,  
 135 n. 2  
 Whibley, L., 23  
 Whitelegs, 21, 80  
 Wilamowitz, 20 n. 4, 30 n. 4,  
 92 n. 4  
 Wilkinson, J. G., 2 n. 2, 5 n. 1  
 Wine-amphora, 13  
 Wine, export of, 13  
 Wolves, rewards for, 114 n. 6  
 Woodward, A. M., 121 n. 6
- XANTHIPPIUS, 96 n. 3  
 Xenophon, 129  
 Xerxes, 108, 125
- ZACYNTHUS, 76 n. 5  
 Zeus Karios, 85, 88 f.  
 Olympios, temple, 61  
 Zoilos, 67

PRE-SOLONIAN MINT

EUPATRID MINT



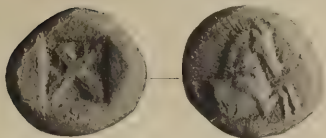
Ca. B. C. 610 - 595  
GROUP A § 5.

B. C. 594 - 562  
GROUP B §§ 12 to 21

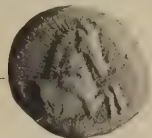


EUPATRID MINT

ATTIC MINT



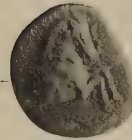
P 18



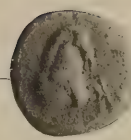
A 20



P 19



A 20



A 21



A 22



P 20



A 23



P 21



A 24



P 22



A 24



P 23



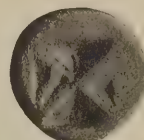
A 25



P 24



A 26



P 25



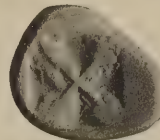
A 26



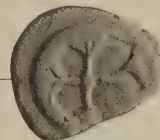
P 26



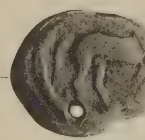
A 27



P 27



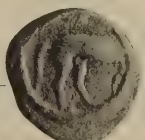
A 28



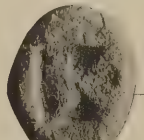
A 29



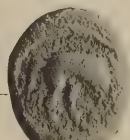
P 28



A 29



P 29



A 29



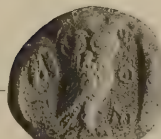
P 30



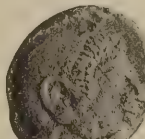
A 30



A 31



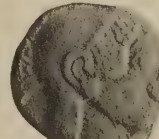
P 31



A 32



P 32



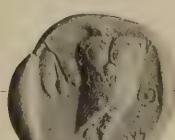
A 33



P 33



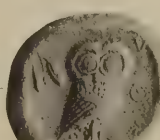
A 34



P 34



P 35



P 36



A 35



P 37

B. C. 594 - 562  
GROUP B §§ 21 to 25.

B. C. 561 - 556  
GROUP C § 28.



ATTIC MINT

EUPATRID MINT

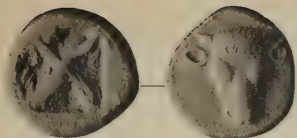


B. C. 561 - 556  
GROUP C § 28

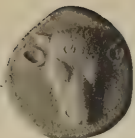
B. C. 560 - 546  
GROUP D §§ 32 to 35



EUPATRID MINT



P 57



A 51



P 58



A 52



P 59



A 53



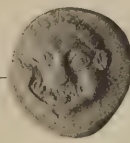
P 60



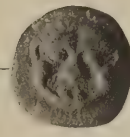
A 54



P 61



A 54



A 55



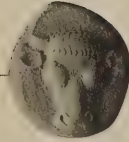
P 62



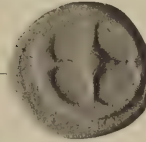
A 56



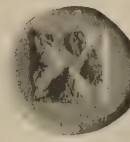
A 57



A 58



A 59



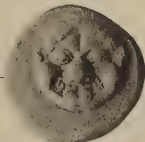
P 63



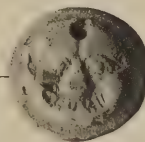
A 56



P 64



A 55



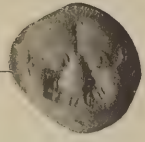
