





THE  
TEMPLE COINS OF OLYMPIA

BY

CHARLES T. SELTMAN

REPRINTED FROM »NOMISMA« VIII. IX. XI

WITH A FOREWORD

BY

SIR WILLIAM RIDGEWAY

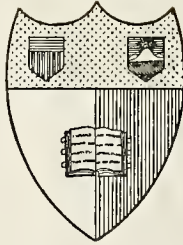
Sc. D., F. B. A., &c.

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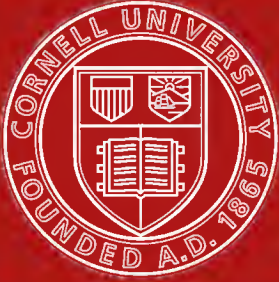
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TO MY WIFE



## FOREWORD.

In the following monograph Mr. Charles T. Seltman of Queens' College, Cambridge, has produced one of the most valuable contributions to the study of Greek numismatics, which has appeared for some years. It is not merely the results which he has obtained, but the method on which he has worked, that give its permanent importance to his book on „The Temple Coins of Olympia“.

The fame of the great Games at Olympia in honour of Pan-Hellenic Zeus has for generations attracted archaeologists and scholars to everything connected with Elis, and not least to its beautiful series of coins.

The chief articles dealing with the Elean series are (1) the paper by Professor Percy Gardner, (*Numismatic Chronicle*, 1879); (2) the section in the same writer's Introduction to the British Museum Catalogue of the Coins of Peloponnesus (1887) and (3) M. Babelon's Sections in Vol. I (1907) and Vol. III (1914) of the Second Part („Description Historique“) of his „*Traité des Monnaies Grecques et Romaines*“. Professor Gardner classified the series into fifteen periods according to the political history of the city, an arrangement approved of and followed by that eminent scholar and numismatist, the late Dr. B. V. Head, in his „*Historia Numorum*“; whilst M. Babelon in Vol. III (1914), in which he refers more than once to Mr. Seltman's Part I, follows the latter's ascription of the series to Olympia.

Mr. Seltman's study of the Elean coins first led him to doubt the received view that they had been struck at the city of Elis, then to make the elaborate researches here embodied, and finally to arrive at the conclusion that these great series of coins were issued from two mints, of which neither was at Elis, but both at Olympia. His wide induction, based upon the examination of over 850 specimens, and on the sequence and interchange of dies, has furnished a new and solid foundation for the chronology of the coinage. By this method, once the die-sequence is established, it has practically the value of a document not much inferior to that of an ancient text.

WILLIAM RIDGEWAY.



## PREFACE.

An interval of eight years has elapsed between the appearance of the first portion of this study of the Olympian coinage and the publication of the complete work. The two first parts were printed in 1913 and 1914 in „Nomisma“ VIII and IX; the third part, which was, like this book, to have emerged in the end of 1914, was indefinitely postponed by the War. It is the long delay that has occasioned a certain difference in the quality of the paper, pages 3 to 74 having been printed off before the War, the rest of the book since, when the same type of paper was no longer obtainable. A return to peace, and a home in Cambridge, have now enabled me to complete my study of the coins of Olympia.

Since 1913 there has come under my observation only one pair of dies of the Zeus mint as well as a single obverse die and a single reverse die employed in the mint of Hera, which I had not incorporated in the Plates (cf. Addenda et Corrigenda); but, by the kindness of M. Svoronos, I have had access to most valuable information concerning the clever fakes of a notorious forger, whose dies are now in the possession of the Athenian authorities. The older „Becker“ coins, or similar forgeries of wrong weight, (like the one figured in *Traité* II, 3, no. 1109, Pl. CCXXXII, 12) should deceive no one. But the almost fiendish skill of this modern coiner lies in the fact that he copies known dies with minute exactitude. M. Svoronos has sent me photographs of this „artist's“ work, among them his copies of Pl. IX, EFηκ and Pl. XI, EZ, FB, η, ι, which are admirable imitations; and I must confess to having myself fallen a victim to his deception in one instance. No. 129 (Pl. IV, [BK]βχ) is a modern fake, the work of this same forger, and not, as I believed, a coin struck in ancient times from the genuine die βχ recut. The dies for both sides of this coin are now in Athens. My plea must be that I had only seen plaster casts, not the coin itself; and that I have „erred in good company“; for M. Babelon, deceived as I was, has published it in his magnificent „*Traité*“ (II, 3, no. 1072, Pl. CCXXX, 12).

M. Babelon, the third volume of the second part of whose „*Traité*“ appeared in 1914, had seen my work on the mint of Zeus, but not this completed book, which includes the mint of Hera. Unfortunately he has, in his classification of the Olympian coinage, fallen into three somewhat serious errors. (1) He has failed to appreciate the fact that there are two mints. (2) He considers the question of die-sequence too difficult for solution, „les mêmes types se répètent, se copient, se

modifient, se croisent et s'enchevêtrent d'une inextricable façon". (3) He still places his trust solely in that most deceptive criterion — Style, „le classement chronologique des monnaies olympiques des Éléens est extrêmement difficile parce qu'il ne peut reposer que sur l'appréciation du style" (Traité II, 3, columns 703 f.).

The existence of the separate Zeus and Hera mints is elucidated in the following pages and plates. As to die-sequence, it is hardly too much claim that Regling in his „Terina" (Berlin 1906), Tudeer in his „Tetradrachmenprägung von Syrakus" (Zeitschr. f. Num. XXX, 1913), Newell in his able work on the Alexander coinage (Amer. Journ. Num. 1919, 1920), and the present work on the coins of Olympia have succeeded in establishing fixed series of die-sequences which amount to „documents". Speculations in style cannot disarrange such facts. M. Babelon greatly overrates the difficulties of a scientific arrangement of die-sequences, which prove to be anything but „inextricable". Style, indeed, can never hold its own against the evidence of documents, inscriptions or the spade; since there is too much of the personal element about it, its sole gauge being the judgment and opinion of an individual. Was it not on grounds of style that the opponents of Schliemann pronounced the Treasures of Troy and Mycene to be Phoenician, and even Byzantine?

By some misconception M. Babelon (columns 704 f.) accuses me of placing the coins with the legend ΟΛΥΝΠΙΚΟΝ some time later than B. C. 472, when the first with this legend has actually been dated 471 B. C. (cf. p. 13 below). At the same time he suggests that the palaeography of the legend is against my dating. In its support I need merely refer to the inscription on a bronze tablet from Olympia („Olympia", vol. V, p. 45, no. 17) which, having a four-stroke ξ, can be dated as late as the end of the 5th century B. C., and which has letters in shape identical with those on the coins. It is only my respect for M. Babelon's knowledge and scholarship that has induced me to discourse at some length on the errors into which he has fallen.

The compilation of these Mint-series from dies has been a work of great interest. One fact has emerged, at least; we must abandon the old notion, which still tends to prevail, that one rarely meets with more than one Greek coin struck from each pair of dies. In the mint of the Temple of Hera, of which I have reviewed 349 specimens of staters, there is but a single coin recorded that stands unrelated to any other coin; in every other instance one die of each coin is paired with at least two different fellow-dies — obverses or reverses. Isolated pairs of dies are also of great rarity in the mint of Zeus, if we except the first period (Group A, Pl. 1) of which comparatively few coins have been found. Making this exception, we find among 207 die-combinations (482 specimens) only 22 isolated pairs of dies, while 7 of these 22 are represented by more than one specimen.

My Father has, throughout a large part of my work, been a keen counsellor and adviser. It is to him I owe my interest in Greek numismatics, an interest which has been intensified by my studies under Professor Sir William Ridgeway. My special thanks are due to Dr. H. Gaebler for his invaluable assistance while editing my work on its first appearance in „Nomisma"; and to Mr. A. B. Cook of my own College, to whom I owe all a pupil can owe to a brilliant and sympathetic teacher, I am grateful for the facilities he has afforded me of studying the

manuscript of his work on „Zeus“. My indebtedness is likewise great to the Keepers and Curators of the coin collections in the Museums of Athens, Berlin, Boston, Brighton, Brussels, Budapest, Cambridge, Copenhagen, Glasgow, Gotha, the Hague, London, Milan, Munich, Naples, New York, Paris, Petrograd, St. Florian Stift, Stockholm and of Vienna, as well as to the many private collectors, whose names are set out in the following pages, for supplying me with plaster casts and weights of their coins of Olympia.

CHARLES T. SELTMAN.

Queens' College, Cambridge.  
April 1921.

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## THE TEMPLE COINS OF OLYMPIA.

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### Introduction.

It is only after a very careful study of the matter that I have assigned the coins usually spoken of as Elean to Olympia. Most of those who have dealt with the coins have spoken of them as coins of Elis and have tried to connect them with the history of that city, rather than with the history of Olympia. But I am convinced, after cataloguing about 850 staters, that the only tenable conclusion is the one propounded by Hill<sup>1</sup>): „It is not strictly accurate to speak of the coinage of Elis, as if it were a single city state. It should not be forgotten that the coinage of the Eleans was especially connected with Olympia, and probably had more of the character of a temple-coinage than any other considerable series known to us“.

Five reasons may, I think, be given for assigning the coinage of the Eleans to the temple mints of Olympia.

1) The early date of the first coins of the Eleans. The city of Elis was founded in 471 B. C. If the coins are treated as emanating from the mint of that city, the earliest must be placed as late as 471 B. C., as has been done only lately by Dr. Head (*Historia Numorum*<sup>2</sup>, p. 419). The two coins of Chalcis in Euboea figured on Plate VIII, 1 and 2 afford an interesting parallel to the earliest coins of the Eleans. The earliest Elean piece (Pl. I, A $\alpha$ ) has an eagle without a serpent, the next (Pl. I, B $\beta$ ) one with a serpent. The same happens in the case of the Chalcidian pieces Pl. VIII, 1, 2. Now a definite limit can be fixed for the latter coins, none having been struck later than B. C. 507, when the Athenians conquered Chalcis<sup>2</sup>). Probably they may be put a good deal earlier. And it seems only reasonable to place the first coins of the Eleans well before 500 B. C. M. Babelon (*Traité II*, 1, columns 887—890) has even gone so far as to place two pieces (Pl. II, AB $\alpha$  and Pl. III, AQ $\beta$  $\gamma$ ) which I have felt obliged to put at the beginning of my second and third periods as early as 500 B. C. This would throw back the earliest coins too far into the sixth century. But we may safely say that 510 B. C. is not too early a date for the first coins of the Eleans.

2) The second reason for assigning them to Olympia is the consideration of the overwhelming need there would be to have coinage and a mint at hand in the Altis.

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<sup>1</sup>) *Historical Greek Coins* (1906), p. 77, together with footnote 2.

<sup>2</sup>) Herod. V, 77. Cf. Babelon, *Traité II*, 1 (1907), columns 672 ff.; Head, *Hist. Num.*<sup>2</sup>, p. 358.

Writers on the numismatics of a Greek city not unfrequently forget to take into account the political or the economical conditions of the place they are dealing with. The religious, the national — and therefore the commercial — importance of Olympia cannot be overestimated<sup>1)</sup>. It was literally the „hub of Hellas“. Of course there was the great festival every four years (a festival to which the coin types of Sicilian cities, of Macedonian kings, even of distant Cyrene, seem to refer). But there must also have been a daily stream of pilgrims visiting the temple of the Great God of the Greeks, the father of gods and men. Of these thousands of yearly pilgrims only a few would pass through Elis, a hill fortress surrounded by a town<sup>2)</sup>, some 22 miles distant. But at Olympia itself money — and therefore a mint — was needed daily. At Olympia itself the priests made profit on the exchange of Attic, Aeginetan, or Corinthian money for Elean. And at Olympia, the religious, the artistic centre of Hellas, the priests issued, what many will agree with the writer in calling, the most uniformly beautiful coinage of the Greeks.

3) Olympia is directly referred to on three dies of those so far known to us of the coinage of the Eleans. First there is the coin mentioned above (Pl. II, ABα with a striding figure of Zeus and the inscription  $\Lambda\Theta\Omega\Gamma\Upsilon\Upsilon\Lambda\Theta$ . From a careful study of the three known specimens from the same dies I have convinced myself that the obverse of this coin bears the inscription  $\Lambda\Theta\Gamma\Upsilon\Lambda\Upsilon$  around the eagle. Secondly, there is the „restitution“<sup>3)</sup> of this piece (no. 73; Pl. III, AQBγ) which, on account of the two advanced obverse dies used with the reverse, I would place in the subsequent period. Thirdly, there is the stater, struck probably directly after the Eleans had regained control of the Altis in B. C. 364, with  $\Phi\Lambda\Upsilon\text{ION}$  before the head of Zeus on the obverse and  $\text{O}\Lambda\Upsilon\text{M}\Pi\text{IA}$  before the female head on the reverse. Each of these coins falls so naturally into its place in the whole series that we cannot give them to a separate mint from the rest. The simple explanation is that all the Elean coins were minted at Olympia.

4) The types of this coinage refer exclusively to the great deities of Olympia, not of Elis. Pausanias (VI, 24, 6 ff.) gives a list of the temples of the city of Elis. They were dedicated to Apollo ( $\text{Ἄρῆσιος}$ ), Hades, Dionysos (containing a statue by Praxiteles), Aphrodite ( $\text{Ὀβρῶν}$ ), Athena (the two latter containing statues by Phedias), and some minor deities. But Zeus and Hera had no sanctuaries in the city. This brings us to my fifth reason for assigning the series to Olympia.

5) The coins were issued from two mints: one most probably situated in the precincts of the temple of Zeus, the other, opened only towards the end of the fifth century, in the precincts of the temple of Hera; the first issuing coins whose types refer entirely to Zeus, the second striking pieces whose obverses regularly bear the head of Hera. It would probably be very difficult to find another series

1) Cf. Gardner, Num. Chron. 1879, p. 232. Pausanias devoted one fifth of his whole work to the description of Olympia only.

2) After 471 B. C. Before that date only a fortress.

3) Deliberate „restitutions“ of famous earlier types occur among Greek coins, though much less often than among Roman. One example is the

small gold piece of Syracuse with obv. head of young Heracles, rev. a restitution of the eagle-tetradrachm of Syracuse with head of nymph centre of quadripartite incuse square. Other restitutions, in the Elean coinage, are the light drachms with types of the staters of the first three periods, cf. Pl. VIII, 33—35.

ancient coins whose dies interlace to such an extent as the dies of the coinage of the Eleans. In two cases we have one reverse die being used with five different obverses; in another case, one obverse die using twelve different reverses. Yet not once among all the staters I have got together for this work (nor among all the smaller pieces I have examined) have I found a Zeus obverse with a Hera reverse, or a Hera obverse with a Zeus reverse, while the crossing of dies within each separate mint is incessant. Therefore, unless a „mule“ turns up which has one die from the Zeus mint and one from the Hera mint, thereby supplying an argument against the existence of two mints, this same existence of the two mints furnishes us with the crowning reason for assigning the coins to the temple mints of Olympia. For the types of each mint correspond to the temples there; the principal mint to the great temple<sup>1)</sup> of Zeus Olympios, the lesser mint to the temple, second in importance, of Hera.

Incidentally the recognition of the existence of these two mints at Olympia solves the whole problem of the chronology of the coinage of the Eleans and makes it comparatively simple and straightforward. The whole difficulty of placing the series with the heads of Hera vanishes. Professor Gardner in his work on Elis (*Num. Chron.* 1879, pp. 221 ff.) placed the earlier ones about B. C. 420—400. Then after a gap of 38 years he put in a few more, and finally arranged the remainder in the period B. C. 312—271. This arrangement, of course, necessitated a corresponding chopping up of the series with the heads of Zeus. Dr. Head in the new edition of *Historia Numorum* (p. 423) has tried to modify this splitting up of the series with the heads of Hera. But this has resulted in compressing a series, of which I have been able to catalogue 77 varieties of staters alone, into a period of some 35 years. Moreover these same 35 years, according to this arrangement, would separate from each other obverses with the head of Zeus which actually share reverse dies between them. Clearly, the difficulties of chronology are great. But once grant the existence of two mints at Olympia — mints corresponding with the two chief temples there — and the difficulties vanish. The two coin-series move smoothly along side by side, while the chronology of each of them unfolds itself by the sequence of its die-combinations.

There is only one event in the history of Olympia that has left a definite mark upon its coinage: the famous seizure of the Altis by the Pisatans in conjunction with the Arcadians in B. C. 364, the year of the 104th Olympiad. From this event we have to try to lead our chronology backwards as well as forwards. Except for that date, then, the dates which I give in the following list are merely approximate and tentative. Each „group“, A, B, C etc., contains a certain number of staters, all, in fact, that I have been able to record. The dies of the staters within each group are (or, as future finds occur, may conceivably be) found to be interchangeable.

<sup>1)</sup> Archaeologists now seem agreed in ascribing the great Doric temple of Zeus to the period immediately after the Persian Wars. But whether Pausanias was right or wrong in telling of the temple as begun by the architect Libon in the first half of the previous century, there must,

of course, have existed a great altar to Zeus Panhellenios (or Olympios) since the institution of the games; and it is immaterial for our purpose whether the Zeus mint was at first attached to the temple, or the altar of the god.

Thus each group stands by itself. I feel confident that there can be little doubt as to the correctness of the sequence of groups that I have adopted. Of course the arrangement of the different pieces within each group may be open to correction if future finds bring to light new die-combinations<sup>1)</sup> that call for a „re-shuffle“.

Mint of the temple of Zeus				Mint of the temple of Hera		
Group	ca. B. C.	Staters recorded	Gold (for the Pisatans)	Group	ca. B. C.	Staters recorded
A	510—471	33	2 denominations	{ E <sup>1</sup> E <sup>2</sup> GH <sup>1</sup>	421—385 385—365 364—323	48 17 60
B	471—452	37				
C	452—432	55				
D	432—421	15				
E	421—365	32				
F	364	—				
G	364—343	27				
H	343—323	12				
J	323—271	15				
K	271—191	11				
L	191— ?	2				

From the above it will be seen that I have treated the mint of the temple of Hera as having been opened approximately about 420 B. C., and as having been closed probably during the reign or about the time of the death of Alexander the Great. My reasons for tentatively assigning these dates are given under groups E<sup>1</sup>, E<sup>2</sup> and GH<sup>1</sup>. In the above table groups E<sup>1</sup> and E<sup>2</sup> are reckoned as being contemporary with group E; group GH<sup>1</sup> with groups G and H.

In the following text I deal with the whole of the staters issued from the temple mint of Zeus first: groups A—L; then with the staters issued from the temple mint of Hera: groups E<sup>1</sup>, E<sup>2</sup> and GH<sup>1</sup>.

The staters of Olympia are far more numerous than their fractions, which generally simply reproduce the types of the bigger coins. And since the staters were by far the most important, it seemed to me to be sufficient to place staters only on the plates. Reference will, however, be found under each group to the fractions of the period, and where these are of sufficient importance, their photographs will be shown on Plates VIII and XII.

The method of „labelling“ that I have adopted needs some explanation. Obverse dies are named with Latin capitals A, B, C etc. . . DA, DB, DC etc.; reverse dies with Greek small letters  $\alpha$ ,  $\beta$ ,  $\gamma$  etc. . .  $\delta\alpha$ ,  $\delta\beta$ ,  $\delta\gamma$  etc. Each die-combination or „coin“ has a definite number; thus A $\alpha$  is no. 1, BK $\gamma\epsilon$  is no. 133. Then, where several specimens of a certain die-combination exist, they are lettered a, b, c, d etc.

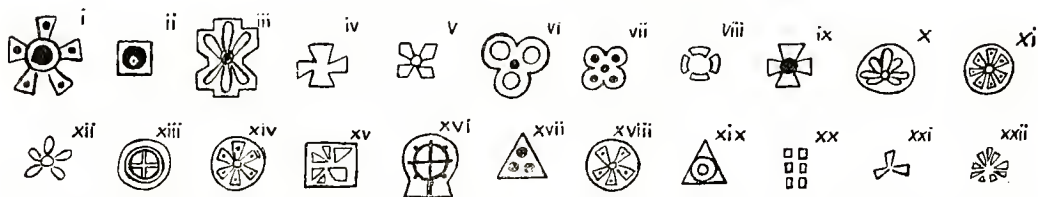
<sup>1)</sup> Of course I have been guided, wherever possible, by signs of dies wearing. When a die is more

worn when used with one obverse than with another, then that obverse is later than the other.

Thus no. 133,a is the Berlin specimen, 133,b is Sir Arthur Evans', 133,c is Monsieur Jameson's, 133,d and 133,e the British Museum specimens, etc. On the plates each die is marked with its name-letters. The obverse die is placed first and followed by all the different reverse dies that occur with it, they being joined to it by lines. Each obverse die is only plated once, but reverses are in many instances repeated, since they recur with other obverses. By this arrangement every known die-combination is recorded upon the plates. Such a scheme seems to me to be of greater scientific value than the plan of placing obverses alone on one set of plates, reverses alone on another set. In the catalogue portion of each group it is easy to see which individual piece is the one plated, since the plate reference is placed in brackets just after the small letter of the individual piece, thus: a (Pl. I, G $\eta$ ). Berlin. But, when only the reverse of a particular piece is figured on the plate, then the name-letter of the obverse die is enclosed in square brackets, e.g.: a (Pl. I, [G]  $\vartheta$ ). Berlin.