A 60



A 59



P 65



A 60



P 66



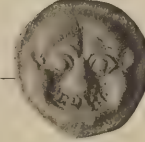
A 60



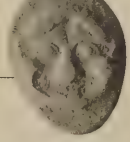
A 61



P 67



A 60



A 61



α



β



γ



δ



ε



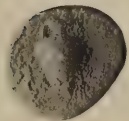
ζ



η



θ



ι



κ



λ



μ



ν



ξ



ο



π



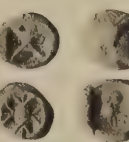
ρ



σ



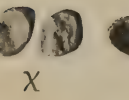
τ



υ



φ



χ



ψ



ω



αα



ββ



γγ



δδ



εε



ζζ

B. C. 560 - 546  
GROUP D §§ 33 to 37

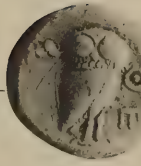
FRACTIONS  
§§ 5 to 36



PAEONIA



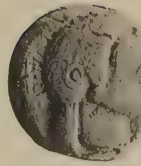
A 62



P 68



P 69



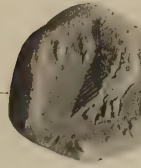
A 63



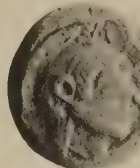
P 70



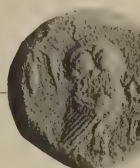
A 64



P 71



A 64 \*



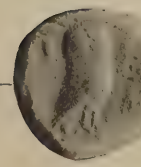
P 72



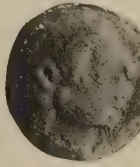
A 65



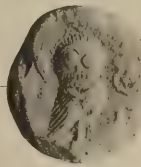
P 72



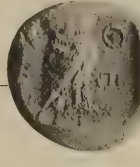
P 73



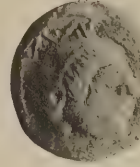
A 66



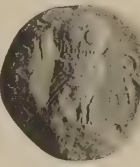
P 73



P 74



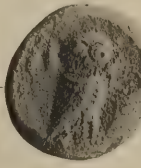
A 67



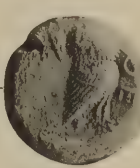
P 75



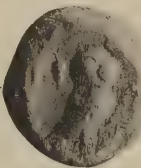
A 68



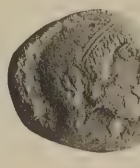
P 75



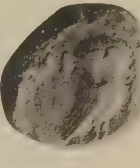
P 76



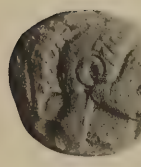
P 77



A 69



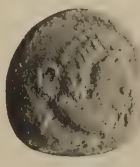
P 77



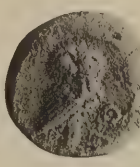
A 70



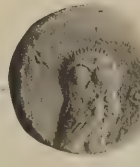
P 78



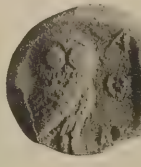
A 71



P 79



P 80



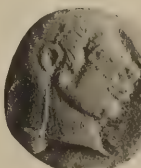
P 81



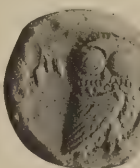
A 72



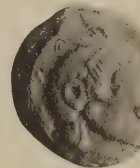
P 81



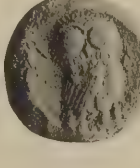
A 73



P 82



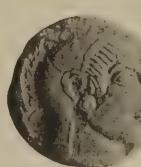
A 74



P 83



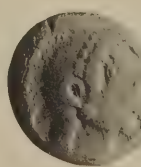
P 84



A 75



P 85



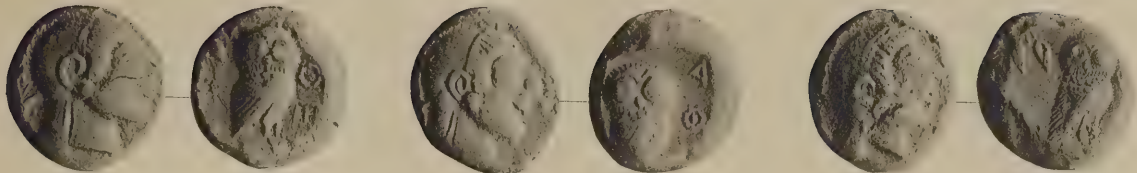
A 76



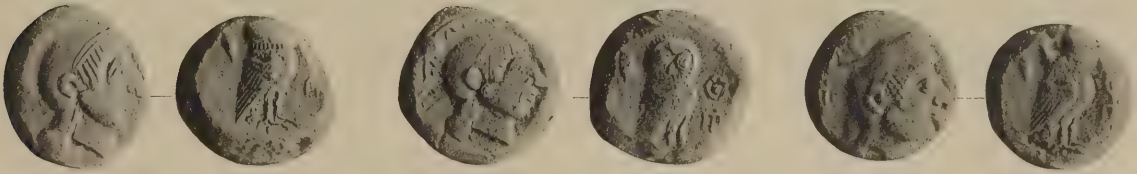
P 86



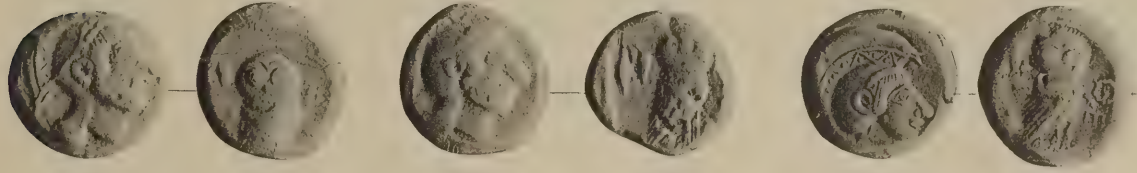
PAEONIA



A 77      P 87      A 78      P 88      A 79      P 89



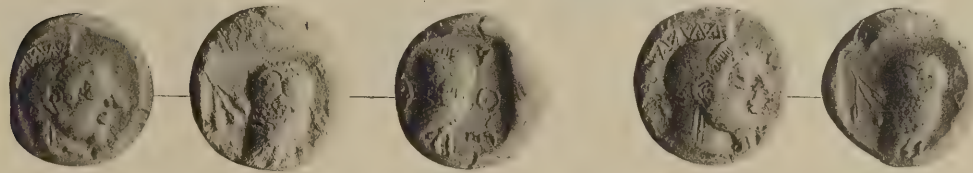
A 80      P 90      A 81      P 90      A 82      P 90