### Countermarks.

#### a) Geometrical and floral (enlarged):



b) The following countermarks also occur on staters, all in incuses of more or less circular form, except the bunch of grapes which is in an incuse square, and the F which is itself incuse. After many I have ventured to suggest in brackets a Peloponnesian or Island mint, which may have stamped on the countermark. Whether the countermarks are really official stamps of cities, or merely tradesmen's and bankers' tokens, will perhaps remain an unanswered question. After each countermark I give the numbers of the coin or coins in the following catalogue on which it occurs.

Sea-turtle (Aegina) 26. 58. 69,e. 115.	89, b. 93, e. 99. 120, b. c. 123, d. 126. 133, e. 136, a. b. 137, b. 140, c. 152, b. 154, e.	Bull's head l. 21.
Horse's head l. (Cleitor) 185.	Corinthian helmet l. (Tegea) 45.	Calf's head l. 16.
Lion's head r. (Cleonae) 8, a. 28.	76, b. 77, c. 80, a. 86, b. 89, b. 105. 115. 119, c. 124, h.	Mule's head l. 8, a. 54, b.
Bunch of grapes (Corone) 82. 133, a. 168, d. 172, e.	Owl l., head facing (Tegea) 86, e. 93, e. 133, e. 140, a. e.	Mule's hind-foot r. 86, b. g. 92, b. 97. 99. 103. 119, c. 126.
Athenian helmet r. (Cranii) 25, b.	Head of Apollo (?) r. 8, a. 101, a.	Crab 28. 37, a. 59, b. 61, a. 102. 104. 118, b. 119, a. c. 120, a.
F (Elis) 161, a. b.	Head of Heracles (?) r. 2.	Scorpion 92, a. 97. 120, e. 134, a. 136, e. 140, e. 154, f. h.
E (Epidaurus) 88, b.	Hand 8, a. 19, a. 33, d. 102. 120, a. 123, d. 124, g. 125, c.	Bipennis 92, b. 133, d.
Bear walking l. (Mantineia) 77, c.	Scrotum with pubes and penis 28. 63. 78, a. 82. 133, b. 141, c. 155, d. 157, b. 168, c.	Lyre 25, b. 58.
Acorn (Mantineia) 124, k. 125, c.		Rosette with six petals 25, a.
Eagle standing l. (Olympia) 19, a. 59, a.		Shield (?) 5. 8, b.
Gorgoneion (Tegea) 4, b. 48. 51, b. 70. 76, b. c. 80, a. 86, e. 88, c.		Star with six rays 148, h.
		Triskeles 8, a. 35. 72.

This apparently very large number of countermarks is actually the product of a comparatively small number of countermark-dies, as the following list shows. The first number after each countermark tells the number of dies recorded with that particular device, while the second number, in brackets, tells how many times altogether the device occurs.

	dies		dies		dies
Sea-turtle (Aegina)	2 (4)	Gorgoneion (Tegea)	3 (23)	Mule's hind-foot r.	2 (8)
Horse's head l. (Cleitor)	1 (1)	Corinthian helmet (Tegea)	1 (10)	Crab	1 (11)
Lion's head r. (Cleonae)	1 (2)	Owl l., head facing (Tegea)	1 (5)	Scorpion	1 (8)
Bunch of grapes (Corone)	1 (4)	Head of Apollo (?) r.	1 (2)	Bipennis	1 (2)
Athenian helmet (Cranii)	1 (1)	Head of Heracles (?) r.	1 (1)	Lyre	2 (2)
F (Elis)	2 (2)	Hand	2 (8)	Rosette with 6 petals	1 (1)
E (Epidaurus)	1 (1)	Scrotum with pubes & penis	1 (9)	Shield (?)	1 (2)
Bear l. (Mantineia)	2 (2)	Bull's head l.	1 (1)	Star with six rays	1 (1)
Acorn (Mantineia)	? (2)	Calf's head l.	1 (1)	Triskeles	1 (3)
Eagle l. (Olympia)	1 (2)	Mule's head l.	1 (3)		

Exact details as to the recurrence of countermark-dies are given in the catalogue. These data show for how long a time many of these Olympian staters must have circulated. As specially remarkable cases note that the same gorgoneion-die (the first of the three recorded) has been struck upon staters so far apart in date as no. 4, b and no. 120, b; the hand (first die of the two recorded) occurs on no. 8, a and no. 123, d; the hand (second die) on nos. 19, a and 125, c; the crab on nos. 28 and 120, a; the Corinthian helmet on nos. 45 and 124, h; the gorgoneion (second die) on nos. 48 and 140, c; the bunch of grapes on nos. 82 and 172, e.

### Group A (Series I—IV).

ca. B. C. 510 (or earlier) to ca. B. C. 471.

Summary of staters:

Obverse dies 23 (A—X). Obverse dies using more than one reverse 7.  
 Reverse dies 29 ( $\alpha$ — $\alpha\epsilon$ ). Reverse dies used with more than one obv. 3.  
 Coins 33. Number of specimens recorded 45.

Series I (Obverse dies A, B).

1. (A) Obv. Eagle flying r. horizontally; wings, one above, the other beneath the body, bent back towards tail, shoulders dotted, band across wings, two rows of feathers; fan-like tail.
- ( $\alpha$ ) Rev. F|A Thunderbolt; wings above curling outwards, dotted at shoulders, one row of feathers; volutes below curling outwards; three mouldings around handle; six wavy flame-lines above, seven below. Incuse circle.  
a (Pl. I, A $\alpha$ ). Jameson, Paris: 11,92 g (184,0 grains). — Countermarks on obverse 2.
2. (B) Obv. Eagle similar; but in claw serpent r., passing over tail and neck and held in beak.
- ( $\beta$ ) Rev. F|A Similar thunderbolt; but a short curling tendril springing upwards from each volute; three mouldings around handle; three wavy flame-

lines on either side of central dart above and below respectively. Incuse circle.

- a (Pl. I, Bβ). London: 11,80 g (182,2 grains); B. M. C. Pelop. 3, Pl. X, 3; B. M. Guide<sup>2</sup> Pl. 14, 26; Num. Chron. 1879, Pl. XI, 1a; Lambros, Peloponnesos (Athens 1891), Pl. E, 1; Babelon, *Traité* (1907), Pl. XXXIX, 3; Head, *Hist. Num.*<sup>2</sup> (1911), p. 419, fig. 224. — Countermark on obverse: on tail, bearded head of Heracles (?) r.

Series II (Obverse dies C—O).

3. (C) Obv. Eagle flying l. horizontally; wings, one above, the other beneath body, bent back towards tail, shoulders dotted, band across wings, one row of feathers; fan-like tail; in claw serpent l., passing over tail and neck and held in beak.  
(γ) Rev. F|A Thunderbolt; wings above curling outwards; volutes below curling outwards; three mouldings around handle; three wavy flame-lines on either side of central dart above and below respectively. Incuse circle.  
a (Pl. I, Cγ). Cat. Egger XL, May 1912 (Prowe), Pl. XX, 1111: 11,80 g (182,1 grains). — Countermarks on obverse (7): nos. I, VII, and 5 others.
4. (D) Obv. Similar; serpent striking at eagle's eye.  
(δ) Rev. F|A Similar; but one straight and one curling tendril springing from each volute. Incuse circle.  
a (Pl. I, Dδ). Boston: 12,05 g (186,0 grains); Regling, Cat. Warren, Pl. XXI, 906.  
b. London: 11,81 g (182,3 grains); B. M. C. Pelop. 1, Pl. X, 1. — Countermarks on obverse (2): gorgoneion (same die as on nos. 51, b. 120, b) and another.
5. (E) Obv. Similar as on no. 3.  
(ε) Rev. F|A Thunderbolt; volutes above curling outwards; wings below curling outwards; three mouldings around handle; eight wavy flame-lines above, seven below. Incuse circle.  
a (Pl. I, Eε). Diez, Dresden-Loschwitz: 11,24 g (173,5 grains); Cat. Hirsch XXV (Philipsen), Pl. XV, 1242. — Countermarks on obverse (2): shield (?; same die as on no. 8, b) and another.
6. (F) Obv. Similar; serpent striking at eagle's eye.  
(ζ) Rev. A|Γ Thunderbolt; wings above curling outwards, dotted at shoulders, one row of feathers; volutes below curling outwards, two tendrils springing from each; three mouldings around handle; three wavy flame-lines on either side of central dart above and below respectively. Incuse circle.  
a (Pl. I, Fζ). Brussels: 11,82 g (182,4 grains), formerly Baron Hirsch.
7. (G) Obv. Similar; serpent striking at eagle's upper shoulder.  
(η) Rev. F|A Thunderbolt; wings above curling outwards, with two rows of feathers; volutes below curling outwards; three mouldings around handle; six flame-lines above, five below. Incuse circle. Cf. no. 26.  
a (Pl. I, Gη). Berlin: 11,95 g (184,4 grains). — Countermarks on obverse 4 or 5.
8. (G) Obv. Same die.  
(θ) Rev. >|Γ Similar thunderbolt; but two tendrils springing from each volute; three mouldings around handle; two wavy flame-lines on either side of central dart above and below respectively. Incuse circle. Cf. nos. 11. 12.  
a (Pl. I, [G]θ). Berlin: 11,28 g (174,0 grains). — Countermarks on obverse (9 or 10): no. II, mule's head and neck l. (same die as on no. 54, b), lion's head r. with tongue hanging out (same die as on no. 28), triskeles (same die as on nos. 35. 72), hand

with fingers spread asunder (thumb to r.; same die as on nos. 33, d. 102. 120, a. 123, d), head of Apollo (?) of transitional style to r. (same die as on no. 101, a), and 3 or 4 others.

b. Hirsch, Munich: 11,43 g (176,4 grains). — Countermarks on obverse (3): shield (?; cf. no. 5) and 2 others.

9. (G) Obv. Same die.

(t) Rev. F|A Similar thunderbolt; three wavy flame-lines on either side of central dart above and below respectively. Incuse circle.

a (Pl. I, [G]t). Pozzi, Paris: 10,50 g (162,0 grains). — Countermarks on obverse 3.

10. (H) Obv. Similar; serpent's head not visible.

(x) Rev. F|A Similar. Incuse circle.

a (Pl. I, Hx). Pozzi, Paris: 10,90 g (168,2 grains).

11. (H) Obv. Same die.

(θ) Rev. >|7 Similar thunderbolt; two wavy flame-lines on either side of central dart above and below respectively. Incuse circle. Cf. nos. 8.12.

a (Pl. I, [H]θ). Athens: 12,05 g (186,0 grains).

12. (J) Obv. Eagle flying l. horizontally; wings, one above, the other beneath body, bent back towards tail, three rows of feathers; fan-like tail; in claw serpent l., passing over tail and neck and held in beak, striking back at eagle's head.

(ϑ) Rev. Same die as nos. 8.11.

a (Pl. I, Jθ). Berlin: 12,09 g (186,6 grains). — Countermarks on obverse 3 or 4.

13. (J) Obv. Same die.

(λ) Rev. A|7 Nike wearing long chiton running r.; l. leg advanced; chest and wings facing, rest in profile; wings with two rows of feathers; l. arm extended, hand holding wreath; r. arm downwards, hand holding hem of chiton above r. ankle. Incuse circle.

a (Pl. I, [J]λ). Berlin: 12,10 g (186,7 grains). — Countermarks on obverse (5): no. III and 4 others.

14. (K) Obv. Similar; serpent's forked tongue extended.

(μ) Rev. F|A Thunderbolt; wings above curling outwards, with three rows of feathers; volutes below curling outwards, two short tendrils springing from each; three mouldings around handle; three wavy flame-lines on either side of central dart above and below respectively. Incuse circle.

a (Pl. I, Kμ). Cambridge (McClellan Collection): 11,90 g (183,7 grains).

b. Hirsch, Munich: 11,05 g (170,5 grains). — Countermarks on obverse (4): no. XIX and 3 others.

15. (L) Obv. Similar.

(ν) Rev. F|A Similar thunderbolt. Incuse circle.

a (Pl. I, Lν). Berlin: 11,68 g (180,2 grains). — Countermarks on obverse 2.

16. (L) Obv. Same die.

(ξ) Rev. [F]|A Similar thunderbolt. Incuse circle. Cf. no. 18.

a (Pl. I, [L]ξ). Count Dessewffy, Budapest: 11,60 g (179,0 grains). — Countermarks on obverse (6): nos. I, IV, calf's head and neck l., and 3 others — on reverse l.

17. (L) Obv. Same die.

(ο) Rev. F|A Similar thunderbolt. Incuse circle.

a (Pl. I, [L]ο). Athens: 9,35 g (144,3 grains), break at edge on obverse. — Overstruck on stater of Aegina like B. M. C. Attica etc., Pl. XXIII, 4 or 6 (the turtle on obv.

shows head bent towards r., fore-legs curved downwards; four triangular incuse depressions appear on the reverse).

b. Pozzi, Paris: 10, 15 g (156, 6 grains), deep cut in obverse.

18. (M) Obv. Similar; serpent's head not clear.

(ξ) Rev. F|A Similar thunderbolt. Incuse circle. Cf. no. 16.

a (Pl. I, Mξ). Athens: 8,95 g (138,1 grains). — Countermarks on obverse 2.

19. (N) Obv. Similar; serpent looped above eagle's beak, and striking back at its head.

(π) Rev. F|A Nike wearing long chiton running l., r. leg advanced; chest and wings facing, rest in profile; wings dotted above and feathered below; r. arm extended, hand holding wreath; l. arm downwards, hand holding hem of chiton over l. ankle; hair in queue. Incuse circle.

a. Berlin: 11,82 g (182,4 grains). — Countermarks on obverse (2): eagle standing l. (same die as on no. 59, a) and hand with fingers spread asunder (thumb to r.; same die as on nos. 124, g. 125, c).

b (Pl. I, Nπ). Paris: 12, 22 g (188, 6 grains), formerly duc de Luynes; Babelon, *Traité*, Pl. XXXIX, 7. — Countermark on obverse.

20. (N) Obv. Same die.

(ρ) Rev. F|A Similar. Incuse circle.

a (Pl. I, [N]ρ). Pozzi, Paris: 11, 73 g (181,0 grains); Cat. Sotheby, May 1897 (Hobart Smith), Pl. II, 96; Cat. Sotheby, Feb. 1909 (Benson), Pl. XVIII, 557. — Countermarks on obverse (6): nos. III, V, and 4 others.

21. (O) Obv. Eagle flying l. horizontally; wings, one above, the other beneath body, bent back but not parallel, three rows of feathers; fan-like tail; large head; in claw serpent l., passing over tail and neck and held in beak, with ∩ shaped neck.

(σ) Rev. F|A Thunderbolt; wings above curling outwards; volutes below curling outwards; three mouldings around handle; five wavy flame-lines on either side of central dart above and below (?) respectively. Border of dots. Shallow incuse circle.

a (Pl. I, Oσ). Seltman, Berkhamsted: 11, 85 g (182,9 grains); Cat. Hirsch XXV (Philipsen), Pl. XV, 1241. — Countermarks on obv. (2): bull's head and neck l. and another.

### Series III (Obverse dies P, Q, R).

22. (P) Obv. Eagle flying l. horizontally; wings, one above, the other beneath body, bent back towards tail, three rows of feathers; fan-like tail; head bent down; beak biting neck, claw grasping haunch, of hare upside-down to l.; hare's head bent back; ears laid flat; whiskers hanging down; r. fore-foot on eagle's neck; l. fore-foot pawing air.

(τ) Rev. A[∩] Thunderbolt; wings above curling outwards, with three rows of feathers; volutes below curling outwards, two short tendrils springing from each; three mouldings around handle; eight (?) wavy flame-lines above, seven below. Incuse circle.

a (Pl. I, Pτ). Glasgow: 11,92 g (184,0 grains); Macdonald, *Cat. Hunter*, vol. II, p. 134, 1, Pl. XXXVIII, 5.

23. (Q) Obv. Similar.

(υ) Rev. F|A Similar thunderbolt. Incuse circle.

a (Pl. I, Qυ). Berlin: 11, 79 g (182,0 grains). — Countermarks on obverse 2.

24. (R) Obv. Similar; but hare's head bent back more; ears hanging limp.  
(φ) Rev. A|∇ Thunderbolt; wings above curling outwards, very curved; volutes below curling outwards, two short tendrils springing from each; one moulding around handle; three wavy flame-lines on either side of central oval dart spring from thin neck. Incuse circle.  
a (Pl. I, [R]φ). Athens: 10,90 g (168,2 grains). — Countermarks on obverse 3 or 4.
25. (R) Obv. Same die.  
(γ) Rev. F|A Thunderbolt; wings above curling outwards; volutes below curling outwards, two short tendrils springing from each; one moulding around handle; three wavy flame-lines on either side of central dart above and below respectively. Incuse circle.  
a (Pl. I, Rγ). Boston: 12,08 g (186,4 grains); Cat. Sotheby, March 1896 (Montagu), Pl. VI, 406; Regling, Cat. Warren, Pl. XXI, 909. — Countermark on obverse: rosette with six petals.  
b. Copenhagen: 11,70 g (180,5 grains). — Countermarks on obverse (7): nos. VI, VII, crested Athenian helmet r., lyre, and 3 others.

Series IV (Obverse dies S—X).

26. (S) Obv. Eagle flying l. horizontally; wings bent back, folded together over back, the r. one shown as an outline over the l., shoulder dotted, two rows of feathers, fan-like tail; head bent down to neck, claw grasping haunch, of hare upside-down to l.; hare's head bent back; ears laid flat.  
(η) Rev. F|A Thunderbolt; wings above curling outwards, with two rows of feathers; volutes below curling outwards; three mouldings around handle; six flame-lines above, five below. Incuse circle Cf. no. 7.  
a (Pl. I, Sη). Cat. Hirsch XXV (Philipsen), Pl. XV, 1253: 11,82 g (182,4 grains). — Countermarks on obverse (2): sea-turtle seen from above as on the Aeginetan coins (other die than on no. 58 etc.) and another.
27. (S) Obv. Same die.  
(ψ) Rev. F|A Similar; but two short tendrils springing from each volute. Incuse circle.  
a (Pl. I, [S]ψ). Weight, Brighton: 11,55 g (178,2 grains). — Countermarks on obverse 5.
28. (S) Obv. Same die.  
(ω) Rev. F|[A] Similar thunderbolt; but broader, tendrils not visible. Incuse circle.  
a (Pl. I, [S]ω). Seltman, Berkhamsted: 11,58 g (178,7 grains). — Countermarks on obverse (9 or 10): lion's head r. with tongue hanging out (cf. no. 8, a), scrotum with pubes and penis (seen from the front; same die as on nos. 63, 78, a. 82, 141, c. 155, d. 157, b and probably also 133, b. 168, c), crab (twice; same die as on nos. 37, a. 59, b. 61, a. 102, 104, 118, b. 119, a. c. 120, a), and 5 or 6 others.
29. (T) Obv. Similar.  
(αα) Rev. F|A Similar thunderbolt. Incuse circle.  
a. Athens: 11,80 g (182,1 grains).  
b (Pl. I, Tαα). Boston; Catherine P. Perkins Coll. no. 353. — Countermark on obverse.
30. (U) Obv. Similar.  
(αβ) Rev. [F]|A Nike wearing long chiton stepping r.; l. leg advanced; chest and wings facing, rest in profile; wings with three rows of feathers; l. arm

bent, hand holding wreath with which she touches her forehead; r. arm downwards, hand holding hem of chiton. Incuse circle.

a (Pl. I, U $\alpha\beta$ ). Berlin: 11,70 g (180,5 grains). — Countermarks on obverse 3.

31. (V) Obv. Similar; but eagle's wing with three rows of feathers.

( $\alpha\gamma$ ) Rev. [F]A Thunderbolt; wings above curling outwards; volutes below curling outwards, two tendrils springing from each; three mouldings around handle; three flame-lines on either side of central dart above and below respectively. Incuse circle.

a (Pl. I, V $\alpha\gamma$ ). Seltman, Berkhamsted: 10,38 g (160,2 grains); Cat. Hirsch XXV (Philipsen), Pl. XV, 1254. — Countermarks on obverse (7): nos. III, VIII, and 5 others.

32. (W) Obv. Similar; but hare's ears hanging down, both shown.

( $\alpha\delta$ ) Rev. F|A Thunderbolt; wings above curling outwards, with two rows of feathers; volutes below curling outwards; three mouldings around handle; two wavy flame-lines on either side of central dart above and below respectively. Border of dots. Shallow incuse circle.

a. Anderson, Athens: 11,75 g (181,3 grains). — Countermark on obverse.

b (Pl. I, W $\alpha\delta$ ). Cambridge (McClellan Coll.): 11,71 g (180,7 grains). — Countermarks on obverse (4): nos. III, IX, X, and another.

c. Sir H. Weber, London: 11,75 g (181,3 grains). — Countermark on obverse: no. IX.