A 83      P 91      A 84      P 92      A 85      P 92



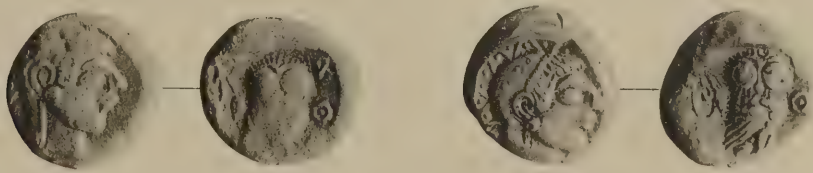
P 93      A 86      P 94      A 87      P 95



A 88      P 96      P 97      A 89      P 98



A 90      P 99      A 91      P 100      P 101      P 102

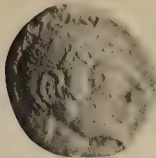


A 92      P 103      A 93      P 104



PAEONIA

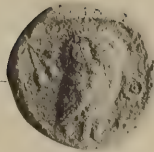
ATTIC MINT



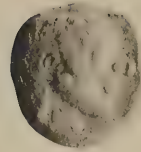
A 94



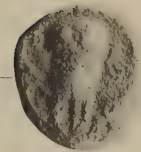
P 105



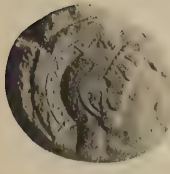
P 106



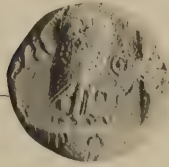
A 95



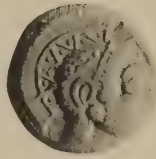
P 106



A 96



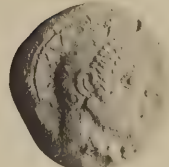
P 107



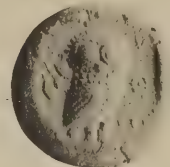
A 97



P 108



A 98



P 109



A 99



P 110



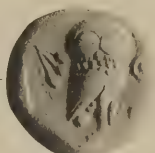
P 111



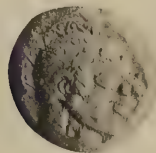
P 112



A 100



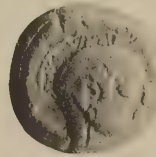
P 113



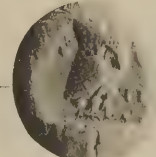
A 101



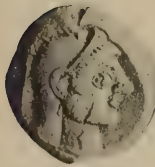
P 114



A 102



P 115



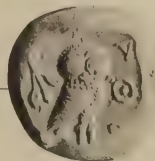
A 103



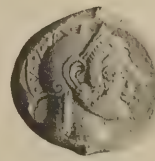
P 116



A 104



P 116



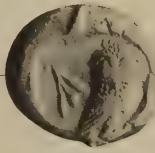
A 105



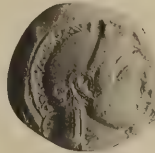
P 116



P 117



P 118



A 106



P 119



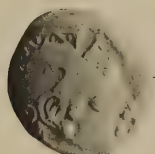
A 107



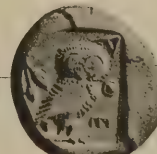
P 119



P 120



A 108



P 119



P 121



A 109



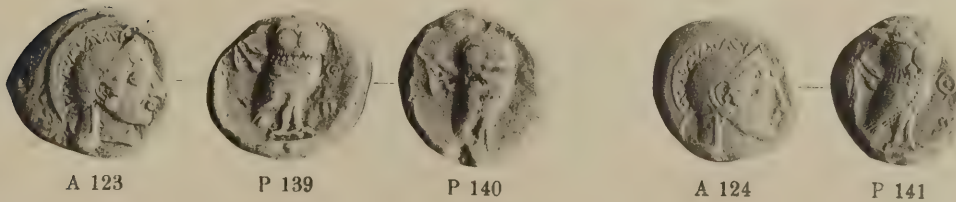
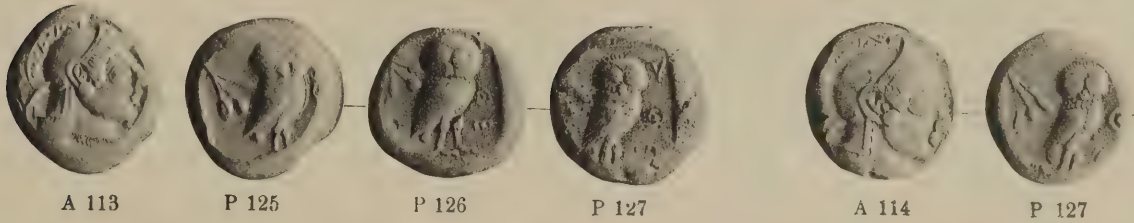
P 122

B. C. 546 - 536  
GROUP F § 46

B. C. 546 - 527  
GROUP Gi § 48



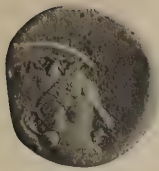
ATTIC MINT



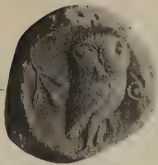
B. C. 546 - 527  
 GROUP Gi § 48.



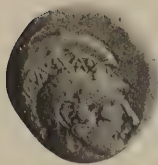
ATTIC MINT



A 125



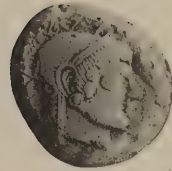
P 142



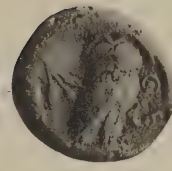
A 126



P 143



A 127



P 144



P 145



A 128



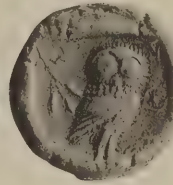
P 146



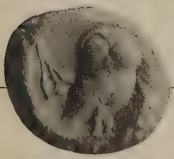
P 147



A 129



P 147



P 148



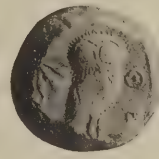
P 149



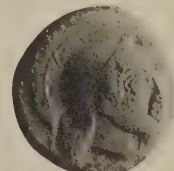
A 130



P 149



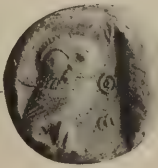
P 150



A 131



P 150



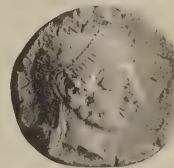
P 151



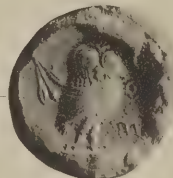
A 132



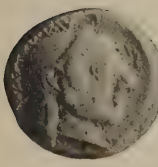
P 152



A 133



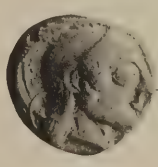
P 153



A 134



P 154



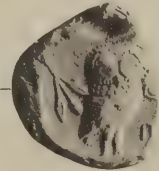
A 135



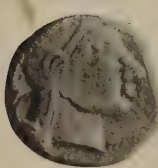
P 155



A 136



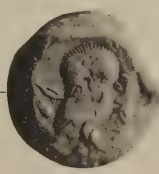
P 156



A 137



P 157



P 158



A 138



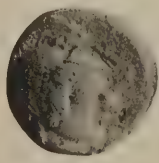
P 159



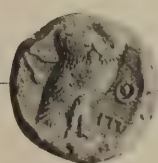
A 139



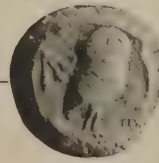
P 160



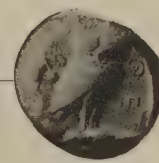
A 140



P 161



P 162



P 163



ATTIC MINT



A 141



P 164



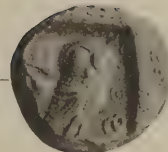
A 142



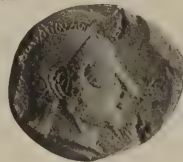
P 165



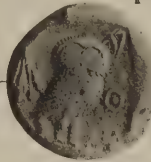
A 143



P 166



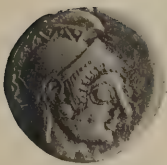
A 144



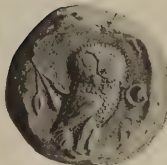
P 167



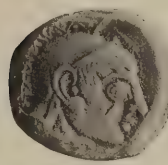
P 168



A 145



P 169



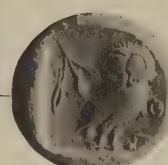
A 146



P 169



A 147



P 170



P 171



P 172



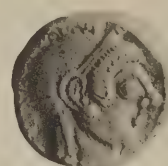
P 173



P 174



P 175



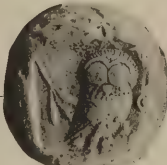
A 148



P 175



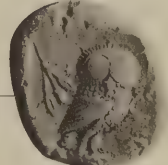
P 176



P 177



P 178



P 179



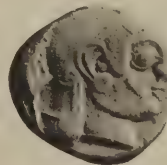
P 180



A 149



P 181



A 150



P 182



A 151



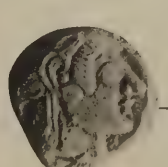
P 183



A 152



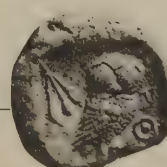
P 184



A 153



P 185



P 186



P 186\*

B. C. 546 - 527  
GROUP Gi § 48.

B. C. 527 - 510  
GROUP Gii § 50.



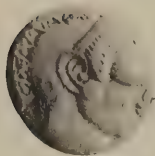
ATTIC MINT



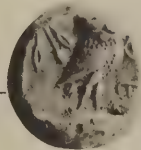
A 154



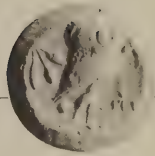
P 187



A 155



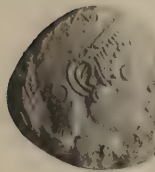
P 188



P 189



P 190



A 156



P 191



P 192



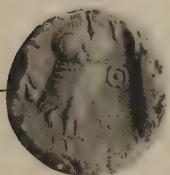
A 157



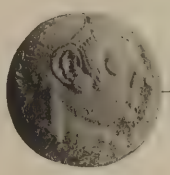
P 193



A 158



P 194



A 159



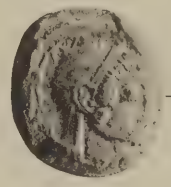
P 195



P 196



P 197



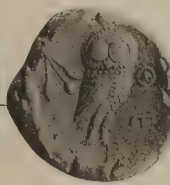
A 160



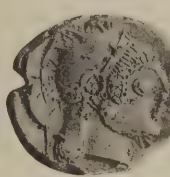
P 198



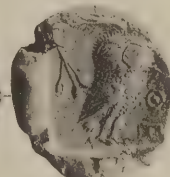
A 161



P 199



A 162



P 200



A 163



P 200



P 201



A 164



P 202



A 165



P 202



P 203



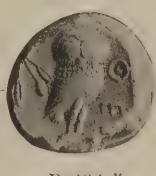
P 204



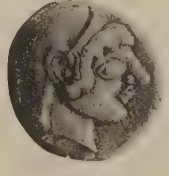
A 166



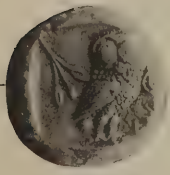
P 204



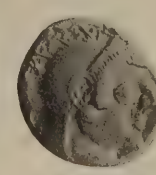
P 204 \*



A 167



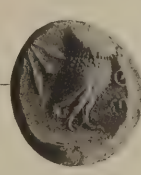
P 205



A 168



P 205



P 206



A 169



P 207



ATTIC MINT



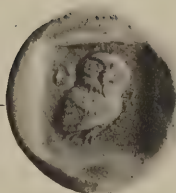
B. C 527 - 510  
 GROUP Gii § 50.