33. (X) Obv. Eagle flying l. horizontally; wings bent back, folded together over back, the r. one shown above the l., three rows of feathers; fan-like tail; claw grasping belly of hare upside-down to l.; hare's neck broken, head looking down; legs extended.

( $\alpha\epsilon$ ) Rev. F|A Thunderbolt; wings above curling outwards, with two rows of feathers; volutes below curling outwards, one short tendril springing from each; five mouldings around handle; four wavy flame-lines on either side of central dart above and below respectively. Incuse circle.

a. Baltatzes, Athens: 11,30 g (174,4 grains), formerly belonging to Mrs. Helena N. Mavrokordatos; Journ. Intern. XIV (1912), p. 26, no. 1993, Pl.  $\epsilon$ , 20.

b (Pl. I, X $\alpha\epsilon$ ). Berlin: 12,12 g (187,0 grains). — Countermark on obverse: no. XI.

c. Hirsch, Munich: 12,05 g (186,0 grains).

d. Cat. Sotheby, June 1896 (Bunbury), lot 1083 = Cat. Sotheby, Feb. 1909 (Benson), Pl. XVIII, 556: 12,38 g (191,0 grains). — Countermarks on obverse (6): no. VII, hand with fingers spread asunder (thumb to r.; cf. no. 8, a), and 4 others.

The early date of the two staters in Series I has already been referred to in the introduction. It is only necessary to compare them with the two didrachms of Chalcis (Pl. VIII, 1.2) which must have been struck before B. C. 507 to see that our two pieces cannot be far removed from them in point of time. Our two staters have the eagle to the right, while all the coins in the three following series of this group A have the eagle to the left. They correspond with the Chalcidian didrachms, the first of which has an eagle without, the second piece an eagle with a serpent. With regard to the thunderbolt on the reverse cf. below (after Group GH<sup>1</sup>) on „The Thunderbolt“.

Fractions: Obol. B. M. C. Pelop. 4, Pl. X, 5; weight: 0,76 g (11,8 grains).

The eagle in Series II closely resembles that of the second coin of series I, but is to the left throughout. On the reverse of no. 13 (Pl. I,  $\lambda$ ) we for the first

time come across the figure of Nike. The obverse of no. 13 is from the same die (J) as that of no. 12 which has a thunderbolt reverse (Pl. I,  $\vartheta$ ). Nike in the same attitude but to the left occurs again on nos. 19 and 20 (Pl. I,  $\pi$  and  $\rho$ ). This, the first representation of Nike on a coin of Greece proper, is of great interest. The figure which is short and dumpy, is in the running attitude, the only attitude by which flight could be suggested at this primitive age<sup>1)</sup>. The chiton hangs in a semi-circle between the feet suggesting the support a statue of this type would require<sup>2)</sup>. The spread wings are treated as formally as those of the eagles on the obverses of our series. Nos. 19 and 20 both show a decided advance on no. 13, both in the modelling and in the treatment of the drapery.

Of the other pieces in this series two call for special comment. No. 17 is overstruck on an early Aeginetan stater; traces both of the turtle and the incuse can be seen. No. 21 (Pl. I,  $0\sigma$ ) is a remarkable piece, which, though undoubtedly later than the ones before it, I have placed in this series for the sake of harmony. The coins in both the following series, III and IV, must be regarded as strictly contemporary with series II, witness the sharing of reverse dies between no. 7 (Pl. I,  $G\eta$ ) in this series and no. 26 (Pl. I,  $S\eta$ ) in series IV. And no. 21, the piece in question, must be contemporary with no. 33 (Pl. I,  $X\alpha\varepsilon$ ), the last coin of series IV.

Fractions: Drachm. Thunderbolt reverse. a (Pl. VIII, 3; wings above, volutes below). Hill, Cat.

Ward, Pl. XIII, 531; weight: 5,61 g (86,5 grains). — b (volutes above, wings below).

Regling, Cat. Warren, Pl. XXI, 907; weight: 5,93 g (91,5 grains).

Hemdrachm. Thunderbolt reverse (wings above, volutes below). B. M. C. Pelop. 2, Pl. X, 2, plated; weight: 2,72 g (42,0 grains).

In Series III and the next the serpent is abandoned for the hare, which is treated with considerable skill. At first (Pl. I, P—W) it is a living hare which struggles for freedom kicking the eagle's breast with its hind legs, while the bird tears its throat. On the last coin of series IV, no. 33 (Pl. I, X), it is a dead hare which hangs limply in the eagle's claws. The general characteristics of the eagle in this series III resemble those of the last series, save that the head is bent down.

A new method of representing the eagle is introduced in Series IV. The wings, instead of being set one over the back, one below the breast, are now folded together over the back of the bird. Otherwise there is no material change in the design, until we come to no. 33 (Pl. I,  $X\alpha\varepsilon$ ), already referred to, on which the limp hang of the hare is very well rendered. The eagle on this piece also shows an advance in draughtsmanship, though still decidedly crude. The reverse of no. 26 (Pl. I,  $S\eta$ ), as has already been pointed out, is from the same die as that of no. 7 (Pl. I,  $G\eta$ ) in series II. On no. 30 (Pl. I,  $U\alpha\beta$ ) we meet with Nike again, a coarser Nike than those of series II, but not necessarily an earlier one, though probably about contemporary. The coarse fabric is due presumably either to hasty or inferior workmanship. With regard to the thunderbolts cf. below (after Group GH<sup>1</sup>) on „The Thunderbolt“.

It is noteworthy that in this whole group A we have very few actual duplicates. I have been able to record 45 specimens, and among these 45 there are 33

<sup>1)</sup> Cf. the important monograph „Die Siegesgöttin“ by F. Studniczka, Leipsic 1898.

<sup>2)</sup> Cf. the famous early Nike of Delos: Studniczka, op. cit., Pl. II, 7.

varieties, giving 33 different staters. Future finds may bring to light more pieces and more varieties. Presumably finds of coins of Olympia of this period have been scarcer than those of later periods.

Of the history of this period there is nothing to be said. We must generally seek to connect the coins, when we can connect them at all, with the history of Olympia rather than of Elis. And it is only in so far as the interests of one coincide with those of the other that we can expect the little we know of Elean history to help us in the chronological arrangement of the coinage of Olympia.

**Group B (Series V—VIII).**

ca. B. C. 471 to ca. B. C. 452.

Summary of staters:

Obverse dies 15 (Y—AN). Obverse dies using more than one reverse 7.

Reverse dies 20 ( $\alpha\zeta$ — $\beta\alpha$ ). Reverse dies used with more than one obv. 10.

Coins 37.

Number of specimens recorded 64.

Series V (Obverse dies Y—AD).

34. (Y) Obv.  $\backslash\text{O}|\text{E}|\text{A}\text{A}\text{A}$  around outwards. Eagle flying l. horizontally; wings outstretched inclining slightly forward, one shown above, the other beneath body, two rows of feathers; fan-like tail; claw and beak holding scaly serpent l. passing over tail, looped twice in an 8 over beak, and striking down at eagle's head.
- ( $\alpha\zeta$ ) Rev.  $\text{A}|\text{A}$  Nike wearing long chiton running r.; l. leg advanced; chest and wings facing, rest in profile; wings with three rows of feathers; l. arm extended, hand holding wreath; r. hand holding hem of chiton above r. ankle. Incuse circle.
- a (Pl. II, Y  $\alpha\zeta$ ). London: 12,00 g (185,2 grains); B. M. C. Pelop. 5, Pl. X, 4; B. M. Guide<sup>2</sup> Pl. 14, 27; Num. Chron. 1873, Pl. V, 2; Num. Chron. 1879, Pl. XI, 2b; Gardner, The Types of Greek Coins (1882), Pl. III, 14 (rev.); Lambros, Peloponnesos, Pl. E, 3; Babelon, *Traité*, Pl. XXXIX, 6; Head, *Hist. Num.*<sup>2</sup>, p. 419, fig. 225. — Countermarks on obverse (3): no. IV and 2 others.
35. (Z) Obv. No legend (?). Similar.
- ( $\alpha\eta$ ) Rev. No legend. Similar. Incuse circle.
- a (Pl. II, Z  $\alpha\eta$ ). Berlin: 9,05 g (139,7 grains). — Countermarks on obverse (2): triskeles (cf. no. 8, a) and another.
36. (AA) Obv. Similar; serpent not looped in front of eagle's beak, and striking at upper wing.
- ( $\alpha\theta$ ) Rev. Similar. Incuse circle.
- a (Pl. II, AA  $\alpha\theta$ ). Berlin: 11,77 g (181,6 grains). — Countermarks on obverse (3): no. XII and 2 others.
37. (AB) Obv.  $\backslash\text{O}|\text{E}|\text{A}\text{A}$  around inwards. Similar; serpent looped once in front of eagle's beak, and striking downwards at head.
- ( $\alpha\iota$ ) Rev.  $\backslash\text{O}\text{X}|\text{I}\text{I}|\text{V}\text{V}\text{A}\text{O}$  to l., below, and to r., inwards. Zeus nude striding r., l. leg advanced, chest facing, rest in profile; r. hand upraised grasping thunderbolt (winged at both ends); l. arm outstretched, on fore-arm eagle seated r., head turned back l., both wings raised. Incuse square.

- a. Cambridge (McClellan Coll.): 10,18 g (157,1 grains); Cat. Hirsch XIII (Rhosopoulos), Pl. XXVIII, 2519; Cat. Hirsch XXI (Consul Weber), Pl. XXIV, 1917. — Countermarks on obverse (2): crab (cf. no. 28) and another.
- b (Pl. II, AB  $\alpha$ ). Paris: 11,79 g (182,0 grains); Zeitschr. f. Num. II (1875), p. 265; Num. Chron. 1879, Pl. XI, 1; Cat. Photiadès Pacha (Paris 1890), Pl. V, 1020; Lambros, Peloponnesos, Pl. E, 5; Babelon, Traité, Pl. XXXIX, 2; Revue Numism. 1909, Pl. XI, 24 (rev.). — Countermarks on obverse 2.
- c. Cat. Hirsch XVI (1906), Pl. XV, 546: 10,80 g (166,7 grains). — Countermarks on obverse 7.

38. (AC) Obv. Eagle flying l. horizontally; wings outstretched inclining slightly forward, one shown above, the other beneath the body, two rows of feathers; fan-like tail; claw grasping haunch of hare, upside-down l.; beak touching hare's neck.

( $\alpha\alpha$ ) Rev. Nike wearing long chiton running r.; l. leg advanced; chest and wings facing, rest in profile; wings with three rows of feathers; l. arm extended, hand holding wreath, r. hand holding hem of chiton above r. ankle. Incuse circle. Cf. no. 39.

- a (Pl. II, AC  $\alpha\alpha$ ). Berlin: 12,11 g (186,9 grains). — Countermark on obverse.
- b. Boston: 12,05 g (186,0 grains); Cat. Photiadès Pacha (Paris 1890), lot 1021; Regling, Cat. Warren, Pl. XXI, 912. — Countermarks on obv. (3): no. III and 2 others.
- c. London: 11,04 g (170,4 grains); B. M. C. Pelop. 6, Pl. X, 6. — Countermarks on obverse (4): no. III and 3 others.

39. (AD) Obv. Similar.

( $\alpha\alpha$ ) Rev. Same die as no. 38.

- a (Pl. II, AD  $\alpha\alpha$ ). Cook, Cambridge: 11,08 g (171,0 grains). — Countermarks on obverse 3 (?).

#### Series VI (Obverse dies AE, AF, AG).

40. (AE) Obv. Eagle flying r. horizontally; wings outstretched inclining slightly backwards, one shown above, the other beneath the body, four rows of feathers; fan-like tail; claw and beak holding serpent r. passing over tail, looped beneath tail and above head of eagle, striking down at beak.

( $\alpha\lambda$ ) Rev. F|A Thunderbolt; wings below curling inwards, one row of feathers; volutes above curling outwards, one short tendril springing from each; plain handle; rays springing r. and l. from darts above and below. Incuse circle. Cf. nos. 46. 54.

- a. Anderson, Athens: 12,05 g (186,0 grains). — Countermark on obverse: no. XIII.
- b (Pl. II, AE  $\alpha\lambda$ ). Berlin: 11,70 g (180,5 grains).

41. (AF) Obv. Similar.

( $\alpha\mu$ ) Rev. F|A Similar thunderbolt; but instead of rays each dart melts into wavy flame-lines. Incuse circle. Cf. nos. 47. 64.

- a (Pl. II, AF  $\alpha\mu$ ). Cambridge (McClellan Coll.): 12,10 g (186,8 grains).
- b. Weight, Brighton: 12,17 g (187,9 grains). — Countermarks on obverse 2 (?).

42. (AF) Obv. Same die.

( $\alpha\nu$ ) Rev. A| $\lambda$  Thunderbolt; wings below curling outwards; tendrils above, each running upwards and ending in downward hook; one moulding around handle; branching flame-lines on either side of central dart above and below. Incuse circle.

- a (Pl. II, [AF]  $\alpha\nu$ ). Seltman, Berkhamsted: 12,14 g (187,3 grains); Cat. Sotheby, May 1897 (Hobart Smith), lot 92; Cat. Sotheby, Feb. 1909 (Benson), lot 555. — Countermarks on obverse (3): no. X and 2 others.
43. (AF) Obv. Same die.  
( $\alpha\xi$ ) Rev. F|A Thunderbolt; wings above curling outwards, two rows of feathers; volutes below curling outwards, one short tendril springing from each; plain handle; flame-lines springing from central dart above and below. Incuse circle. Cf. no. 49.  
a. Cat. Ratto (Genoa), Apr. 1909, Pl. XII, 2971: 11,84 g (182,7 grains). — Countermarks on obverse 3.  
b (Pl. II, [AF]  $\alpha\xi$ ). Cat. Sotheby, 21. Apr. 1909, Pl. II, 105: 11,79 g (182,0 grains). — Countermarks on obverse 4.
44. (AF) Obv. Same die.  
( $\alpha\omicron$ ) Rev. A|F Similar thunderbolt. Incuse circle. Cf. nos. 50. 63. 65.  
a (Pl. II, [AF]  $\alpha\omicron$ ). Vienna: 12,20 g (188,3 grains); Cat. Hirsch XXI (Consul Weber), Pl. XXIV, 1914.
45. (AF) Obv. Same die.  
( $\alpha\pi$ ) Rev. F|A Nike wearing long chiton stepping l.; r. leg advanced; wings facing, rest in profile; r. arm extended; l. arm hanging down. Incuse circle. Cf. nos. 51. 68.  
a (Pl. II, [AF]  $\alpha\pi$ ). Berlin: 12,35 g (190,6 grains); Imhoof-Blumer, Monn. Gr., p. 167,59, Choix Pl. II, 55. — Countermarks on obverse (5): nos. XIV, XV, XV, Corinthian helmet l. (same die as on nos. 76, b. 77, c. 80, a. 86, b. 89, b. 105. 115. 119, c. 124, b) and another.
46. (AG) Obv. Similar; but serpent not looped under tail nor over beak.  
( $\alpha\lambda$ ) Rev. F|A Thunderbolt; wings below curling inwards, one row of feathers; volutes above curling outwards, one short tendril springing from each; plain handle; rays springing r. and l. from darts above and below. Incuse circle. Cf. nos. 40. 54.  
a (Pl. II, [AG]  $\alpha\lambda$ ). Munich: 11,85 g (182,9 grains). — Countermarks on obverse (2): no. XVI and another.
47. (AG) Obv. Same die.  
( $\alpha\mu$ ) Rev. F|A Similar thunderbolt; but instead of rays each dart melts into wavy flame-lines. Incuse circle. Cf. nos. 41. 64.  
a. Berlin: 12,18 g (188,0 grains).  
b. Newell, New York: 11,31 g (174,5 grains). — Countermark on obverse.  
c (Pl. II, AG  $\alpha\mu$ ). Paris: 11,65 g (179,8 grains), formerly duc de Luynes; Babelon, Traité, Pl. XXXIX, 5.  
d. Sir H. Weber, London: 11,39 g (175,8 grains). — Countermarks on obverse 3.
48. (AG) Obv. Same die.  
( $\alpha\rho$ ) Rev. F|A Similar thunderbolt; three wavy flame-lines on either side of central dart above(?) and below respectively. Incuse circle.  
a (Pl. II, [AG]  $\alpha\rho$ ). Anderson, Athens: 11,98 g (184,9 grains). — Countermarks on obverse (2): gorgoncion (same die as on nos. 70. 76, b. c. 86, e. 88, c. 89, b. 93, e. 99. 133, e. 137, b. 140, c) and another.
49. (AG) Obv. Same die.  
( $\alpha\xi$ ) Rev. F|A Thunderbolt; wings above curling outwards, two rows of feathers; volutes below curling outwards, one short tendril springing from

each; plain handle; flame-lines springing from central dart above and below. Incuse circle. Cf. no. 43.

- a (Pl. II, [AG]αξ). Sir H. Weber, London: 12,05 g (186,0 grains). — Countermarks on obverse (2): no. XIV and another.
50. (AG) Obv. Same die.  
(αο) Rev. A|F Similar thunderbolt. Incuse circle. Cf. nos. 44. 63. 65.  
a (Pl. II, [AG]αο). Copenhagen: 11,81 g (182,3 grains). — Countermark on obverse.
51. (AG) Obv. Same die.  
(απ) Rev. F|A Nike wearing long chiton stepping l.; r. leg advanced; wings facing, rest in profile; r. arm extended; l. arm hanging down. Incuse circle. Cf. nos. 45. 68.  
a. Hirsch, Munich: 10,25 g (158,2 grains).  
b (Pl. II, [AG]απ). London: 12,12 g (187,0 grains); B. M. C. Pelop. 8, Pl. X, 8. — Countermarks on obverse (3): gorgoneion (cf. no. 4, b) and 2 others.  
c. Cat. Hirsch XIII (Rhosopoulos), Pl. XXVIII, 2517: 12,00 g (185,2 grains). — Countermarks on obverse (4): no. XI and 3 others.
52. (AG) Obv. Same die.  
(ασ) Rev. F|[A] Similar. Incuse circle.  
a (Pl. II, [AG]ασ). Oman, Oxford: 12,31 g (190,0 grains).  
b. Cat. Hirsch XXXII (1912), Pl. XIX, 500: 11,00 g (169,7 grains), reverse tooled. — Countermark on obverse.
53. (AG) Obv. Same die.  
(ατ) Rev. F|A Similar; Nike holds wreath in extended r. hand; l. hand grasps chiton. Incuse circle. Cf. nos. 60. 69.  
a (Pl. II, [AG]ατ). Berlin: 10,98 g (169,4 grains).  
b. Hirsch, Munich: 10,80 g (166,7 grains). — Countermarks on obverse 2.

Series VII (Obverse dies AH, AJ, AK).

54. (AH) Obv. Eagle flying r. horizontally; wings outstretched inclining slightly backwards, one shown above, the other beneath the body, four rows of feathers; fan-like tail; claw holding breast of hare r. upside-down, neck stretched, hind-legs hanging down.  
(αλ) Rev. F|A Thunderbolt; wings below curling inwards, one row of feathers; volutes above curling outwards, one short tendril springing from each; plain handle; rays springing r. and l. from darts above and below. Incuse circle. Cf. nos. 40. 46.  
a. Hirsch, Munich: 11,72 g (180,9 grains). — Countermark on obverse.  
b (Pl. II, AHαλ). London: 11,66 g (180,0 grains); Cat. Sotheby, June 1896 (Bunbury), lot 1082. — Countermarks on obverse (2): mule's head and neck l. (twice; cf. no. 8, a).
55. (AH) Obv. Same die.  
(αυ) Rev. F|A Thunderbolt; wings above curling outwards, two rows of feathers; volutes below curling outwards, one short tendril springing from each; seven flame-lines above, nine below. Incuse circle.  
a (Pl. II, [AH]αυ). Brussels: 12,05 g (186,0 grains).  
b. Hirsch, Munich: 11,77 g (181,6 grains). — Countermark on obverse.
56. (AH) Obv. Same die.  
(αφ) Rev. F|A Nike wearing long chiton stepping l.; r. leg advanced; wings

facing, rest in profile, three rows of feathers; r. arm extended, hand holding wreath; l. arm hanging down. Incuse circle. Cf. no. 57.

a (Pl. II, [AH] $\alpha\varphi$ ). London: 11,91 g (183,8 grains); B. M. C. Pelop. 10, Pl. X, 9; Lambros, Peloponnesos, Pl. E, 4.

57. (AJ) Obv. Similar.

( $\alpha\varphi$ ) Rev. Same die as no. 56.

a (Pl. II, AJ $\alpha\varphi$ ). Jameson, Paris: 11,53 g (177,9 grains). — Countermark on obverse.

b. Newell, New York: 11,26 g (173,8 grains).

58. (AJ) Obv. Same die.