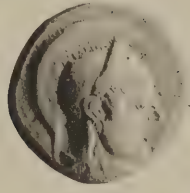
CIVIC MINT



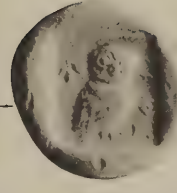
A 185



P 231



A 186



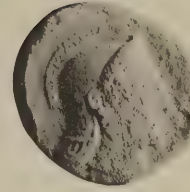
P 232



A 187



P 233



A 188



P 234



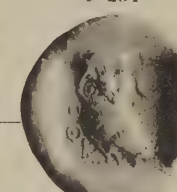
A 189



P 235



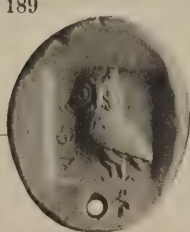
A 190



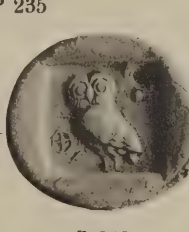
P 235



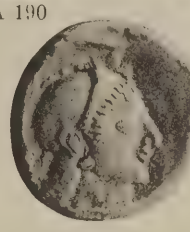
A 191



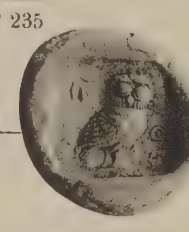
P 236



P 237



A 192



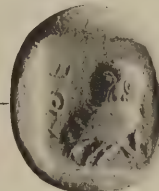
P 238



A 193



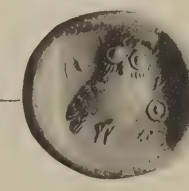
P 239



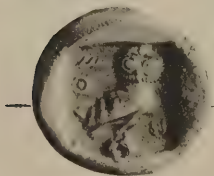
P 240



A 194



P 241



P 242



P 243



A 195



P 244



A 196



P 243



P 245



P 246



P 247

B. C. 527 - 514  
GROUP H § 55.



CIVIC MINT

DELPHI

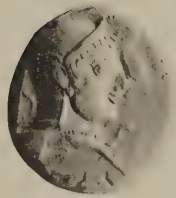
CIVIC MINT



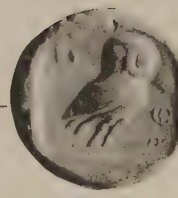
A 197



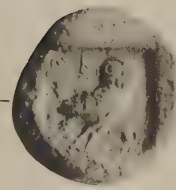
P 248



A 198



P 249



P 250



P 251



A 199



P 252



A 200



P 253



A 201



P 254



A 202



P 255



A 203



P 256



A 204



P 257



A 205



P 258



A 206



P 259



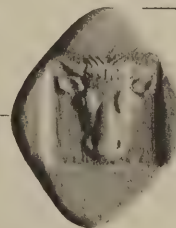
A 207



α



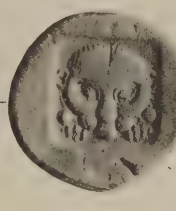
A 208



P 260



P 261



P 262



P 263



A 209



P 264



P 265



P 266



P 267



A 210



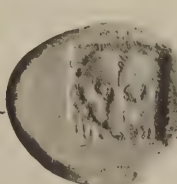
P 268



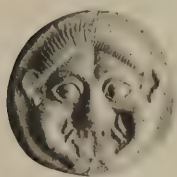
A 211



P 269



P 270



A 212



P 271



A 213



P 272

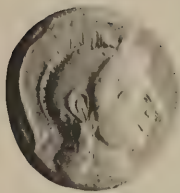
B. C. 514.  
GROUP H § 55.

B. C. 514 - 510  
GROUP J § 61.

B. C. 510 - 507  
GROUP K § 66.



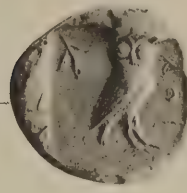
CIVIC MINT



A 214



P 273



P 274



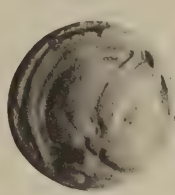
P 275



A 215



P 276



A 216



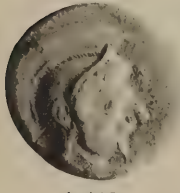
P 277



A 217



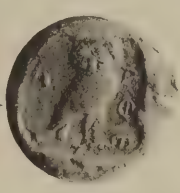
P 278



A 218



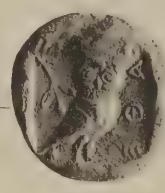
P 279



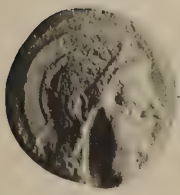
P 280



A 219



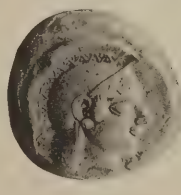
P 281



A 220



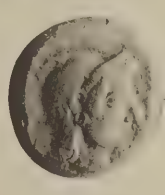
P 282



A 221



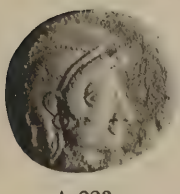
P 283



A 222



P 284



A 223



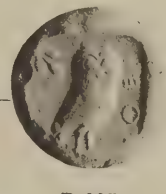
P 285



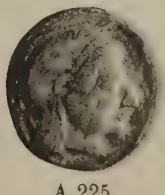
A 224



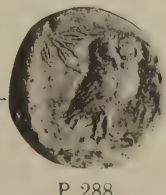
P 286



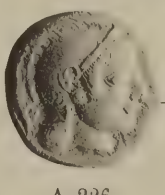
P 287



A 225



P 288



A 226



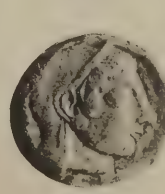
P 289



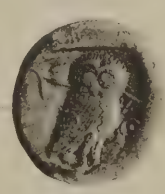
A 227



P 290



A 228



P 291



ATTIC MINT

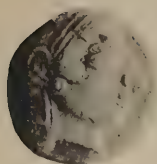


B. C. 506 - 490  
GROUP M § 76.

E<sup>ts</sup> Le Deley, imp., Paris



ATTIC MINT



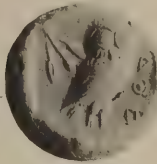
A 243



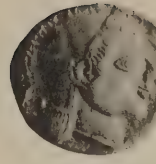
P 314



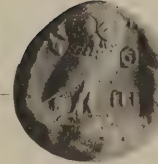
A 244



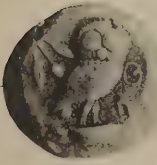
P 315



A 245



P 316



P 317



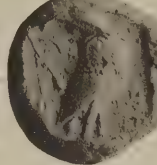
A 246



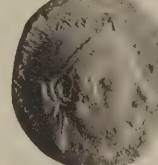
P 318



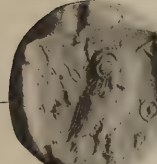