( $\alpha\chi$ ) Rev. F|A Thunderbolt; wings below curling inwards, one row of feathers; volutes above curling outwards, one short tendril springing from each; plain handle; each dart melting into wavy flame-lines. Incuse circle. Cf. nos. 61. 62.

a (Pl. II, [AJ] $\alpha\chi$ ). Pozzi, Paris: 11,40 g (175,9 grains). — Countermarks on obverse

(3): sea-turtle seen from above as on the Aeginetan coins (same die as on nos. 69, e. 115), Iyre (other die than on no. 25, b), and another.

59. (AK) Obv. Similar; but wings with two rows of feathers; hare bent back more.

( $\alpha\psi$ ) Rev. F|A Thunderbolt; wings below curling outwards, two rows of feathers; volutes above curling outwards, one short tendril springing from each; three mouldings around handle; seven flame-lines above and below. Incuse circle. Cf. no. 66.

a (Pl. II, [AK] $\alpha\psi$ ). Berlin: 11,77 g (181,6 grains). — Countermarks on obverse (2): no. XIII, and eagle standing l. (cf. no. 19, a). — Flaws in reverse die.

b. Berlin: 12,10 g (186,7 grains). — Countermarks on obverse (2): crab (cf. no. 28) and another. — Flaws in reverse die.

c. New York: 11,40 g (175,9 grains); Hill, Cat. Ward, Pl. XIII, 532. — Flaws in reverse die.

60. (AK) Obv. Same die.

( $\alpha\tau$ ) Rev. F|A Nike wearing long chiton stepping l.; r. leg advanced; wings facing, rest in profile; r. hand extended holds wreath; l. hand holding chiton. Incuse circle. Cf. nos. 53. 69.

a (Pl. II, AK $\alpha\tau$ ). London: 11,69 g (180,4 grains); B. M. C. Pelop. 9. — Countermark on obverse: triangular incuse.

#### Series VIII (Obverse dies AL, AM, AN).

61. (AL) Obv. Eagle flying r. horizontally; wings raised over back, the l. higher than the r. one, two rows of feathers; fan-like tail; beak touching head, claw grasping back, of hare r. with legs outstretched in running attitude.

( $\alpha\chi$ ) Rev. F|A Thunderbolt; wings below curling inwards, one row of feathers; volutes above curling outwards, one short tendril springing from each; plain handle; each dart melting into wavy flame-lines. Incuse circle. Cf. nos. 58. 62.

a (Pl. II, AL $\alpha\chi$ ). Berlin: 11,52 g (177,8 grains), overstruck. — Countermarks on obverse (3): crab (cf. no. 28) and 2 others.

b. Seltman, Berkhamsted: 10,38 g (160,2 grains); Cat. Hirsch XXV (Philipsen), no. 1255. — Countermark on obverse.

62. (AM) Obv. Similar.  
( $\alpha\chi$ ) Rev. Same die as nos. 58. 61.  
a (Pl. II, AM $\alpha\chi$ ). Seltman, Berkhamsted: 11,33 g (174,8 grains).
63. (AM) Obv. Same die.  
( $\alpha\sigma$ ) Rev. A|F Thunderbolt; wings above curling outwards, two rows of feathers; volutes below curling outwards, one short tendril springing from each; plain handle; flame-lines springing from central dart above and below. Incuse circle. Cf. nos. 44. 50. 65.  
a (Pl. II, [AM] $\alpha\sigma$ ). Anderson, Athens: 12,00 g (185,2 grains). — Countermarks on obverse (4): no. XIV, scrotum with pubes and penis (seen from the front; cf. no. 28), and 2 others.
64. (AN) Obv. Similar.  
( $\alpha\mu$ ) Rev. F|A Thunderbolt; wings below curling inwards, one row of feathers; volutes above curling outwards, one short tendril springing from each; plain handle; each dart melts into wavy flame-lines. Incuse circle. Cf. nos. 41. 47.  
a (Pl. II, [AN] $\alpha\mu$ ). Cat. Hirsch XVI (1906), Pl. XV, 555: 12,05 g (186,0 grains).
65. (AN) Obv. Same die.  
( $\alpha\sigma$ ) Rev. A|F Thunderbolt as on no. 63 (= 44. 50); same die.  
a. Hirsch, Munich: 11,30 g (174,4 grains). — Countermark on obverse.  
b (Pl. II, [AN] $\alpha\sigma$ ). London: 11,99 g (185,0 grains); B. M. C. Pelop. 22, Pl. XI, 4. — Countermark on obverse.
66. (AN) Obv. Same die.  
( $\alpha\psi$ ) Rev. F|A Thunderbolt; wings below curling outwards, two rows of feathers; volutes above curling outwards, one short tendril springing from each; three mouldings around handle; seven flame-lines above and below. Incuse circle. Cf. no. 59.  
a (Pl. II, [AN] $\alpha\psi$ ). Munich: 12,28 g (189,5 grains).
67. (AN) Obv. Same die.  
( $\alpha\omega$ ) Rev. F|A Similar thunderbolt; but wings above, volutes below. Incuse circle.  
a. Vicomte de Jonghe, Brussels: 12,05 g (186,0 grains). — Countermarks on obverse 3.  
b (Pl. II, AN $\alpha\omega$ ). Mathey, Paris: 12,25 g (189,0 grains).
68. (AN) Obv. Same die.  
( $\alpha\pi$ ) Rev. F|A Nike wearing long chiton stepping l.; r. leg advanced; wings facing, rest in profile; r. arm extended; l. arm hanging down. Incuse circle. Cf. nos. 45. 51.  
a (Pl. II, [AN] $\alpha\pi$ ). Anderson, Athens: 12,14 g (187,3 grains). — Countermarks on obverse (4): no. XIV and 3 others.  
b. Hirsch, Munich: 11,67 g (180,1 grains).
69. (AN) Obv. Same die.  
( $\alpha\tau$ ) Rev. F|A Similar; Nike holds wreath in extended r. hand; l. hand grasps chiton. Incuse circle. Cf. nos. 53. 60.  
a. Copenhagen: 11,18 g (172,5 grains). — Countermarks on obverse 2.  
b. Pozzi, Paris: 11,70 g (180,5 grains). — Countermarks on obverse 3.  
c (Pl. II, [AN] $\alpha\tau$ ). Sir H. Weber, London: 12,00 g (185,2 grains). — Countermark on obverse.  
d. Sir H. Weber's London.

e. Cat. Hirsch XVI (1906), Pl. XV, 544: 11,96 g (184,6 grains). — Countermarks on obverse (3): sea-turtle seen from above as on the Aeginetan coins (cf. no. 58) and 2 others.

70. (AN) Obv. Same die.

(βα) Rev. F|[A] Similar; but no wreath in r. hand. Incuse circle.

a (Pl. II, [AN] βα). Berlin: 12,27 g (189,3 grains); Friedlaender and von Sallet, Das Königliche Münzkabinet<sup>2</sup>, Pl. I, 49. — Countermarks on obverse (2): gorgoneion (cf. no. 48) and another.

In Series V a new and more realistic way of representing the flying eagle is found for the first time. The wings instead of being bent back parallel to the body are stretched out at right angles to it, their points tending forwards. On the first four coins (nos. 34—37) the bird carries a serpent which is much more elaborately treated than in the former group. On the two others (nos. 38, 39) it carries a hare. There are decided traces of Egyptian influence in the treatment of these eagles.

The most important piece, however, is no. 37 (Pl. II, AB α), the much discussed stater with the inscription  $\Lambda\text{O}\kappa\iota\Gamma\text{V}\Lambda\Lambda\text{O}$  and the figure of Zeus. As I have already said in the introduction, a careful study of the known specimens from these dies — especially of the one in the McClean Collection at Cambridge (Fitzwilliam-Museum) — has convinced me that the obverse bears the legend  $\Lambda\text{O}\iota\Xi\Lambda\Lambda\text{I}$ , just as the obverse of no. 34 (Pl. II, Y) does. There has been much discussion over the meaning of the word  $\Lambda\text{O}\kappa\iota\Gamma\text{V}\Lambda\Lambda\text{O}$ . I cannot help thinking that the most reasonable explanation as yet offered is the one mentioned by M. Babelon (Traité II, 1, column 893) following Lambropoulos (Zeitschr. f. Num. XIX, 1895, p. 210), who interprets it as Ὀλυμπικῶν ἀγώνων (or ἄθλων) σῆμα, παῖμα, κόμμα, χαρακτήρ). Professor George Macdonald<sup>1)</sup> objects to the last omicron of the word being treated as the archaic equivalent of omega, citing the word  $\Phi\text{O}\kappa\iota\kappa\text{O}\text{N}$  and asking „why is there only one omega in  $\Phi\text{O}\kappa\iota\kappa\text{O}\text{N}$ ?“ But in this he has been misled by a repeated misprint in M. Babelon's „Traité“. I know of no coin inscribed  $\Phi\text{O}\kappa\iota\kappa\text{O}\text{N}$ . The first series of Phocian hemidrachms often bears the legend  $\Phi\text{O}\kappa\iota$  which must be completed as  $\Phi\text{O}\kappa\iota\kappa\text{O}\text{N}$ .  $\Phi\text{O}\kappa\iota$  never occurs<sup>2)</sup>. Since  $\Phi\text{O}\kappa\iota\kappa\text{O}\text{N}$  does not exist, why not regard the fifth century  $\Phi\text{O}\kappa\iota$  as equivalent to  $\Phi\omega\kappa\iota\kappa\omega\text{N}$ ?  $\Delta\Lambda\Lambda\Phi\iota\kappa\text{O}\text{N}$ ,  $\text{A}\text{P}\text{K}\Lambda\Delta\iota\kappa\text{O}\text{N}$ ,  $\text{O}\text{-}\Lambda\text{Y}\text{N}\text{N}\text{I}\kappa\text{O}\text{N}$  as equivalent to  $\Delta\epsilon\lambda\phi\iota\kappa\omega\text{N}$ , Ἀρκαδικῶν, Ὀλυμπικῶν? Might it not be that our piece with its double legend  $\Lambda\text{O}\iota\Xi\Lambda\Lambda\text{I}$   $\Lambda\text{O}\kappa\iota\Gamma\text{V}\Lambda\Lambda\text{O}$  might be interpreted as follows:  $\text{F}\Lambda\Lambda\epsilon\iota\omega\text{N}$  ἐπὶ τῶν  $\text{O}\Lambda\text{Y}\text{N}\text{N}\text{I}\kappa\omega\text{N}$  ἀγώνων σῆμα, „the badge (stamp, official guarantee)<sup>3)</sup> of the Elean people for the occasion of the Olympian games“?

M. Babelon, (Traité II, 1, columns 889 f.) considers this Zeus to be a copy of a famous statue of the god by the sculptor Aristonoos who flourished presumably in the second half of the sixth century. It must have been inspired by it, though we should not look for a slavish copy. The proportions of the figure have the

<sup>1)</sup> Procès-verbaux et Mémoires du Congrès International de Numismatique, tenu à Bruxelles, Juin 1910, p. 288.

<sup>2)</sup>  $\Phi\text{O}$  is found on the later hemidrachms (4th

century) with head of Apollo. But the contemporary copper completes this legend as  $\Phi\text{O}\kappa\epsilon\omega\text{N}$ .

<sup>3)</sup> Macdonald, l. cit., p. 285.

same awkwardness that the figures of Nike have in this group and the former. The square, instead of circular, incuse is due probably to the squareness of the design. Thunderbolts and Nikes are more or less circular designs.

None of the pieces in this series V have thunderbolts. Perhaps some may yet turn up. While no. 34 (Pl. II,  $\Upsilon\alpha\zeta$ ) has a legend on both sides,  $\Lambda\Theta\text{I}\text{E}\Lambda\Lambda\text{A}\text{I}$  on the obverse,  $\text{A}\text{I}$  on the reverse, the rest of the pieces with Nike have no legend on either side. The Nikes are very similar to those in the foregoing group, but show some advance on them, especially in the more natural „hang“ of the draperies.

Series VI and the two following series, VII and VIII, are contemporary with each other and all a little later than series V. Their dies interlace to a considerable extent. The eagles in series VI (Pl. II,  $\text{A}\text{E}—\text{A}\text{G}$ ) and the next still have their wings extended at right angles to the body, but they have lost their Egyptian character, and their points no longer curve forwards. The serpents are elaborately contorted, writhing round the eagle's tail and above its head. The obverse die  $\text{A}\text{G}$  uses no less than eight different reverse dies (nos. 46—53). Nike occurs on three different dies ( $\alpha\pi$ ,  $\alpha\sigma$ ,  $\alpha\tau$ ), to the left on all of them, and shows considerable advance in artistic treatment. The one on no. 52 ( $\alpha\sigma$ ), especially, is decidedly graceful both in proportions and action. There is a sudden advance in the treatment of the thunderbolts, which develop with great variety; cf. below (after Group  $\text{GH}^1$ ) on „The Thunderbolt“.

In Series VII a dead hare takes the place of the serpent. It hangs limply with dangling head and hind legs. The eagle is much like the one in the last series save that his head, by reason of the nature of his prey, is bent downwards.

Fractions: Drachm similar to no. 60 ( $\text{A}\text{K}\alpha\tau$ ); obverse suggestive in the treatment of the eagle of series VIII, hare as on series VII. B. M. C. Pelop. 11, Pl. X, 10; weight: 5,86 g (90,4 grains). — Pl. VIII, 4.

Hemidrachm similar to no. 55 ( $\text{A}\text{H}\alpha\omega$ ), but eagle to 1.; obverse suggestive in the treatment of the bird of series VIII, hare as on series VII. Cat. Sotheby, Feb. 1909 (Benson), Pl. XVIII, 563; weight: 3,11 g (48,0 grains). — Pl. VIII, 5.

In Series VIII a fresh attempt is made to represent the eagle with both wings over the back just as was done in series IV. This time with much greater success. The hare, instead of hanging limply, is in a running attitude. It seems to be bounding along just as the eagle, swooping down from above, seizes it by the middle of its back. The third obverse die,  $\text{A}\text{N}$ , shows considerable advance on the other two ( $\text{A}\text{L}$ ,  $\text{A}\text{M}$ ). The thunderbolts and Nikes are mostly from dies that have occurred in the two preceding series. No. 70 (Pl. II,  $[\text{A}\text{N}]\beta\alpha$ ) calls for some comment. The Nike is more delicately drawn than any of the preceding ones. The feathering of her wings is more naturally rendered. She seems to be taking long steps rather than to be running, and forms a link between those which precede and the Nike in the following series (Group C, no. 74; Pl. III,  $\text{A}\text{R}\beta\delta$ ).

Fractions, cf. series VII.

Many more duplicates exist of the coins in this group B than of the first group. While 37 staters fall under this period I have been able to record 64 specimens. The dates I have assigned to this group are, as already explained in the introduction, somewhat speculative. But it is tempting to give the coin no. 37 with the double legend  $\Lambda\Theta\text{I}\text{E}\Lambda\Lambda\text{A}\text{I}\text{E}\text{F}\text{E}\Lambda\text{O}\text{V}\text{I}\text{K}\text{I}\text{K}\text{I}\text{V}\Lambda\text{O}$  to the 77th Olympiad, the time of the foun-

dition of the city of Elis in B. C. 471. Such an event would give the priestly moneyers at Olympia a special occasion for emphasizing the fact that their staters bore „the badge of the Elean people for the occasion of the Olympian games“ (as suggested above) on no. 37, and even on no. 34 placing the name  $\Lambda\text{OΙΕΛΛΑ}\tau$  „of the Elean people“ in full lest FA alone might be mistaken for FA $\Lambda\text{I}\xi$ , and the coin be thought to emanate from the newly built city.

It seems to me that there cannot be much error in making the coins dealt with under this group extend over a period of 19 years. Most numismatists (e. g. Babelon, *Traité* II, 1, columns 887 f.), when dealing with Elean coins, have placed the  $\Lambda\text{OΙΙ}\tau\Lambda\text{V}\Lambda\text{O}$  piece (no. 37; Pl. II, AB $\alpha\tau$ ) together with no. 73 (Pl. III, A $\text{Q}\beta\gamma$ ) that I, regarding it as a „restitution“, have placed at the beginning of the following group. Surely though, the great divergence of the style of their obverses, and the great superiority of the artistic merit of the latter over the former, quite precludes this contemporary arrangement. But more of this under the following Group C, where I have tentatively assigned the piece no. 73 to the period of the 82nd Olympiad.

### Group C (Series IX—XII).

ca. B. C. 452 to ca. B. C. 432.

#### Summary of staters:

Obverse dies 20 (AO—BH). Obverse dies using more than one reverse 13.  
Reverse dies 25 ( $\beta\beta$ — $\gamma\beta$ ). Reverse dies used with more than one obv. 17.  
Coins 55. Number of specimens recorded 118.

#### Series IX (Obverse dies AO—AR).

71. (AO) Obv. [F] $\Lambda\text{A}\text{E}\text{I}\text{O}\text{V}$  to l. and to r. inwards. Eagle flying l. horizontally; wings outstretched points bending forwards, one shown above, the other beneath the body, three rows of symmetrical feathers; fan-like tail; ruffle of feathers round neck; on claw shown; no prey.
- ( $\beta\beta$ ) Rev. F $\Lambda$  Nike wearing long chiton standing facing, head r. and looking upwards, hair in knot, band round head; leg shown through drapery in profile r.; wings with five rows of feathers; l. arm raised, bent at elbow and wrist, hand holding end of taenia; r. arm — first attempt in front of body, partly erased, bent towards r. — second attempt in front of wing, bent to l., hand holding other end of taenia. Incuse circle.
- a (Pl. III, AO  $\beta\beta$ ). Boston: 12,09 g (186,6 grains); Num. Chron. 1879, Pl. XI, 4; Gardner, *The Types of Greek Coins*, Pl. III, 52 + 42; Lambros, *Peloponnesos*, Pl. E, 2; Cat. Sotheby, May 1895 (Ashburnham), Pl. III, 118; Regling, *Cat. Warren*, Pl. XXI, 913. — Countermarks on obverse (2): no. V twice.
- b. Sir H. Weber, London: 11,60 g (179,1 grains). — Countermarks on obverse (2): no. XVII and another — on reverse 1.
- c. *Cat. Hirsch XVI* (1906), Pl. XV, 547: 11,80 g (182,1 grains). — Countermarks on obverse 2.
72. (AP) Obv. Eagle flying l. horizontally; wings outstretched, one shown above, the other beneath the body, three rows of feathers; fan-like tail; serpent l. passing over tail and neck held in claw(?) and beak.
- ( $\beta\gamma$ ) Rev.  $\Lambda\text{OΙ}\text{I}\tau\Lambda\text{V}\Lambda\text{O}$  to l., below, and to r. inwards. Zeus nude striding

r., l. leg advanced, shoulders facing, rest in profile; r. hand upraised grasping thunderbolt (winged at l. end); l. arm outstretched, on hand eagle seated r., head turned back, both wings raised. Incuse square. Cf. no. 73.

a (PI. III, AP  $\beta\gamma$ ). Sir H. Weber, London: 12,23 g (188,8 grains). — Countermarks on obverse (4): nos. IV, VII, triskeles (cf. no. 8, a), and another.

73. (AQ) Obv. Eagle flying up perpendicularly; wings open and bent down towards tail, three rows of feathers; fan-like tail; head r.; beak touching top, claw grasping side, of carapace of Greek tortoise seen from above, its legs struggling, its head bent towards l.; even markings on carapace.

( $\beta\gamma$ ) Rev. Same die as no. 72.

a (PI. III, AQ  $\beta\gamma$ ). Berlin: 12,02 g (185,5 grains); Zeitschr. f. Num. XIX (1895), Pl. III, 1; Babelon, *Traité*, Pl. XXXIX, 1. — Countermarks on obverse (2): no. III and another.

74. (AR) Obv. Similar; but eagle holds serpent upwards passing behind tail and neck, looped once in front of chest, striking down from above at eagle's eye; both claws shown grasping serpent.

( $\beta\delta$ ) Rev. A| $\Gamma$  Nike wearing long chiton running r.; l. leg advanced; wings and shoulders facing, rest in profile; three rows of feathers; l. arm raised bent at elbow and right back at wrist, hand holding wreath inwards; r. hand holding hem of chiton over r. heel. Incuse circle.

a (PI. III, AR  $\beta\delta$ ). Boston: 11,78 g (181,8 grains); Regling, *Cat. Warren*, Pl. XXI, 911. — Countermarks on obverse 4.

#### Series X (Obverse dies AS—AY).

75. (AS) Obv. Eagle flying r. horizontally; wings outstretched, one shown above, the other beneath the body, four rows of feathers; spread tail; claw and beak holding serpent r. passing round tail, striking back from above at eagle's eye.

( $\beta\epsilon$ ) Rev. No legend. Thunderbolt; wings below curling outwards, with two rows of feathers; volutes above curling outwards, one short tendril on each; one moulding around handle; darts merging into flame-lines above and below. Incuse circle.

a (PI. III, [AS]  $\beta\epsilon$ ). Giesecke, Leipsic: 11,05 g (170,5 grains); *Cat. Hirsch XVI* (1906), Pl. XV, 542. — Countermarks on obverse 3.

b. Gotha: 11,15 g (172,0 grains).