A 247



P 319



A 248



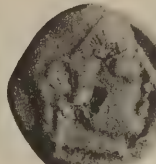
P 320



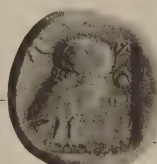
A 249



P 321



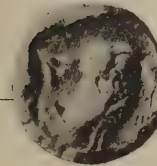
A 250



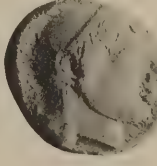
P 322



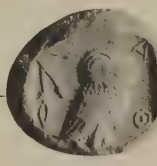
A 251



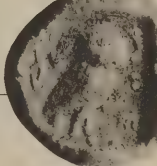
P 323



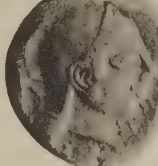
A 252



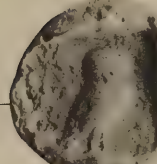
P 324



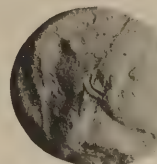
P 325



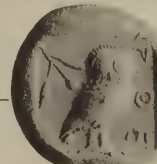
A 253



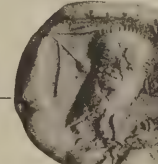
P 326



A 254



P 326



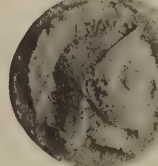
P 327



P 328



P 329



A 255



P 329



A 256



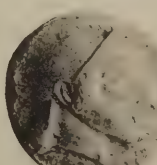
P 331



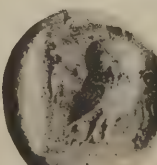
A 257



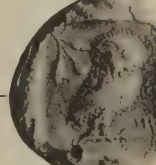
P 332



A 258



P 332



P 333



ATTIC MINT



A 259

P 334

P 335

A 260

P 336



A 261

P 337

A 262

P 338

P 339



A 263

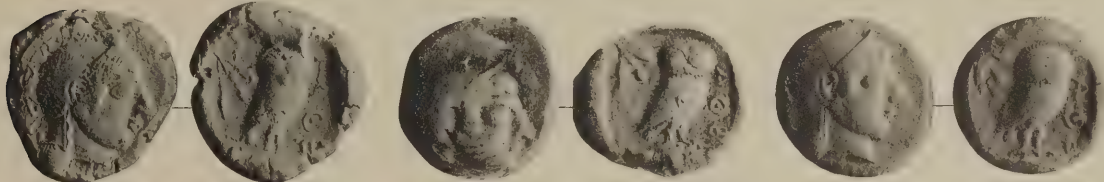
P 340

A 264

P 341

A 265

P 342



A 266

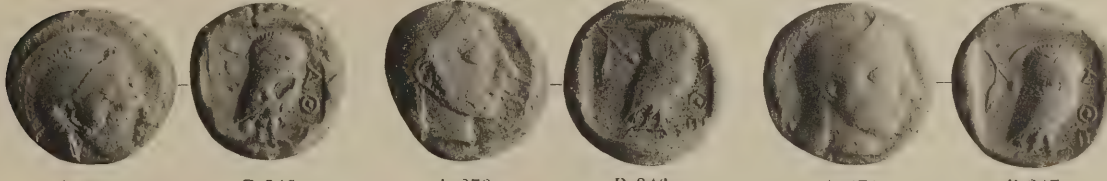
P 343

A 267

P 344

A 268

P 345



A 269

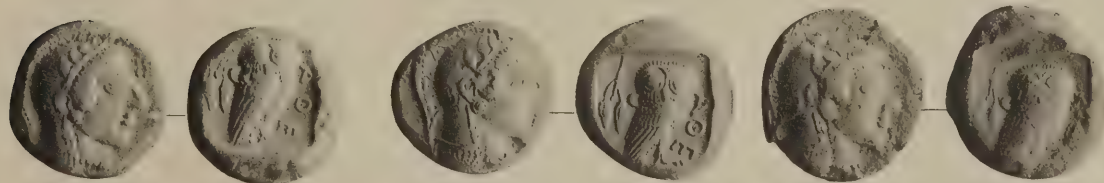
P 345

A 270

P 346

A 271

P 347



A 272

P 348

A 273

P 349

A 274

P 349



A 275

P 350

A 276

P 351

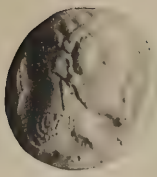
E<sup>ts</sup> Le Deley, imp., Paris.

B. C. 506 - 490  
GROUP M § 76.

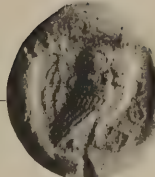
B. C. 490 - 480  
GROUP N § 79.