76. (AS) Obv. Same die.

( $\beta\zeta$ ) Rev. F|A Similar thunderbolt. Incuse circle. Cf. nos. 88. 111.

a. Boston: 12,01 g (185,3 grains); *Cat. Sotheby, March 1889* (Moore), lot 296; Regling, *Cat. Warren*, Pl. XXI, 910. — Countermarks on obverse 2.

b (PI. III, [AS]  $\beta\zeta$ ). Copenhagen: 11,42 g (176,2 grains). — Countermarks on obverse (4): no. XIV, Corinthian helmet I. (cf. no. 45), gorgoneion (cf. no. 48), and another.

c. Mathey, Paris: 11,36 g (175,3 grains); *Cat. Hirsch XXV* (Philipsen), Pl. XV, 1243; *Cat. Hirsch XXXII* (1912), Pl. XIX, 499. — Countermark on obverse: gorgoneion (cf. no. 48).

77. (AS) Obv. Same die.

( $\beta\eta$ ) Rev.  $\frac{F}{\Xi}|A$  in the four corners. Nike wearing long chiton running l.;



profile; l. arm raised, bent at elbow, hand holding sceptre point of which rests on bottom step; r. hand resting on top step and holding wreath in square. Cf. nos. 91. 125.

a (Pl. III, [AS] βν). Cat. Hirsch XXV (Philipsen), Pl. XV, 1250: 11,22 g (173,1 grain) — Countermarks on obverse (3): bunch of grapes in incuse square (same die on nos. 133, a. 168, d. 172, e), scrotum with pubes and penis (seen from the front cf. no. 29), and another.

83. (AT) Obv. Eagle flying r. horizontally; wings raised over back, the l. higher than the r. one, four rows of feathers; spread tail; one claw shown, grasping back of hare r., with legs outstretched in running attitude.

(βν) Rev.  $\begin{array}{c} \text{F} \\ \text{A} \end{array}$  in the two l. corners. Nike wearing long chiton running l. hair loose; r. leg advanced; wings facing, rest in profile; r. arm extended hand holding drooping wreath; l. hand clasping chlamys which is fastened round waist; between r. wing and r. leg ΘΥΞ. Incuse square. Cf. no. 102

a (Pl. III, AT βν). London: 11,63 g (179,5 grains); B. M. C. Pelop. 16, Pl. X, 14.  
b. Sir H. Weber, London: 11,86 g (183,0 grains).

84. (AT) Obv. Same die.

(βθ) Rev.  $\begin{array}{c} \text{A} \\ \text{A} \\ \text{A} \\ \text{A} \end{array}$  in the four corners. Similar; but no letters. Incuse square Cf. no. 78.

a. Boston: 12,06 g (186,1 grains); Regling, Cat. Warren, Pl. XXI, 914.  
b (Pl. III, [AT] βθ). The Hague: 11,80 g (182,1 grains).  
c. Sir H. Weber, London: 11,60 g (179,0 grains).

85. (AT) Obv. Same die.

(βι) Rev.  $\begin{array}{c} \text{F} \\ \text{A} \\ \text{A} \\ \text{A} \end{array}$  in the four corners. Similar; but hair rolled. Incuse square. Cf. nos. 79. 103. 107. 122.

a (Pl. III, [AT] βι). Berlin: 11,47 g (177,0 grains).  
b. Pozzi, Paris: 11,80 g (182,1 grains). — Countermarks on obverse 2.

86. (AT) Obv. Same die.

(βκ) Rev.  $\begin{array}{c} \text{F} \\ \text{A} \\ \text{A} \\ \text{A} \end{array}$  in the four corners. Nike seated l. as on no. 80 (= 87); same die.

a (Pl. III, [AT] βκ). Berlin: 11,45 g (176,7 grains).  
b. Berlin: 11,50 g (177,5 grains). — Countermarks on obverse (2): Corinthian helmet l. (cf. no. 45) and hind-foot of mule to r. (same die as on nos. 86, g. 92, b. 97. 99. 103. 119, c).  
c. Boston; Catherine P. Perkins Coll. no. 355.  
d. Lederer, Berlin: 10,69 g (165,0 grains).  
e. London: 11,66 g (180,0 grains); B. M. C. Pelop. 17, Pl. X, 15; Num. Chron. 1879, Pl. XI, 8. — Countermarks on obverse (3): no. XIV, gorgoneion (cf. no. 48), and owl l., head facing (same die as on nos. 93, e. 133, e. 140, a. e).  
f. Cat. Meletopoulos (Athens 1884), p. 89, 40, Pl. III, 40: 11,78 g (181,8 grains).  
g. Cat. Hirsch XIII (Rhosopoulos), Pl. XXVIII, 2521: 11,73 g (181,0 grains). — Countermarks on obverse (2): no. XIV, and hind-foot of mule to r. (cf. no. 86, b).  
h. Cat. Hirsch XXV (Philipsen), no. 1251: 10,68 g (164,8 grains).

87. (AU) Obv. Similar; tips of wings farther apart.

(βλ) Rev. Same die as nos. 80. 86.

a (Pl. III, [AU] βλ). Sir H. Weber, London: 11,49 g (177,3 grains). — Countermark on obverse.

88. (AU) Obv. Same die.  
 (βζ) Rev. F|A Thunderbolt as on no. 76 (= 111); same die.  
 a. Brighton: 11,66 g (180,0 grains). — Countermarks on obverse 2.  
 b. Hollschbek, Vienna: 9,97 g (153,9 grains). — Countermark on obverse: E in circular incuse.  
 c (Pl. III, [AU] βζ). New York: 11,56 g (178,4 grains); Hill, Cat. Ward, Pl. XIII, 533. — Countermark on obverse: gorgoneion (cf. no. 48).  
 d. Rollin & Feuardent, Paris: 11,50 g (177,5 grains).  
 e. Sir H. Weber, London: 12,06 g (186,1 grains).
89. (AU) Obv. Same die.  
 (βλ) Rev. F|A in field above. Thunderbolt as on no. 81 (= 90. 97. 123); same die.  
 a. Cambridge (McClellan Coll.): 11,66 g (179,9 grains); Cat. Hirsch XIII (Rhosopoulos), Pl. XXVIII, 2529; Cat. Hirsch XX (Hoskier), Pl. XII, 333. — Countermark on obverse: no. XIV.  
 b (Pl. III, AU βλ). Giesecke, Leipsic: 11,87 g (183,2 grains); Cat. Hirsch XVI (1906), Pl. XV, 554. — Countermarks on obverse (2): Corinthian helmet I. (cf. no. 45) and gorgoneion (cf. no. 48).  
 c. Newell, New York: 10,77 g (166,2 grains).  
 d. Sir H. Weber, London: 11,28 g (174,1 grains).
90. (AV) Obv. Similar; but eagle's beak touches hare's head.  
 (βλ) Rev. Same die as nos. 81. 89. 97. 123.  
 a (Pl. III, AV βλ). Cook, Cambridge: 11,08 g (171,0 grains). — Countermarks (2): one on obverse, and another on reverse.
91. (AV) Obv. Same die.  
 (βμ) Rev. F|A Nike seated r. as on no. 82 (= 125); same die.  
 a (Pl. III, [AV] βμ). Anderson, Athens: 9,60 g (148,1 grains). — Countermarks on obverse 2 (?).
92. (AW) Obv. Similar; but eagle grasps back of sheep r. with legs outstretched in running attitude.  
 (βη) Rev.  $\frac{F|A}{\Xi|\Lambda}$  in the four corners. Nike running l. as on no. 77 (= 116); same die.  
 a (Pl. III, [AW] βη). Berlin: 11,80 g (182,1 grains). — Countermarks on obverse (2): scorpion (same die as on nos. 97. 120, e. 134, a. 136, e. 140, e. 154, f. h) and another.  
 b. New York: 11,50 g (177,5 grains); Hill, Cat. Ward, Pl. XIII, 534 (rev.). — Countermarks on obverse (3): no. XIV, bipennis (same die as on no. 133, d), and mule's hind-foot to r. (cf. no. 86, b). — Reverse misstruck.  
 c. Cat. Hirsch XXI (Consul Weber), Pl. XXIV, 1918: 10,42 g (160,8 grains). — Countermark on obverse: no. XXI. — Obverse misstruck.
93. (AW) Obv. Same die.  
 (βξ) Rev. F|A Thunderbolt; wings above curling outwards, two rows of feathers; volutes below curling outwards, spiral tendril springing from each; one moulding around handle; three straight flame-lines on either side of central dart above and below respectively. Incuse circle.  
 a. Count Dessewffy, Budapest: 11,62 g (179,3 grains).  
 b (Pl. III, [AW] βξ). The Hague: 11,40 g (175,9 grains), formerly Six. — Countermark on obverse.  
 c. Pozzi, Paris: 11,65 g (179,8 grains). — Countermarks on obverse (2): no. XIV twice.

- d. St. Petersburg: 11,55 g (178,2 grains).  
 e. Cat. Hirsch XVI (1906), Pl. XV, 552 = Cat. Merzbacher, Nov. 1909, Pl. 27, no. 2997: 12,09 g (186,6 grains). — Countermarks on obverse (2): owl l, head facing (cf. no. 86, e); and gorgoneion (cf. no. 48).
94. (AW) Obv. Same die.  
 (βo) Rev. F|A Similar thunderbolt; but three slightly curved flame-lines on either side of central dart above and below respectively. Incuse circle.  
 a (Pl. III, AW βo). Cat. Hirsch XXV (Philipsen), Pl. XV, 1256: 12,25 g (189,0 grains).
95. (AW) Obv. Same die.  
 (βπ) Rev. F|A Thunderbolt; wings above, points curling inwards, three rows of feathers; volutes below curling outwards; one moulding around handle; dart above and below merging into wavy flame-lines; in field r. olive-leaf stem downwards. Incuse square. Cf. no. 96.  
 a (Pl. III, [AW] βπ). Sir H. Weber, London: 12,35 g (190,6 grains). — Countermarks on obverse 2.
96. (AX) Obv. Eagle flying r. horizontally; wings raised over back and bent back towards tail; l. shown above the r., five rows of feathers; tail closed; claws grasping chest of hare upside-down r., legs outstretched, head bent back.  
 (βπ) Rev. Same die as no. 95.  
 a. Berlin: 11,76 g (181,5 grains).  
 b. Count Dessewffy, Budapest: 12,29 g (189,7 grains).  
 c. Jakountcbikoff, St. Petersburg: 11,50 g (177,5 grains).  
 d (Pl. III, AX βπ). London: 12,15 g (187,5 grains); B. M. C. Pelop. 19, Pl. XI, 1; Num. Chron. 1879, Pl. XII, 9a; Lambros, Peloponnesos, Pl. ζ, 1.
97. (AY) Obv. F|A Similar; but wings more open, three rows of feathers; eagle's beak fixed in head, claws grasping haunch and back, of fawn in running attitude r.  
 (βλ) Rev. F|A in field above. Thunderbolt as on no. 81 (= 89. 90. 123); same die.  
 a (Pl. III, AY βλ). London: 11,57 g (178,5 grains); Num. Chron. 1894, Pl. I, 5. — Countermarks on obverse (2): hind-foot of mule to r. (cf. no. 86, b) and scorpion (cf. no. 92, a).

Series XI (Obverse dies AZ, BA).

98. (AZ) Obv. Zeus, naked to waist, wearing himation round legs, seated l. on four-legged stool; r. leg in front of l.; r. arm resting on r. knee, thunderbolt in hand; l. arm raised, bent at elbow, hand holding sceptre behind him, point of which rests on ground; in field l. eagle flying l. horizontally, wings bent back towards tail and shown above and below body.  
 (βρ) Rev. AΛ Eagle flying l, alighting upon ground; wings raised over F E back, r. shown behind l., three rows of feathers; tail closed; Λ OI claws open. Incuse square. Cf. nos. 100. 112.  
 a (Pl. III, [AZ] βρ). London: 11,30 g (174,4 grains); B. M. C. Pelop. 12, Pl. X, 11; Num. Chron. 1879, Pl. XI, 2.
99. (AZ) Obv. Same die.

(βσ) Rev. A|F in the top corners. Nike wearing long chiton, peplos wrapped round her from waist to feet, seated l. on top of two steps; head l., hair rolled; wings facing, five rows of feathers; r. foot on lower step, l. on ground; r. arm bent, hand holding long sceptre, end resting on ground before her; l. arm hanging down; plain ground line. Incuse square. Cf. no. 118.

a (Pl. III, AZ βσ). Pozzi, Paris: 11,55 g (178,2 grains). — Countermarks on obverse (3): gorgoneion (cf. no. 48), hind-foot of mule to r. (cf. no. 86, b), and another.

100. (BA) Obv. Similar; but himation round l. arm and legs and hanging down over a rock on which he sits; head turned slightly towards front; r. leg behind l.; sceptre leaning against r. shoulder, point at l. toe; r. arm extended; on the hand eagle l. about to fly off; wings raised over back, r. shown behind l., tail closed.

(βρ) Rev. Same die as nos. 98. 112.

a (Pl. III, [BA] βρ). Seltman, Berkhamsted: 10,37 g (160,0 grains); Cat. Hirsch XXV (Philipsen), Pl. XV, 1248.

101. (BA) Obv. Same die.

(βτ) Rev.  $\begin{array}{l} \text{Eagle flying l. horizontally;} \\ \text{wings, one above, the other} \\ \text{beneath the body, bent back, five rows of feathers;} \\ \text{fan-like tail;} \\ \text{claw and beak grasping serpent l., rearing up in } \zeta \\ \text{in front of head. Incuse square.} \end{array}$

a (Pl. III, BA βτ). London: 12,03 g (185,6 grains); B. M. C. Pelop. 13, Pl. X, 12; Num. Chron. 1861, Pl. VI, 4; Num. Chron. 1879, Pl. XI, 3; Gardner, The Types of Greek Coins, Pl. III, 41 (obv); Lambros, Peloponnesos, Pl. E, 6. — Countermark on obverse: head of Apollo (?) of transitional style to r. (cf. no. 8, a).

b. Sir H. Weber, London: 11,42 g (176,2 grains).

102. (BA) Obv. Same die.

(βν) Rev.  $\begin{array}{l} \text{F} \\ \text{A} \end{array}$  in the two l. corners, and in field ΘVΞ Nike running l. as on no. 83 (same die).

a (Pl. III, [BA] βν). Berlin: 11,77 g (181,6 grains). — Countermarks on obverse (2): crab (cf. no. 28) and hand with fingers spread asunder (thumb to r.; cf. no. 8, a).

#### Series XII (Obverse dies BB—BH).

103. (BB) Obv. Eagle l., horizontally; wings folded down; tail bent down; claws grasping back, beak tearing neck, of young buck l., with neck and hind-legs extended, fore-legs contracted.

(βι) Rev.  $\begin{array}{l} \text{F} \\ \text{A} \end{array}$  in the four corners. Nike wearing long chiton running l.; hair rolled; r. leg advanced; wings facing, rest in profile, four rows of feathers; r. arm extended, hand holding drooping wreath; l. hand clasps her chlamys, which is fastened round waist. Incuse square. Cf. nos. 79. 85. 107. 122.

a (Pl. III, [BB] βι). Cambridge (McClellan Coll.): 11,37 g (175,5 grains). — Countermarks on obverse (2): no. XIV, and hind-foot of mule to r. (cf. no. 86, b). — Obverse misstruck; two fractures in the obverse die.

104. (BB) Obv. Same die.

(βυ) Rev. F|A Thunderbolt; wings above curling outwards; volutes below

curling outwards, one short tendril springing from each; three mouldings around handle; three wavy flame-lines on either side of central dart above and below respectively. Incuse circle.

a (Pl. III, [BB] βv). Seltman, Berkhamsted: 11,54 g (178,1 grains). — Countermark on obverse: crab (cf. no. 28). — Same two fractures in the obverse die as on no. 103.

105. (BB) Obv. Same die.

(βφ) Rev. A|∇ Thunderbolt; Nike-wings above turned downwards towards volutes, three rows of feathers; volutes below curling outwards, one tendril on each; two mouldings around handle; one flame-line above, two below, on either side of central dart. Incuse circle. Cf. no. 106.

a (Pl. III, BB βφ). Naples: 12,20 g (188,3 grains); Fiorelli, *Cat. del Mus. Naz.* 1 (1870), no. 7523; *Num. Chron.* 1879, Pl. XIII, 10; Imhoof-Blumer and Keller, *Thier- und Pflanzenbilder* (1889), Pl. IV, 37 (obv.). — Countermarks on obverse (2): Corinthian helmet 1. (cf. no. 45) and another.

106. (BC) Obv. Eagle flying l. horizontally; wings outstretched, one shown above, the other beneath the body, three rows of feathers; spread tail; claw grasping back, beak tearing neck, of fawn l., with neck and legs extended. In field l. above eagle's head, corn-grain.

(βφ) Rev. Same die as no. 105.

a (Pl. IV, BC βφ). Sir H. Weber, London: 10,02 g (154,7 grains). — Countermark on obverse.

107. (BD) Obv. Similar; but wings bent back towards tail, four rows of feathers. In field l. above eagle's head, cowrie-shell.

(βt) Rev.  $\begin{matrix} \text{F}|\text{A} \\ \exists|\text{A} \end{matrix}$  in the four corners. Nike running l. as on no. 103 (= 79. 85. 122); same die.

a (Pl. IV, BD βt). London: 12,10 g (186,7 grains); B. M. C. Pelop. 15.

108. (BD) Obv. Same die.

(βγ) Rev. [F|A] in the two bottom corners. Thunderbolt; conventional lily ending in twisted flame above; large outspread wings, with two rows of feathers, attached below handle and reaching to upper corners of square; volutes below curling outwards, one short tendril springing from each; one wavy flame-line on either side of the flame-flower above and of the central dart below. Border of dots. Incuse square. Cf. nos. 113. 124. 129 (remade).

a (Pl. IV, [BD] βγ). Rollin & Feuardent, Paris: 11,45 g (176,7 grains).

109. (BD) Obv. Same die.

(βψ) Rev. F|A Thunderbolt; wings above curling inwards, with two rows of feathers; volutes below curling outwards, one tendril on each; moulded handle; two flame-lines on either side of flame-dart above and below respectively. In field r. vine-leaf on stalk with tendril. In field l. olive on stalk between two olive-leaves. Incuse circle.

a (Pl. IV, [BD] βψ). Sir H. Weber, London: 12,02 g (185,5 grains). — Countermark on obverse.

110. (BD) Obv. Same die.

(βω) Rev. F|▷ in the top corners. Nike wearing long chiton, peplos wrapped round her from waist to knees, seated l. on rock; hair rolled, head facing, three-quarters towards l.; wings facing, five rows of feathers; r.

toe behind l. heel; r. arm raised, bent at elbow, hand holding one end of taenia; l. arm hanging down behind, hand holding other end of taenia; plain ground line. Incuse square. Cf. nos. 114. 117.

a (Pl. IV, [BD]  $\beta\omega$ ). Sir H. Weber, London: 11,14 g (171,9 grains); Num. Chron. 1892, Pl. XV, 13. — Countermarks on obverse 2.

111. (BE) Obv. Eagle flying l. horizontally; wings raised over back and bent back, points curling up, r. wing shown above l., four rows of feathers; spread tail; claw round body of lamb l. in running attitude. In field l. above eagle's head, murex-shell.

( $\beta\zeta$ ) Rev. F|A Thunderbolt; wings below curling outwards, with two rows of feathers; volutes above curling outwards, one short tendril on each; one moulding around handle; darts merging into flame-lines above and below. Incuse circle. Cf. nos. 76. 88.

a (Pl. IV, [BE]  $\beta\zeta$ ). Cambridge (McClellan Coll.): 11,93 g (184,2 grains); Cat. Ratto (Genoa), April 1909, Pl. XII, 2973.

112. (BE) Obv. Same die.

( $\beta\rho$ ) Rev. Legend and eagle flying l. as on no. 98 (= 100); same die.

a (Pl. IV, [BE]  $\beta\rho$ ). London: 10,89 g (168,0 grains); Num. Chron. 1891, p. 127, 16; Num. Chron. 1892, p. 13. — Countermark on obverse.

113. (BE) Obv. Same die.

( $\beta\gamma$ ) Rev. [F|A] in the two bottom corners. Thunderbolt as on no. 108 (= 124 = 129[remade]); same die.

a (Pl. IV, [BE]  $\beta\gamma$ ). London: 11,75 g (181,4 grains); Num. Chron. 1890, Pl. XIX, 10. — Countermark on obverse: no. XIV.

114. (BE) Obv. Same die.

( $\beta\omega$ ) Rev. F| $\triangleright$  in the top corners. Nike seated l. as on no. 110 (= 117); same die.

a (Pl. IV, [BE]  $\beta\omega$ ). Berlin: 12,05 g (186,0 grains).

115. (BE) Obv. Same die.

( $\gamma\alpha$ ) Rev.  $\begin{array}{c} \Lambda \\ | \\ \text{E} \end{array}$  in the four corners. Nike wearing long chiton — peplos draped over l. shoulder, under r. arm, across body, and over l. elbow — standing facing; head l., hair rolled; wings with five rows of feathers; l. knee bent; r. foot turned l.; r. arm raised, hand holding end of taenia which hangs down to ground; l. arm bent up, hand holding long palm-branch with fronds at top. Incuse square. Cf. no. 119.

a (Pl. IV, BE  $\gamma\alpha$ ). Paris: 12,14 g (187,3 grains). — Countermarks on obverse (2): sea-turtle seen from above as on the Aeginetan coins (cf. no. 58) and Corinthian helmet l. (cf. no. 45).

116. (BF) Obv. Eagle standing l. on short exergual line; wings raised over back, tip of r. wing below tip of l., three rows of feathers; small folded tail; in front on the line, dead crested heron upside-down, head dangling, wings folded.

( $\beta\eta$ ) Rev.  $\begin{array}{c} \text{F} \\ \text{E} \end{array} | \begin{array}{c} \Lambda \\ \Lambda \end{array}$  in the four corners. Nike running l. as on no. 77 (= 92); same die.

a (Pl. IV, [BF]  $\beta\eta$ ). Paris: 11,64 g (179,6 grains). — Countermark on obverse: no. XIII.

117. (BF) Obv. Same die.  
(βω) Rev. F|> in the top corners. Nike seated l. as on no. 110 (= 114); same die.  
a (Pl. IV, [BF] βω). Seltman, Berkhamsted: 11,10 g (171,3 grains); Cat. Hirsch XXV (Philipsen), Pl. XV, 1252; Cat. Hirsch XXXII (1912), Pl. XIX, 501.
118. (BF) Obv. Same die.  
(βσ) Rev. A|F in the top corners. Nike seated l. as on no. 99 (same die).  
a (Pl. IV, [BF] βσ). Cambridge (McClellan Coll.): 11,08 g (171,0 grains); Cat. Hirsch XIII (Rhosopoulos), Pl. XXIX, 2545.  
b. Sir H. Weber, London: 11,20 g (172,8 grains); Lambros, Peloponnesos (1891), Pl. E, 9; Num. Chron. 1892, p. 194, 17. — Countermark on obverse: crab (cf. no. 28).
119. (BF) Obv. Same die.  
(γα) Rev.  $\begin{array}{c} \Lambda \\ | \\ \Gamma \\ | \\ E \end{array}$  in the four corners. Nike standing facing as on no. 115 (same die).  
a (Pl. IV, [BF] γα). Berlin: 11,84 g (182,7 grains). — Countermarks on obverse (3): crab (cf. no. 28) and 2 others.  
b. Boston; Catherine P. Perkins Coll. no. 354.  
c. London: 11,85 g (182,9 grains); B. M. C. Pelop. 18, Pl. X, 16; Num. Chron. 1879, Pl. XI, 6. — Countermarks on obverse (4): Corinthian helmet l. (cf. no. 45), mule's hind-foot to r. (cf. no. 86, b), crab (cf. no. 28), and another.
120. (BF) Obv. Same die.  
(γβ) Rev. AΛEIOV in field r. downwards. Nike wearing long chiton, peplos wrapped round her from waist to feet, seated r. on square block; hair rolled, head r. but slightly facing and bent downwards; wings facing, five rows of feathers; knees crossed, r. over l., l. foot on ground; l. arm bent, elbow on r. knee, hand supporting her head; r. arm hanging down, hand holding two short laurel twigs; plain ground line. Incuse square. Cf. no. 121.  
a. Jameson, Paris: 11,86 g (183,0 grains); Cat. Sotheby, June 1896 (Bunbury), Pl. VII, 1088; Cat. Sotheby, Feb. 1909 (Benson), Pl. XVIII, 558. — Countermarks on obverse (4): nos. XIV, XX, crab (cf. no. 28), and hand with fingers spread asunder (thumb to r.; cf. no. 8, a).  
b. Munich: 11,56 g (178,4 grains); Cat. Hirsch XIII (Rhosopoulos), Pl. XXVIII, 2520. — Countermark on obverse: gorgoneion (cf. no. 4, b).  
c (Pl. IV, BF γβ). Paris: 12,20 g (188,3 grains), formerly duc de Luynes; Imhoof-Blumer and Keller, Thier- und Pflanzenbilder, Pl. IV, 38 (obv.); Lambros, Peloponnesos, Pl. E, 8. — Countermarks on obverse (2): gorgoneion (cf. no. 80, a) and another.  
d. St. Florian Stift; Num. Chron. 1879, Pl. XI, 7. — Countermark on obverse.  
e. Sir H. Weber, London: 11,85 g (182,9 grains); Num. Chron. 1892, Pl. XV, 14. — Countermark on obverse: scorpion (cf. no. 92, a).  
f. Cat. Hirsch XII (1904), Pl. V, 202; 12,10 g (186,7 grains).
121. (BG) Obv. Eagle flying l. horizontally; wings raised over back, r. wing showing above l., four rows of feathers; tail slightly spread; claws grasping haunch of young fallow-deer, with short branching horns, l., its legs in running position. In field l. above eagle's head, sacrificial axe on handle upside-down, with blade end to l., mallet end to r.  
(γβ) Rev. Same die as no. 120.  
a (Pl. IV, BG γβ). Giesecke, Leipsic: 11,57 g (178,5 grains); Cat. Hirsch XVI (1906), Pl. XV, 548.

122. (BG) Obv. Same die.  
 (βι) Rev.  $\begin{array}{c} \text{F}|\text{A} \\ \text{E}|\text{A} \\ \text{A} \end{array}$  in the four corners. Nike running l. as on no. 103. (= 79. 85. 107); same die.  
 a (Pl. IV, [BG]βι). Hirsch, Munich: 11,57 g (178,5 grains).
123. (BH) Obv. F|A Eagle flying l. nearly upright; wings raised together over back and bent backwards, the r. one higher than the l., four rows of feathers; tail closed; claws grasping serpent l. undulating, with looped neck, striking upwards at eagle's head.  
 (βλ) Rev. F|A in field above. Thunderbolt as on no. 81 (= 89. 90. 97); same die.  
 a. Berlin: 11,67 g (180,1 grains).  
 b. Boston: 11,80 g (182,1 grains); Cat. Sotheby, March 1889 (Moore), lot 297; Regling, Cat. Warren, Pl. XXI, 916 (rev.).  
 c. Hirsch, Munich: 11,74 g (181,2 grains). — Countermark on obverse.  
 d (Pl. IV, BHβλ). Paris: 11,85 g (182,9 grains). — Countermarks on obverse (2): gorgoneion (cf. no. 80, a) and hand with fingers spread asunder (thumb to r., double-struck; cf. no. 8, a).
124. (BH) Obv. Same die.  
 (βγ) Rev. F|A in the two bottom corners. Thunderbolt as on no. 108 (= 113 = 129[remade]); same die.  
 a. Berlin: 11,85 g (182,9 grains); Lambros, Peloponnesos, Pl. ζ, 2.  
 b. Berlin: 11,65 g (179,8 grains). — Countermark on obverse: no. XIV. — Flaw in reverse die.  
 c (Pl. IV, [BH]βγ). Cambridge (McClellan Coll.): 12,03 g (185,7 grains). — Flaw in reverse die.  
 d. Copenhagen: 11,38 g (175,6 grains). — Countermark on obverse. — Flaw in reverse die.  
 e. Hirsch, Munich: 11,65 g (179,8 grains). — Countermark on obverse. — Flaw in reverse die.  
 f. Jakountchikoff, St. Petersburg: 12,08 g (186,4 grains). — Slight flaw in reverse die.  
 g. London: 11,81 g (182,3 grains); B. M. C. Pelop. 25, Pl. XI, 6; Num. Chron. 1879, Pl. XIII, 8. — Countermarks on obverse (2): hand with fingers spread asunder (thumb to r.; cf. no. 19, a) and another. — Flaw in reverse die.  
 h. Pozzi, Paris: 11,75 g (181,3 grains). — Countermarks on obverse (2): Corinthian helmet l. (cf. no. 45) and another. — Flaw in reverse die.  
 i. Seltman, Berkhamsted: 10,10 g (155,9 grains); Cat. Hirsch XXV (Philipsen), no. 1259.  
 k. Sir H. Weber, London: 12,09 g (186,6 grains). — Countermark on obverse: acorn.
125. (BH) Obv. Same die.  
 (βμ) Rev. F|A Nike seated r. as on no. 82 (= 91); same die.  
 a. Boston: 11,97 g (184,7 grains); Regling, Cat. Warren, Pl. XXI, 915. — Countermarks on obverse 2.  
 b. London: 11,72 g (180,8 grains); Num. Chron. 1892, Pl. I, 20 (rev.). — Countermarks on obverse 3.  
 c (Pl. IV, [BH]βμ). Paris: 11,65 g (179,8 grains). — Countermarks on obverse (4): nos. XIII, XIV, acorn, and hand with fingers spread asunder (thumb to r.; cf. no. 19, a).  
 d. Cat. Sotheby, May 1897 (Hobart Smith), Pl. II, 97 = Cat. Sotheby, Febr. 1909 (Benson), Pl. XVIII, 559: 11,73 g (181,0 grains). — Countermarks on obverse 2 or 3.

Series IX contains four remarkable staters. The obverse of the first (no. 71) and the reverses of the other three (nos. 72. 73. 74) all hark back to coins of series V struck, I believe, some five Olympiads before. In this way they may be said to be archaistic restitutions. The artists responsible for these dies were feeling after an ideal of art, which on the dies of the three following series is suddenly realized. On the obverse of no. 71 (Pl. III, AO), on the reverses of nos. 72—74 (Pl. III,  $\beta\gamma$ ,  $\beta\delta$ ), they allow themselves to be bound by existing conventions. But on the reverse of no. 71 (Pl. III,  $\beta\beta$ ) and on the obverses of the others (Pl. III, AP, AQ, AR) they have struck out a new line for themselves with strange result on no. 71, and with decided success on nos. 73. 74.

To take the archaistic dies first: no. 71 (Pl. III, AO) recalls no. 34 (Pl. II, Y) of series V. The full legend FAAEION is on one and the other, while the eagle on no. 71 has wings resembling those of an Egyptian vulture even more closely than on no. 34. The bird carries no prey. The figure of Zeus on nos. 72. 73 (Pl. III,  $\beta\gamma$ ) is, as has been stated above (under Group B), a restitution of the earlier type no. 37 (Pl. II,  $\alpha$ ). Even were it dissociated from its advanced obverse, it would manifestly strike one as being decidedly later than its prototype. The eye of the god is, as a close study with a lens will show, no longer drawn in full, but correctly in profile. The anatomy, though somewhat exaggerated, is that of a human figure, not of a primitive wooden idol. To regard these three staters as contemporary seems to me an untenable position, to treat nos. 72. 73 as the earlier ones is, to say the least, fantastic. The Nike on no. 74 (Pl. III,  $\beta\delta$ ) is from another archaistic die. The latest Nike of the foregoing series (no. 70; Pl. II,  $\beta\alpha$ ) seems almost to be in advance of her. Careful scrutiny, however, will show that she on no. 74 displays more delicate modelling than any which precede her. She may be the work of an older engraver, a workman with more finished technique but more conservative notions, than his younger contemporaries who executed dies like  $\beta\beta$ , AQ, AR.

This brings us to these three dies which display such marked originality of treatment. The ambition of the artist who engraved the die of no. 71 (Pl. III,  $\beta\beta$ ) has clearly surpassed his capabilities. Apparently he has set out to draw Nike in profile to right, standing and holding a taenia. Her head was successful, and he went on to engrave her left arm raised in front of the left wing, her right leg in profile showing through the drapery, her right shoulder and arm bent at the elbow just over the right hip; then he came to the filling up of the left side of the field of this coin with Nike's right wing and the whole thing „stumped“ him. It looked wrong. So he obliterated the right forearm as much as possible by putting in the taenia, and, having broadened her chest, put in a new right arm in front of the right wing holding the other end of the said taenia. But the unobliterated upper arm and the right leg in profile remain on this three-armed and one-legged Nike!

The artist who engraved the obverses of nos. 73. 74 (Pl. III, AQ, AR) — they are evidently both by the same hand — has been most successful in rendering his eagles in a difficult and entirely new attitude. On both dies, instead of flying to the right or left, the bird flies upwards. On no. 73 it carries a tortoise, by far

the earliest representation of this creature on a Greek coin<sup>1)</sup>. The clever way in which the feeble struggles of the creature, as it kicks and moves its head from side to side, are rendered will be apparent to anyone who has ever handled a „Testudo Graeca“. The eagle is drawn with spirit, the wings are outspread, the feathers more naturally treated than on any preceding piece. The same may be said of the bird on no. 74, which carries a serpent instead of the tortoise. Note how its right wing is raised higher than its left. Unfortunately this die is rather marred by countermarks.

Fractions: Hemidrachm. Obv. like no. 71 (AO), rev. similar to no. 74 (β<sup>2</sup>). B. M. C. Pelop. 7, Pl. X, 7; weight: 2,95 g (45,5 grains). — Pl. VIII, 6.

Just as in the former groups A and B we had three series of staters (II. III. IV and VI. VII. VIII respectively) which were contemporary with each other and possessed interchangeable reverse dies, so here in group C we have them again, viz: X. XI. XII.

The obverse dies of Series X have their eagles to the right, those of XII have them to the left. Shortly before 457 B. C. the majestic pediment groups of the great temple of Zeus at Olympia had been completed. And, I think, there is no doubt of the fact that their influence appears to a marked extent on the coins of these three contemporary series. Reference was made above to a school of young and ambitious engravers, who, striking out a new line for themselves, seem to have produced the more advanced dies of the staters in the foregoing series, while their older and more conservative contemporaries stuck to the conventional and established methods of their art. Here, in these series X. XI. XII, we may see this same new school brought under the influence of the sculptors of the pediments and metopes of the temple of Zeus.

It is more in the drapery than in the attitude of the first Nike no. 77 (Pl. III, β<sub>7</sub>) of our series that we see the influence of the new school. The big strides that she takes remind one of the Nikes of a much earlier period (Pl. I, λ, π). But this is quite redeemed in the two next dies nos. 78. 79 (Pl. III, β<sub>8</sub>, β<sub>9</sub>) which have running Nikes unsurpassed for beauty and delicacy of execution in the whole series of Greek numismatics<sup>2)</sup>. They seem to move along gracefully and lightly without touching the ground, and in the graceful pose of their heads they remind one of the Athenian maidens on the Parthenon frieze. Another die closely resembling that of no. 77 (Pl. III, β<sub>7</sub>) and of less artistic merit than those of nos. 78. 79 (Pl. III, β<sub>8</sub>, β<sub>9</sub>) calls for special mention, viz the reverse of no. 83 (= no. 102; Pl. III, β<sub>v</sub>). It bears what must almost certainly be an artist's signature, the letters ΘΒΞ. It

<sup>1)</sup> On the early coins of Lycia, as on the Aeginetan staters, it is a „leather-backed“ turtle. The tortoise (Testudo Graeca) does not occur at Aegina before 404 B. C. Imhoof-Blumer and Keller, Thier- und Pflanzenbilder (1889), Pl. VI, 27 show a Lycian coin which they describe as bearing a tortoise. But surely this animal is a „leather-backed“ turtle, just as much as no. 25 of Aegina on the same plate. It has no „marginal plates“ to its carapace like the tortoise on no. 26.

<sup>2)</sup> Unfortunately owing, either to carelessness, or to technical imperfections in the Olympian mint apparatus, we have no single coin that does either of these dies justice; β<sub>8</sub> however occurs again as the reverse of our no. 84 (Pl. III), where it fortunately shows to advantage that portion of the coin which is badly struck on no. 78. β<sub>9</sub> occurs with no less than five obverse dies, viz nos. 79. 85. 103. 107. 122 (AS, AT, BB, BD, BG, cf. Pls. III and IV).

has been fancifully suggested<sup>1)</sup> that this Εὐθ... is the same man who engraved tetradrachms at Syracuse quite thirty years later<sup>2)</sup>. It is quite inconceivable that these pieces should have been produced by the same hand, as a glance at their style will show. The suggestion that this Εὐθ... may have been a magistrate<sup>3)</sup> can hardly be supported. Magistrates' names do not begin at Elis till a period about a hundred years later. So isolated an instance cannot, therefore, well be anything but an artist's signature, presumably the earliest known on any Greek coin.

There is likewise a single instance in this series of the occurrence of a symbol (olive-leaf stem downwards) on the reverse of nos. 95. 96 (Pl. III, βπ). The use of symbols appears here for the first time. In series XII it becomes somewhat more frequent, but is soon discontinued, nor does it recur until a considerably later period.

We now come to the two dies in our series with seated figures of Nike. The older of the two, which occurs as the reverse of nos. 80. 86. 87 (Pl. III, βκ), is a work of art worthy of being ranked with the sculptures of its period. The delicacy of the work and the fineness of feeling is equal to the most beautiful of the running Nikes (Pl. III, βδ); but the pose of the figure, the modelling, and the composition of the design surpass her. Observe the exquisite modelling of the right arm and the hand which is laid upon the lion-head fountain. It is this coin, presumably, that suggested the well-known type which occurs at a later date on a coin of Terina<sup>4)</sup> which represents Nike filling a vase at a fountain with a lion's head<sup>5)</sup>. The other seated Nike (Pl. III, βμ) belongs strictly speaking rather to series XII, where she will be mentioned again. The same remark applies to the broad-winged thunderbolt of nos. 81. 89. 90 (Pl. III, βλ). The occurrence of these two dies in the series under consideration can best be accounted for by the supposition that the three obverse dies with which they occur (Pl. III, AS, AU, AV) were exceptionally durable, and having lain idle for several years, were once more made use of by the workmen of the mint.

This brings us to the consideration of the obverse dies of series X. The first one, AS, resembles those dies of series VI in the foregoing group in which the eagle is shown with one wing above, the other below the body. It is a fine design, but too large for the staters. Of the eighteen examples of this obverse that have come under my observation, not one has the bird completely on the flan. The next three dies (Pl. III, AT, AU, AV) are all developments from the obverses of series VIII in the group B. The die AW resembles them, save that the eagle is stouter and carries a sheep in its claws in place of a hare. AX shows a further advance in style. The eagle which is seated on the chest of a dead hare holds its wings in a very realistic manner. The same remark applies to the bird on AY, which has just landed upon the back of a running fawn. The engravers of the dies AW

<sup>1)</sup> Gardner, B. M. C. Peloponnesus, p. XXXVI; Head, *Hist. Num.*<sup>1</sup> (1837), p. 354.

<sup>2)</sup> The beautiful reverses which have in the exergue Scylla urging on her own dogs to chase a fish: Du Chastel, *Syracuse* (1898), Pl. VI, 70—72.

<sup>3)</sup> Hill, *Handbook of Greek and Roman Coins* (1899), p. 194, footnote 4 and asterisk.

<sup>4)</sup> By way of illustrating the superiority of these

Olympian Nikes over those of Terina, it is interesting to compare their hands. On looking at the Terinaean coins, it will be seen that the hands of the figures are almost invariably disproportionately large, those of the Olympian ones are not; cf. Regling, *Terina* (1906), Pls. II and III.

<sup>5)</sup> Regling, *op. cit.*, Pl. II, ζζ.

and AY, in their desire for introducing variety into the eagle's prey, have lost their sense of proportion and have made the sheep and the fawn no bigger than a hare. Only on the fine die AX do we really get the correct proportions between bird and beast.

Fractions: Drachm. Obv. similar to nos. 92 ff. (AW), but with hare; rev. similar to nos. 95. 96 ( $\beta\pi$ ), but thunderbolt reversed; no symbol. a (Pl. VIII, 7). Graz Museum: 4,52 g (69,7 grains). — b (same dies). Cat. Sotheby, Feb. 1909 (Benson), Pl. XVIII, 560: 4,41 g (68,0 grains).

Hemidrachm like no. 96 (AX  $\beta\pi$ ), save that on the rev. the olive-leaf is in field I. instead of r. B. M. C. Pelop. 20, Pl. XI, 2: 2,75 g (42,5 grains).

Obol. Obv. like no. 96 (AX); rev. more similar to no. 94 ( $\beta\sigma$ ), but thunderbolt reversed. B. M. C. Pelop. 21, Pl. XI, 3: 0,68 g (10,5 grains).

Series XI is a very small one, containing only two obverse and two reverse dies, though two other reverse dies, viz: nos. 99. 102 (Pl. III,  $\beta\sigma$ ,  $\beta\nu$ ) strictly belonging to the following and the former series respectively, occur in it. For the first time in the history of the mint there is no eagle on the obverse die. The bird has been transferred to the reverse, while on the obverse there is a figure of Zeus, seated, on the earlier die (Pl. III, AZ) upon a throne, on the later (Pl. III, BA) upon a rock. Were it not for the fact that these two dies actually share a reverse die, one would be tempted to put an interval of several years between them. As it is, one must conclude that AZ is the work of an older man, BA the work of a younger and more ambitious contemporary.