ATTIC MINT



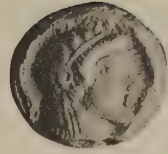
A 277



P 351



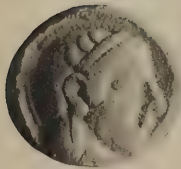
P 352



A 278



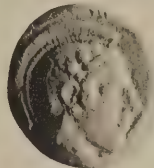
P 353



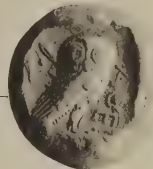
A 279



P 354



A 280



P 355



A 281



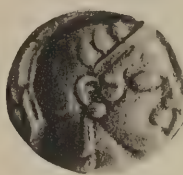
P 356



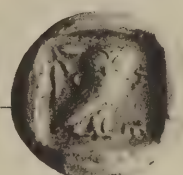
A 282



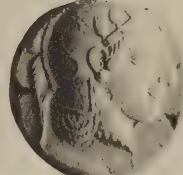
P 357



A 283



P 358



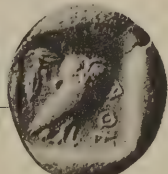
A 284



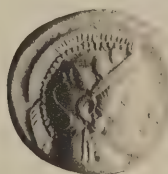
P 359



A 285



P 359



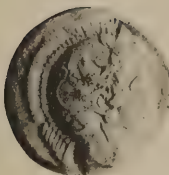
A 286



P 360



P 361



A 287



P 362



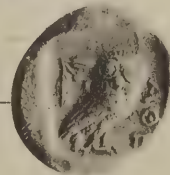
A 288



P 363



A 289



P 364



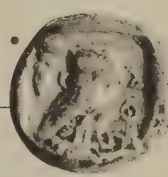
P 365



A 290



P 366



P 367



A 291



P 368



A 292



P 369



A 293



P 370



ATTIC MINT

CIVIC DOLE

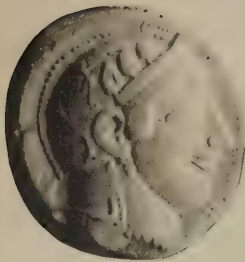


B. C. 490 - 480  
GROUP N § 79.

Ca. 486 B. C.  
GROUP O § 81.



CIVIC DOLE



A 303



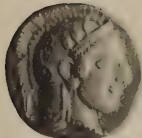
P 383



A 304



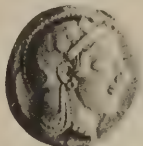
P 384



A 312



P 395



A 313



P 395



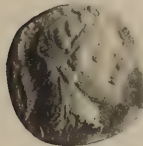
A 314



P 396



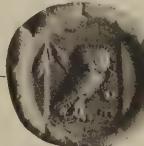
P 397



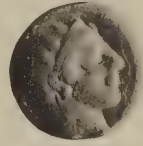
A 315



P 398



P 399



A 316



P 399



P 400



A 305



P 385



A 306



P 386



A 317



A 307



P 387



A 318



P 402



P 401



P 403



A 319



P 403



A 320



P 404



P 405

Ca. 485 B. C.

GROUP O § 81.

Ca. 484 B. C.



FRACTIONS



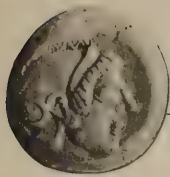
GROUPS, E (§ 41), G (§ 47), H (§ 56), K (§ 69), L (§ 75), M (§ 76), N (§ 79).



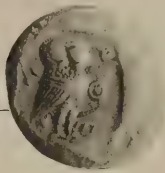
CLERUCHY

ANCIENT FORGÉRIES

BARBAROUS IMITATIONS



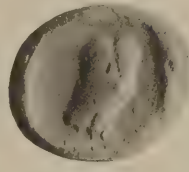
A 321



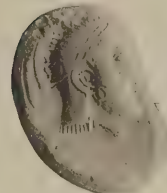
P 406



A 322



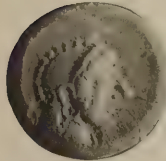
P 407



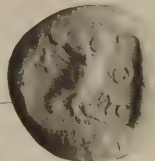
A 323



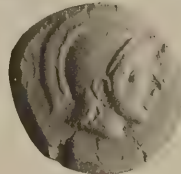
P 408



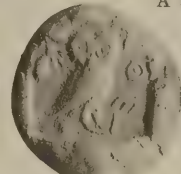
A 324



P 409



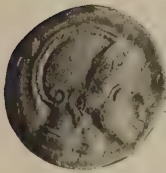
A 325



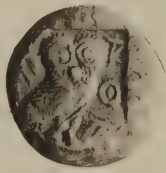
P 410



P 411



A 326



P 412



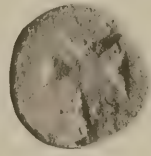
$\alpha$



$\beta$



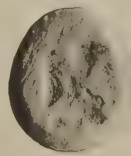
$\gamma$



1



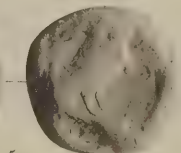
2



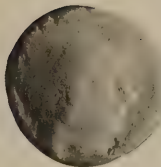
3



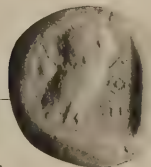
4



5



6



7



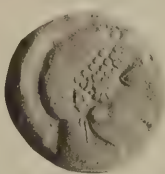
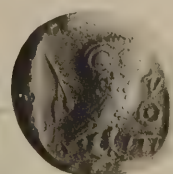
8



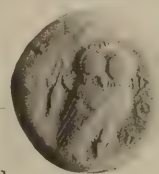
9



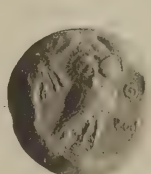
10



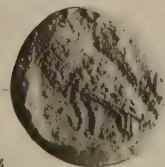
11



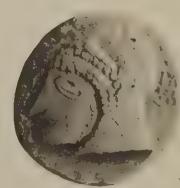
12



14



13



15



B. C. 506 to 490  
GROUP P § 77.

PLATED COINS  
1 to 9 § 104.

BARBARIANS  
10 to 15 § 41.



CHERSONESIAN MINT

COINS OF CARTHAEA