Though new to the coins of Olympia, a seated Zeus was the regular obverse type of the coinage of the Arcadian League minted at Heraea of which Pl. VIII, 8 (Paris; Zeitschr. f. Num. III, Pl. VII, 2) is a beautiful archaic example. The Zeus on no. 99 (Pl. III, AZ) is more or less of a close copy of the figures on the Arcadian coins. He holds sceptre and thunderbolt just as they do. The eagle which flies from him is strangely reminiscent of the very early eagles of series I and II<sup>1)</sup>. Zeus is seated on a throne without a back. His head is disproportionately large. This same fault also goes to show that the other die BA is nearly contemporary with AZ; for Zeus on it also has too large a head. Otherwise this obverse is a fine and bold design strangely advanced for the period.

The two reverse dies which actually belong to this series call for some comment. The eagle on the first (Pl. III,  $\beta\rho$ ) carries no prey whatever and is shown in the action of alighting on the ground. It is used with both the „seated Zeus“ dies, and after having apparently lain idle for some time and become slightly corroded, was used again with an obverse die belonging to series XII, viz no. 112 (Pl. IV, BE  $\beta\rho$ ). The die bears the full ethnic  $\Phi\Lambda\Lambda\epsilon\text{I}\text{ON}$ . On the other die the eagle carries a serpent (Pl. III,  $\beta\tau$ ). A very successful attempt has been made at representing the perspective of the right wing of this bird.

The two Arcadian triobols figured on Pl. VIII, 9. 10 (both in the Berlin Collection; Zeitschr. f. Num. III, Pl. VIII, 6. 5) are interesting as showing how the Heraean mint copied the Olympian, especially in the eagle over the right hand of Zeus. Note how closely the eagle on Pl. VIII, 9 resembles that on our die  $\beta\rho$ ; the bird

<sup>1)</sup> Cf. B. M. Cat. Peloponnesus, Pl. XXXI, 11. 15.  
See also 17. 20. 21. 22 and Pl. XXXII, 1. 3. 5

whose eagles suggest our Olympian eagles of series V and VI.

on Pl. VIII, 10 that on  $\beta\tau$ . In passing it is also worth noting, how the female heads on the reverses of these two triobols resemble the heads of many of the Nikes which occur in the group under consideration.

Two dies with the running Nike that strictly belong to series X have been taken over into Series XII. The die  $\beta\eta$  once, as a reverse to BF (Pl. IV); the die  $\beta\iota$  three times, with the obverses BB, BD, BG (Pls. III. IV). The Nikes actually belonging to this series are, with one exception, seated. Owing to classification by obverses, I have been forced to place what is, presumably, the earliest of these four seated figures ( $\beta\mu$ ) last; for the obverse with which it most frequently occurs (BH) is undoubtedly the latest of our series, forming, as it does, a link with the first obverse die of series XIII in the following group D. However the Nike (Pl. IV,  $\beta\mu$ ) cannot be much earlier than the other three. She is seated in a graceful attitude on the topmost of three steps and holds a wreath and a long sceptre. Perhaps she is the work of the artist who engraved the best of the running Nikes. Another Nike (Pl. IV,  $\beta\varsigma$ ) on the reverse of no. 118 closely resembles her in attitude, but is turned to the left. This is the die that has been used with the „enthroned Zeus“ die (Pl. III, AZ) of the previous series. One is tempted to ascribe a third one (Pl. IV,  $\beta\omega$ ), which occurs with three different obverses (BD, BE, BF), to the same artist who engraved the Zeus seated on a rock (Pl. III, BA) of series XI. Her attitude, half facing, the rock on which she sits, and her large head all support this suggestion. She holds the two ends of a long taenia, one in each hand. The fourth seated Nike (Pl. IV,  $\gamma\beta$ ), a famous die, shows considerable merit and originality but will not bear comparison with the beautiful figure of the goddess on coins like nos. 80. 86. 87 (Pl. III,  $\beta\kappa$ ). Her position has been described as a mourning attitude (Sir H. Weber, Num. Chron. 1892, p. 194), but surely such an idea is incompatible with the nature of the Olympian coinage. A sad or regrettable incident would scarcely be recorded upon what is especially a festival coinage. I would describe her position as a pensive, rather than a mourning attitude. Sitting upon a square block she holds a wreath in one hand, while she rests her head upon the other. Both this die  $\gamma\beta$  and the one mentioned before it,  $\beta\omega$ , show a perspective in the drawing of Nike's wings that had not occurred before. Fortunately the Bibliothèque Nationale at Paris possesses a really fine example (Pl. IV,  $\gamma\alpha$ ) of the beautiful standing Nike, which had hitherto only been published in the poor specimen belonging to the British Museum (no. 119, c; the Berlin specimen, no. 119, a, is also poor). She holds a taenia and a long palm-branch; and the drapery of her peplos, like her whole attitude, is beautifully engraved. It seems never to have been noticed before that on the two reverse dies last described the digamma at the beginning of the ethnic is wanting; die  $\gamma\beta$  reads  $\Lambda\Lambda\text{EION}$ , die  $\gamma\alpha$ :  $\Lambda\Lambda\text{EI}$ . I believe these are the only instances before Roman times of this name without its digamma.

Turning now to the eagles of series XII all of which are to the left, we come to the first instance of an Olympian coin representing the bird with its wings folded close to the body (Pl. III, BB). The prey, instead of a hare, is a young buck. On the two next dies (Pl. IV, BC, BD) a fawn is carried, and the wings of the eagle are shown above and below the body. On the second die, BD, they are actually bent back towards the tail, an obvious archaism like the wide-spread tails on both

these dies. The bird on the die BE (Pl. IV) is a clumsy large-headed creature, clasping a lamb which is much better drawn than the eagle which carries it. Next we come to an eagle which stands upon a short line, both its wings raised over its back (Pl. IV, BF). In front of it lies a disproportionately small crested heron<sup>1)</sup> upside-down with dangling head. The die BG (Pl. IV) has an eagle resembling the one on BE, but a fallow-deer, with short branching horns, has taken the place of the lamb. The last five dies mentioned (BC to BG) fall naturally together, since they all have symbols in the field beside the eagle. These symbols are a corn-grain, a cowrie-shell, a murex-shell, the crested heron already referred to, and a sacrificial axe with blade and mallet ends. No. 109 has symbols on the reverse as well (Pl. IV,  $\beta\psi$ ), a vine-leaf on a stalk with tendril in the field to r., an olive on a stalk between two olive-leaves in the field to l. The last eagle of our series (Pl. IV, BH) is a spirited and finely proportioned bird, which is fighting in earnest with the serpent that it grasps in its claws. FA appears on this obverse die alone in this series. This eagle is used only with two similar thunderbolt-dies (Pl. IV,  $\beta\lambda$ ,  $\beta\chi$ ) — those with the big open wings (cf. below on „The Thunderbolt“) — and with the earliest of the seated Nikes of our series mentioned above (Pl. IV,  $\beta\mu$ ). As has already been pointed out above, three particularly enduring obverse dies from series X have been used with the reverses  $\beta\lambda$  and  $\beta\mu$ , which seem to have belonged strictly to the die BH. The latter was evidently not a very enduring die, as specimens like no. 125, b and d show.

Fractions: Drachm. Obv. similar to nos. 107 ff. (BD), but with hare, upside-down; symbol, small two-handled vase; rev. similar to nos. 105. 106 ( $\beta\varphi$ ), but volutes above, wings below.

British Museum. — Pl. VIII, 11.

Drachm. Obv. same die; rev. like no. 109 ( $\beta\psi$ ), but no symbols. Cat. Hirsch XVIII (1907), Pl. XXXVI, 2408: 6,05 g (93,4 grains). — Pl. VIII, 12 (rev.).

Hemidrachm. Obv. similar to nos. 111 ff. (BE), but with hare, upside-down; symbol, an ear of corn over the eagle's tail; rev. like no. 109 ( $\beta\psi$ ), but no symbols. Cat. Hirsch XVIII (1907), Pl. XXXVI, 2409: 3,08 g (47,5 grains).

Drachm. Obv. like nos. 123 ff. (BH); rev. like nos. 95. 96 ( $\beta\pi$ ), but no symbol. Anderson, Athens: 4,95 g (76,4 grains). — Pl. VIII, 13.

The proportion of duplicates in this group C of ours is greater than in either of the preceding groups. In one instance, I have been able to record as many as ten specimens struck from one pair of dies. But in most cases only one or two instances of a certain die-combination are known. The dates I have tentatively assigned to this group are from the 82nd to the 87th Olympiad, a time which was without doubt the most prosperous period in the history of Hellas, and therefore of Olympia, the centre of Hellas. During this period of comparative domestic peace, Olympia was open to all the Greeks, and the prosperity of the whole of Greece during this time makes it quite justifiable to crowd as many as 55 different coins into a period of twenty years. In the second year of the 87th Olympiad (B. C. 431) the Peloponnesian War broke out, and the Athenians and their allies were

<sup>1)</sup> Sir H. Weber (Num. Chron. 1892, p. 194) has, very naturally, mistaken this dead crested heron for a lizard running towards the eagle's feet, supposing the heron's tail to be the reptile's

head. The incompleteness of his specimen of the coin, which compare l. cit., Pl. XV, 14, accounts for this error.

excluded by the Spartans from all access to the Altis<sup>1)</sup>. The effect on the coinage of the next ten years, during which the Spartans enforced this exclusion, is astonishing. Only 15 different coins can be assigned to the period between the 87th and 90th Olympiads.

**Group D (Series XIII. XIV).**

ca. B. C. 432 to ca. B. C. 421.

Summary of staters:

Obverse dies 5 (BJ—BN). Obverse dies using more than one reverse 4.  
 Reverse dies 9 (βχ, γγ—γκ). Reverse dies used with more than one obv. 5.  
 Coins 15. Number of specimens recorded 42.

Series XIII (Obverse dies BJ, BK, BL).

126. (BJ) Obv. Eagle flying r.; r. wing raised over back, l. wing drooping below breast, three rows of feathers; tail spread; beak holding neck, claws grasping tail, of serpent r., looped beneath tail and at breast of eagle, striking down at beak.  
 (γγ) Rev. F|A Thunderbolt; wings above curling outwards, two rows of feathers; volutes below curling outwards, three acanthus-petals on the upper side of each; long handle; three flame-lines above, two below on either side of the central dart. Shallow incuse circle. Cf. nos. 130. 135.  
 a (Pl. IV, BJ γγ). Sir H. Weber, London: 11,72 g (180,8 grains). — Countermarks on obverse (2): gorgoneion (cf. no. 80, a) and mule's hind-foot to r. (other die than on no. 86, b etc.).
127. (BJ) Obv. Same die.  
 (γδ) Rev. A|Γ Thunderbolt; straight wings below, shoulders fastened at handle, ends pointing downwards, two rows of feathers, a tendril curving outwards beneath each; small volutes above curling outwards, three acanthus-petals on the underside of each; long handle; three flame-lines on either side of the central dart above and below respectively, the upper dart spiral. Shallow incuse circle. Cf. no. 131.  
 a (Pl. IV, [BJ] γδ). Pozzi, Paris: 10,20 g (157,4 grains); Cat. Hirsch XIII (Rhouso-poulos), Pl. XXVIII, 2523.
128. (BJ) Obv. Same die.  
 (γε) Rev. F|A Nike wearing long chiton, peplos wrapped round her from waist to feet, seated l. on topmost of two steps; head l., hair rolled; wings facing, three rows of feathers; r. foot behind lower step, l. foot in front of it; r. hand resting on r. knee holds end of long palm-branch the top of which passes behind her head; l. hand resting on corner of upper step. In exergue olive-twig with five leaves, stalk r. Shallow incuse circle. Cf. no. 133.

<sup>1)</sup> Grote, History of Greece<sup>2</sup>, vol. VII (1851), p. 71; also p. 76, footnote, where it is conclusively proved that this exclusion existed from the time of the outbreak of the Peloponnesian War down

to the Peace of Nicias in 421 B. C., an exclusion not only of the Athenians, but of their allies also.

- a (Pl. IV, [BJ] γε). Berlin: 12,15 g (187,5 grains); Friedlaender and von Sallet, Das Königliche Münzkabinet<sup>2</sup>, Pl. II, 136.
129. (BK) Obv. Eagle flying r.; wings raised over back, l. wing shown above r., three rows of feathers; tail open and bent downwards; beak near nose, claws grasping back, of hare r., in running attitude, ears laid back.  
(βγ) Rev. [F|A] in the two bottom corners. Thunderbolt as on no. 108 (= 113. 124); same die, but remade and flaw partly corrected.  
a (Pl. IV, [BK] βγ). Pozzi, Paris: 11,65 g (179,8 grains).
130. (BK) Obv. Same die.  
(γγ) Rev. F|A Thunderbolt as on no. 126 (= 135); same die.  
a (Pl. IV, [BK] γγ). Cambridge (McClellan Coll.): 11,60 g (179,0 grains); Cat. Hirsch XVI (1906), Pl. XV, 551. — Countermark on obverse: no. XIV.  
b. St. Petersburg: 11,50 g (177,5 grains).
131. (BK) Obv. Same die.  
(γδ) Rev. A|∇ Thunderbolt as on no. 127 (same die).  
a (Pl. IV, [BK] γδ). Cambridge (McClellan Coll.): 11,63 g (179,5 grains).  
b. Copenhagen: 11,78 g (181,8 grains). — Countermark on obverse.
132. (BK) Obv. Same die.  
(γζ) Rev. FAΛ|EIOΛ to l. and to r. inwards. Thunderbolt; straight wings below, shoulders fastened at handle, ends pointing downwards, two rows of feathers, a tendril curving outwards beneath each; small volutes above curling outwards, four acanthus-petals on the upper side of each; long handle; one plain and one dotted flame-line on either side of the central dart above and below, the upper dart spiral. Shallow incuse circle. Cf. no. 134.  
a (Pl. IV, BK γζ). London: 11,88 g (183,3 grains); B. M. C. Pelop. 26, Pl. XI, 7; B. M. Guide<sup>2</sup> Pl. 14,34; Num. Chron. 1879, Pl. XIII, 9; Gardner, The Types of Greek Coins, Pl. VIII, 24 (rev.); Lambros, Peloponnesos, Pl. ζ, 3; Head, Hist. Num.<sup>2</sup>, p. 420, fig. 227. — Countermarks on obverse 2.
133. (BK) Obv. Same die.  
(γε) Rev. F|A Nike seated l. as on no. 128 (same die).  
a. Berlin: 11,54 g (178,1 grains); Num. Chron. 1879, Pl. XIII, 1; Lambros, Peloponnesos, Pl. E, 10. — Countermarks on obverse (2): no. XIV, and bunch of grapes in incuse square (cf. no. 82).  
b. Sir Arthur Evans, Whitebarn: 11,40 g (176,0 grains); Cat. Hirsch XXI (Consul Weber), Pl. XXIV, 1927. — Countermarks on obverse (2): no. XIV, and scrotum with pubes and penis (seen from the front; cf. no. 28).  
c. Jameson, Paris: 12,18 g (188,0 grains); Cat. Sotheby, June 1896 (Bunbury), Pl. VII, 1089; Cat. Christie, May 1908 (Sir R. Knowles), lot 68.  
d (Pl. IV, [BK] γε). London: 11,87 g (183,2 grains); B. M. C. Pelop. 52, Pl. XII, 9; B. M. Guide<sup>2</sup> Pl. 14, 31; Gardner, The Types of Greek Coins, Pl. VIII, 4 (rev.); Head, Hist. Num.<sup>2</sup>, p. 420, fig. 228 (rev.). — Countermark on obverse: bipennis (cf. no. 92, b). — Obverse misstruck.  
e. London: 11,36 g (175,3 grains); B. M. C. Pelop. 53; Head, Hist. Num.<sup>2</sup>, p. 420, fig. 228 (obv.). — Countermarks on obverse (3): gorgoneion (cf. no. 48); owl l., head facing (cf. no. 86, e); and another.  
f. Paris: 11,81 g (182,3 grains).  
g. Pozzi, Paris: 12,00 g (185,2 grains); Cat. Hirsch XVI (1906), Pl. XVI, 564.  
h. St. Petersburg: 11,80 g (182,1 grains), overstruck.

134. (BL) Obv. Eagle flying r.; similar, but tail more spread, not bent downwards; beak touching hare's nose.  
(7ζ) Rev. Same die as no. 132.  
a (Pl. IV, [BL] 7ζ). Berlin: 12,16 g (187,7 grains). — Countermark on obverse: scorpion (cf. no. 92, a).  
b. Boston: 11,70 g (180,5 grains); Regling, Cat. Warren, Pl. XXI, 919.
135. (BL) Obv. Same die.  
(7γ) Rev. F|A Thunderbolt as on no. 126 (= 130); same die.  
a (Pl. IV, BL 7γ). Berlin: 11,80 g (182,1 grains).  
b. Munich: 11,07 g (170,8 grains).

Series XIV (Obverse dies BM, BN).

136. (BM) Obv. Eagle standing r., looking back l.; r. wing raised in front of head; l. wing stretched slightly forward, three rows of feathers; tail folded and bent down; claws placed on thick stem of laurel-branch with mass of leaves under eagle's tail and r. wing, stem r.  
(7η) Rev. F|A Thunderbolt; wings below curling outwards, one row of feathers beneath dotted shoulders; volutes above curling outwards, a short tendril hanging down from each; moulding round handle; two wavy flame-lines on either side of central dart above and below. Shallow incuse circle. Cf. no. 137.  
a (Pl. IV, BM 7η). Berlin: 12,13 g (187,2 grains). — Countermark on obverse: gorgoneion (cf. no. 80, a).  
b. Berlin: 11,92 g (184,0 grains). — Countermarks on obverse (2): no. XXI, and gorgoneion (cf. no. 80, a).  
c. Cambridge (McClellan Coll.): 11,95 g (184,5 grains).  
d. Seltman, Berkhamsted: 11,70 g (180,5 grains); Cat. Hirsch XXV (Philipsen), Pl. XV, 1257.  
e. Seltman, Berkhamsted: 11,97 g (184,7 grains). — Countermark on obverse: scorpion (cf. no. 92, a). — Rev. die retouched by adding a flame-line on each side above.  
f. Sir H. Weber, London: 11,51 g (177,6 grains).
137. (BN) Obv. Δ|A in field below. Eagle standing r., both wings raised, the r. one behind, the l. in front of the body, four rows of feathers; tail spread; head r., but slightly towards front; beak holding neck of serpent whose head strikes l. at top of eagle's head; serpent passes round eagle's neck, is grasped by eagle's l. claw, which is raised off ground, and is looped under eagle's tail.  
(7η) Rev. Same die as no. 136, but retouched (as in 136, e) by adding a flame-line on either side of central dart above.  
a. Cook, Cambridge: 11,60 g (179,0 grains). — Fracture in reverse die.  
b (Pl. IV, [BN] 7η). Copenhagen: 10,08 g (155,5 grains), plated (?). — Countermark on obverse: gorgoneion (cf. no. 48). — Fracture in reverse die.  
c. Pozzi, Paris: 10,75 g (165,9 grains). — Fracture in reverse die.
138. (BN) Obv. Same die.  
(7θ) Rev. F|A Thunderbolt; similar, but wings with three rows of feathers. Circle of dots on raised band around. Incuse circle.  
a. Boston: 12,30 g (189,8 grains); Cat. Sotheby, June 1896 (Bunbury), Pl. VII, 1084; Regling, Cat. Warren, Pl. XXI, 917 (rev.).

- b (Pl. IV, BN  $\gamma\theta$ ). London: 11,71 g (180,7 grains); B. M. C. Pelop. 27, Pl. XI, 8; Num. Chron. 1879, Pl. XIII, 7; Gardner, The Types of Greek Coins, Pl. VIII, 22 (obv.).
- c. Oman, Oxford: 10,76 g (166,0 grains).
- d. Sir H. Weber, London: 11,51 g (177,6 grains).

139. (BN) Obv. Same die.

( $\gamma\iota$ ) Rev. F|A Similar thunderbolt; but wings less curved, two rows of feathers. Circle of dots slightly narrower. Incuse circle.

- a (Pl. IV, [BN]  $\gamma\iota$ ). Berlin: 11,80 g (182,1 grains).
- b. Berlin: 10,81 g (166,8 grains); Imhoof-Blumer, Monn. Gr., p. 168, 61, Choix Pl. II, 56; Lambros, Peloponnesos, Pl. c, 4. — Countermarks on obverse (2): no. XIV and another.
- c. Cambridge (McClean Coll.): 11,06 g (170,7 grains); Cat. Hirsch XXV (Philipsen), Pl. XV, 1260.

140. (BN) Obv. Same die.

( $\gamma\kappa$ ) Rev. F|A Similar thunderbolt; but inversed, i. e. wings above, volutes below. Incuse circle.

- a. Boston: 12,09 g (186,6 grains); Regling, Cat. Warren, Pl. XXI, 918. — Countermark on obverse: owl l, head facing (cf. no. 86, e).
- b. Mathey, Paris: 11,86 g (183,0 grains).
- c (Pl. IV, [BN]  $\gamma\kappa$ ). Paris: 12,10 g (186,7 grains), formerly duc de Luynes. — Countermark on obverse: gorgoneion (cf. no. 48).
- d. Cat. Hirsch XVI (1906), Pl. XV, 557: 12,05 g (186,0 grains).
- e. Cat. Sotheby, May 1897 (Hobart Smith), Pl. II, 93 = Cat. Sotheby, Feb. 1909 (Benson), Pl. XVIII, 562 (obv.): 11,89 g (183,5 grains). — Countermarks on obverse (2): scorpion (cf. no. 92, a); and owl l, head facing (cf. no. 86, e).

The first eagle of Series XIII (Pl. IV, BJ) is more or less of a copy of the last one described in the foregoing group (Pl. IV, BH), but it is not equal to its prototype. The spread tail and the left wing, shown behind the serpent, do not improve the design. The other two obverses (Pl. IV, BK, BL) show the latest and most finished representation of the type which has so often occurred<sup>1)</sup>, the eagle grasping the back of a running hare. The die BK is particularly effective, and is certainly one of the masterpieces of the Olympian mint.

Series XIII has 4 reverse dies of its own, three of them with thunderbolts (see below on „The Thunderbolt“), one with a Nike. This last (Pl. IV,  $\gamma\epsilon$ ) is the most famous of all the Olympian Nikes<sup>2)</sup>; though many will probably agree with the writer in thinking the figure seated at the fountain with the lion's head (Pl. III,  $\beta\kappa$ ) more beautiful. The die  $\gamma\epsilon$  is a magnificent piece, the last, and technically the most perfect, of the Nikes of this mint. The foreshortening of the left leg is beautifully managed as is the drapery of her chiton and peplos. She is seated on two steps and holds a long palm-branch. The empty space under the steps is filled with an olive-twig. It has at various times been remarked that the coinage of the Greeks of Sicily is always ahead of the rest of Hellas in development. I think this may be allowed, provided that Olympia is excepted. Always bearing in mind the mechanical imperfections of the mint apparatus of Olympia, which so often have prevented

<sup>1)</sup> It first appeared in series VIII (no. 61; Pl. II, AL). | <sup>2)</sup> The reverse of the famous „Waterloo Medal“ has been copied from it.

coins from being seen to their full advantage owing to bad striking, it cannot be denied that such a composition as the Nike of nos. 128. 133 (Pl. IV,  $\gamma\epsilon$ ) just referred to is artistically well in advance of any other contemporary Greek coin. The same remark applies to the coins of the preceding group. Nor is this a matter for any surprise. It seems most natural that the best die-engravers, like the greatest sculptors, should be attracted to the religious, and therefore the artistic, centre of Hellas. The die has been found, so far, with two of the three obverses, BJ and BL. The thunderbolts are also interchangeable among the obverse dies <sup>1)</sup>.

One thunderbolt die calls for special notice, that of no. 129 (Pl. IV,  $\beta\chi$ ). It was one of the latest to be used in the foregoing period; but there, when used in conjunction with the obverse die BH, it got badly fractured. Now, when it reappears in our present period, an attempt has been made to repair the fracture, and the whole die has besides been touched up and remade. Thus, though the die strictly belongs to the foregoing period, in another sense it belongs especially to this period, since retouching has made another die of it.

Series XIV contains two obverse and four reverse dies. On the first of the former is an eagle perched on the end of a laurel-branch, raising its wings and looking back (Pl. IV, BM). On the second is a magnificent bird standing upon a serpent which it tears with its beak, flapping its wings the while (Pl. IV, BN). The die has the letters  $\Delta A$  in the field, one on each side of the eagle. This is, I think, an unmistakable artist's signature. The die is worthy of a great artist, but Professor Gardner's suggestion of Daedalus of Sicyon <sup>2)</sup> will hardly fit, since this die is undoubtedly earlier than the period to which he would assign it, the period when Daedalus was at work in Olympia (about B. C. 400).

The two dies BM and BN share a reverse die between them (Pl. IV,  $\gamma\eta$ ), and it is of interest to note that on five out of the six recorded specimens of no. 136 the upper dart of the thunderbolt is flanked on either side by two flame-lines, on the sixth (no. 136, e) by three flame-lines. And, where this same thunderbolt die occurs again with the obverse BN (no. 137), it also has three flame-lines on either side. The die  $\gamma\eta$  was evidently touched up by an engraver and used again. Another instance of a touched-up die occurs in the preceding series XIII (no. 129; Pl. IV,  $\beta\chi$ ), while in the following group E we have a die which was actually twice repaired and remade. On the three other reverse dies used with BN (Pl. IV,  $\gamma\vartheta$ ,  $\gamma\iota$ ,  $\gamma\kappa$ ) the thunderbolt is surrounded by a border consisting of a circle of dots on a raised band. This design was found to be so decorative, that in the following period the idea was improved upon and a wreath placed around the thunderbolt.

Fractions: Hemidrachm like no. 136 (BM  $\gamma\eta$ ), but no laurel-branch on obverse. B. M. C. Pelop. p. 61, no. 23, Pl. XI, 5 (here Pl. VIII, 14): 2,46 g (38,0 grains) and no. 24: 2,98 g (46,0 grains).

The coinage of this group D is indicative of a period of comparative poverty at the mint of Olympia. Not only were few dies made, as compared with the foregoing

<sup>1)</sup> Gardner (both in his monograph on Elis, Num. Chron. 1879, and in the B. M. Cat. Peloponnesus) and Head in the first edition of *Historia Numorum* have overlooked the fact that nos. 132

and 133 share the same obverse die. In the new edition (p. 420) Head has corrected it.

<sup>2)</sup> Num. Chron. 1879, p. 243. More dies signed  $\Delta A$  occur in the following group E.

period, but they were used for a long time, very many examples being struck from them. While recording only 15 coins in this group, I have got together as many as 42 specimens, an average of nearly three examples of each die-combination or coin. Only a period of considerable commercial depression would account for this comparative scarcity of coinage, and, as was pointed out in the preceeding group, the first ten years of the Peloponnesian War B. C. 431—421 certainly constituted such a period. The exclusion of Athens and all her allies from all access to Olympia would come near to halving the number of visitors and the trade of the sacred place. In the next period we find none of this scarcity in the coinage. „The leading clause“ of the Peace of Nicias in B. C. 421 „had been expressly introduced to guarantee to all Greeks free access to the great Pan-hellenic temples, with liberty of sacrificing, consulting the oracle, and witnessing the matches“<sup>1)</sup>. As a result of this the output of the Olympian coinage was, in the next period, practically doubled.

### Group E (Series XV—XVIII).

ca. B. C. 421 to ca. B. C. 365.

#### Summary of staters:

Obverse dies 10 (BO—BX). Obverse dies using more than one reverse 8.  
 Reverse dies 22 (γλ—δθ). Reverse dies used with more than one obv. 7.  
 Coins 32. Number of specimens recorded 133.

#### Series XV (Obverse dies BO, BP).

141. (BO) Obv. Eagle r. standing on hare; wings closed, three rows of feathers; tail folded and bent down; beak tearing throat, claws grasping belly, of hare upside-down r., with broken neck and head bent back; legs outstretched.

(γλ) Rev. F|A Thunderbolt; wings above curling slightly outwards, nearly straight, one row of feathers emerging from cuticle; volutes below curling outwards; one moulding round handle; one flame-line on either side of central dart below. Around, wreath of two twigs of olive fastened above, three pairs of leaves on l., four on r. branch. Shallow circular incuse.

a. Berlin: 12,42 g (191,7 grains); Lambros, Peloponnesos, Pl. 6, 5.

b. London: 12,10 g (186,7 grains); B. M. C. Pelop. 29, Pl. XI, 9; Num. Chron. 1879, Pl. XIII, 11.

c (Pl. V, BO γλ). Vienna: 12,04 g (185,8 grains); Cat. Welzl von Wellenheim I (Vienna 1844), no. 4273. — Countermark on obverse: scrotum with pubes and penis (seen from the front; cf. no. 28).

142. (BO) Obv. Same die.

(γμ) Rev. F|A Similar thunderbolt, but wings below, volutes above; over each wing and under each volute a tendril curving outwards; two flame-lines on either side above. Olive twigs fastened below, six pairs of leaves on l., six on r. branch. Shallow circular incuse.

a. Athens: 12,02 g (185,5 grains).

<sup>1)</sup> Grote, History of Greece<sup>2</sup>, vol. VII (1851), p. 71.

- b (Pl. V, [BO]γμ). London: 11,38 g (175,7 grains); B. M. C. Pelop. 28. — Counter-mark on obverse.
- c. Paris: 11,95 g (184,4 grains).
- d. Sir H. Weber, London: 11,95 g (184,4 grains).
- e. Cat. Hirsch XXXII (1912), Pl. XIX, 502: 12,00 g (185,2 grains).
143. (BP) Obv. Similar; but hare's neck not broken, head not bent as far back, ears very short.
- (γν) Rev. F|A Thunderbolt; wings below straight downwards shaped like those of a fly, at the root of each C-shaped volute enclosing pellet; two legs shown at either side of the central dart or abdomen; volutes above curling outwards, beneath each a small tendril curling outwards; handle (head of insect) with two curves on either side of pellet. Wreath of two twigs of wild olive fastened above, eight pairs of leaves on l., eight on r. branch. Shallow circular incuse.
- a (Pl. V, [BP]γν). Cambridge (McClellan Coll.): 11,51 g (177,6 grains).
- b. Jameson, Paris: 12,01 g (185,3 grains); Cat. (1913), vol. I, Pl. LXIII, 1230; Cat. Sotheby, June 1896 (Bunbury), lot 1086; Cat. Sotheby, Feb. 1909 (Benson), Pl. XVIII, 564. — Slight flaw (at A) in reverse die.
144. (BP) Obv. Same die.
- (γξ) Rev. F|A Similar thunderbolt, but no insect; wings below curving slightly outwards, one row of feathers under cuticle; over each wing a tendril curling outwards; three wavy flame-lines on either side of central dart above. Wreath similar, but seven pairs of leaves on l., nine on r. branch. Shallow circular incuse.
- a (Pl. V, BPγξ). Berlin: 12,41 g (191,5 grains). — Slight flaw in reverse die.
- b. Boston: 11,88 g (183,3 grains); Regling, Cat. Warren, Pl. XXI, 920. — Flaw almost invisible.
- c. Brussels: 12,28 g (189,5 grains), formerly Baron Hirsch. — Big flaw in reverse die.
- d. Paris: 12,10 g (186,7 grains), formerly duc de Luynes. — Slight flaw in reverse die.

Series XVI (Obverse dies BQ, BR).

145. (BQ) Obv. Head of Zeus r. bearded; short curly hair, wreath of laurel round head.
- (γο) Rev. F|A Thunderbolt; wings below curving slightly outwards, volutes outside them, one row of feathers under cuticle; volutes above curling outwards, beneath each a tendril curling outwards; moulding round handle; on either side of the central dart below Δ|A. Wreath of two twigs of olive fastened below, twisted above, five pairs and two odd leaves on l., five pairs and three odd leaves on r. branch. Shallow circular incuse.
- a. Berlin: 12,14 g (187,3 grains); Lambros, Peloponnesos, Pl. ζ, 8.
- b (Pl. V, BQγο). Pozzi, Paris: 12,00 g (185,2 grains).
146. (BQ) Obv. Same die.
- (γπ) Rev. F|A Similar thunderbolt, but reversed — wings etc. above, volutes etc. below; no letters. Wreath fastened above, twisted below, eight pairs of leaves on l., seven on r. branch. Shallow circular incuse. Cf. nos. 147. 148.

- a. Cambridge (McClellan Coll.): 11,60 g (179,1 grains). — Big flaw (below) in reverse die.  
b (Pl. V, [BQ] γπ). Sir H. Weber, London: 11,72 g (180,9 grains). — Countermark on obverse: no. XIV.

147. (BR) Obv. Similar.

(γπ) Rev. Same die as nos. 146. 148.

- a (Pl. V, BR γπ). London: 11,98 g (184,9 grains); B. M. C. Pelop. 54, Pl. XII, 10; B. M. Guide<sup>2</sup> Pl. 14, 29; Num. Chron. 1879, Pl. XII, 1; Gardner, The Types of Greek Coins, Pl. VIII, 6 (obv.); Head, Hist. Num.<sup>2</sup>, p. 422, fig. 230.

Series XVII (Obverse dies BS—BV).

148. (BS) Obv. Head of eagle l.; under its beak large ivy-leaf, stalk r., veins shown, on it beneath the middle vein ΔA.

(γπ) Rev. Same die as nos. 146. 147.

- a (Pl. V, [B<sup>v</sup>] γπ). Berlin: 12,30 g (189,8 grains).  
b. Berlin: 12,15 g (187,5 grains).  
c. Berlin: 11,50 g (177,5 grains). — Countermark on obverse: no. XIV.  
d. Cambridge (McClellan Coll.): 12,00 g (185,2 grains). — Flaw (below) in reverse die.  
e. Copenhagen: 11,83 g (182,6 grains).  
f. Imhoof-Blumer, Winterthur: 12,06 g (186,1 grains); Num. Chron. 1879, Pl. XIII, 2; Imhoof-Blumer, Monn. Gr., p. 168, 65; Imhoof-Blumer and Keller, Tbiere- und Pflanzenbilder, Pl. IV, 35 (obv.); Lambros, Peloponnesos, Pl. 5, 7.  
g. London: 10,69 g (165,0 grains).  
h. Pozzi, Paris: 11,90 g (183,6 grains). — Countermark on obverse: no. XIV (not six-rayed star, as was erroneously stated in the tables at the end of the introduction).  
i. Sir H. Weber, London: 12,20 g (188,3 grains).  
k. Cat. Sotheby, July 1898 (Balmanno), Pl. II, 97.

149. (BS) Obv. Same die.

(γρ) Rev. F|A Thunderbolt; wings below curling slightly outwards, nearly straight, one row of feathers under cuticle; volutes above curling outwards, under each a tendril curling outwards; moulding round handle; two wavy flame-lines on either side of central dart above. Wreath of two twigs of wild olive fastened below, twisted above, ten pairs of leaves on each branch. Shallow circular incuse.

- a (Pl. V, BS γρ). Jameson, Paris: 12,11 g (186,9 grains); Cat. (1913), vol. I, Pl. LXIII, 1231; Cat. Sotheby, 20. April 1909 (Hobart Smith), Pl. I, 28. — Flaw (below) in reverse die.  
b. Picard, Paris. — Countermarks on obverse (2): no. XIV and another. — Flaw (below) in reverse die.

150. (BS) Obv. Same die, worn.

(γσ) Rev. F|A Thunderbolt; wings above, almost straight, one row of feathers under double cuticle; volutes below curling outwards; moulding round handle; one flame-line above, two below, on either side of central dart. In field r. and l. short olive-twig downwards, four leaves on each. Shallow circular incuse.

- a. Brighton, Municipal Collection: 12,08 g (186,5 grains). — Big flaw (to l.) in reverse die.  
b. Earle Fox, London: 11,82 g (182,4 grains). — Big flaw (to l.) in reverse die.  
c. Greene, Providence: 11,76 g (181,5 grains). — Big flaw (to l.) in reverse die.

- d. London: 12,17 g (187,8 grains); B. M. C. Pelop. 38. — Countermark on obverse. — Big flaw (to l.) in reverse die.
- e. London: 10,77 g (166,2 grains). — Small flaw (to l.) in reverse die.
- f (Pl. V, [BS] γτ). Paris: 11,88 g (183,3 grains), formerly duc de Luynes. — Slight flaw (to l.) in reverse die.
151. (BS) Obv. Same die, but much worn and partly recut: neck feathers prolonged downwards.
- (γτ) Rev. F|A Similar thunderbolt as on no. 149, but the point of each wing below curling outwards. Wreath fastened below, twisted above, five pairs and three odd leaves on l., four pairs and four odd leaves on r. twig. Shallow circular incuse. Cf. no. 152.
- a. Athens: 11,80 g (182,1 grains).
- b. Hirsch, Munich: 11,39 g (175,8 grains). — Countermark on obverse.
- c. St. Petersburg: 12,15 g (187,5 grains). — Countermark on obverse: no. XIV.
- d (Pl. V, [BS] γτ). Vicomte de Sartiges, Paris: 11,82 g (182,4 grains); Cat. Hirsch XIII (Rhousopoulos), Pl. XXIX, 2535; Cat. Hirsch XX (Hoskier), Pl. XII, 334.
- e. Cat. Hirsch XXI (Consul Weber), Pl. XXIV, 1921: 12,20 g (188,3 grains).
152. (BT<sup>1</sup>) Obv. Similar; no letters on leaf.
- (γτ) Rev. Same die as no. 151.
- a. Anderson, Athens: 11,45 g (176,7 grains). — Punch in reverse.
- b (Pl. V, [BT<sup>1</sup>] γτ). Berlin: 12,05 g (186,0 grains); Friedlaender and von Sallet, Das Königliche Münzkabinet<sup>2</sup>, Pl. II, 134. — Countermark on obverse: gorgoneion (cf. no. 80, a).
- c. Beste, Bad Nauheim: 11,95 g (184,4 grains).
- d. Rollin & Feuardent, Paris: 12,20 g (188,3 grains).
153. (BT<sup>1</sup>) Obv. Same die.
- (γτ) Rev. F|A Thunderbolt; wings straight, below, one row of feathers under cuticle, over each a tendril ending in pellet, curling outwards; volutes above curling outwards; under each, tendril curling inwards; moulding round handle; one flame-line on either side of central dart above. Wreath of two twigs of wild olive, fastened below, twisted above, six (?) pairs of leaves on each branch. Shallow circular incuse.
- a (Pl. V, BT<sup>1</sup> γτ). Berlin: 12,24 g (188,9 grains). — Small flaw in reverse die.
- b. Boston: 12,10 g (186,7 grains); Regling, Cat. Warren, Pl. XXI, 922. — Broad flaw in reverse die.
- c. Brussels: 11,95 g (184,4 grains); Cat. Sotheby, May 1894 (Carfrae), lot 172, Pl. VII, 3. — Broad flaw in reverse die.
- d. Glasgow: 12,10 g (186,7 grains); Macdonald, Cat. Hunter, vol. II, p. 135, 5, Pl. XXXVIII, 6. — Broad flaw in reverse die.
- e. Hirsch, Munich: 11,99 g (185,0 grains). — Broad flaw in reverse die.
- f. New York: 11,94 g (184,2 grains); Hill, Cat. Ward, Pl. XIII, 537. — Broad flaw in reverse die.
- g. Cat. Ratto (Genoa), April 1909, Pl. XII, 2976 = Cat. Merzbacher, Nov. 1910, Pl. 10, 554: 11,71 g (180,7 grains). — Broad flaw in reverse die.
- h. Cat. Sotheby, May 1895 (Ashburnham), Pl. IV, 120: 12,12 g (187,0 grains). — Broad flaw in reverse die.
154. (BT<sup>2</sup>) Obv. Same die, but worn and partly recut: neck feathers prolonged slightly downwards.
- (γφ) Rev. F|A Thunderbolt; wings above curling inwards, tips touching dart, one row of feathers (without cuticle); volutes below curling out-

wards; two tendrils over each volute, one pair rising from them, one pair curling outwards; moulding round handle; one flame-line above, two below on either side of central dart. Wreath similar, eight (?) pairs of leaves on each branch. Shallow circular incuse.

- a (Pl. V, [BT<sup>2</sup>] γφ). Berlin: 12,05 g (186,0 grains).
- b. Cambridge (McClellan Coll.): 11,18 g (172,6 grains).
- c. Cambridge (McClellan Coll.): 11,89 g (183,5 grains). — Rev. die recut: big A.
- d. Hirsch, Munich: 11,99 g (185,0 grains). — Rev. die recut: big A.
- e. London: 11,99 g (185,0 grains); B. M. C. Pelop. 40, Pl. XII, 1; B. M. Guide<sup>2</sup> Pl. 14, 32; Gardner, *The Types of Greek Coins*, Pl. VIII, 23 (obv.); Head, *Hist. Num.*<sup>2</sup>, p. 421, fig. 229. — Countermark on obverse: gorgoneion (cf. no. 80, a). — Rev. die recut: big A.
- f. Munich: 12,00 g (185,2 grains); Cat. Hirsch XVI (1906), Pl. XVI, 560. — Countermark on obverse: scorpion (cf. no. 92, a).
- g. Newell, New York: 11,99 g (185,0 grains).
- h. New York: 12,06 g (186,1 grains); Hill, *Cat. Ward*, Pl. XIII, 536 (obv.). — Countermark on obverse: scorpion (cf. no. 92, a). — Rev. die recut: big A.
- i. Cat. Hirsch XXV (Philipsen), Pl. XV, 1263: 12,20 g (188,3 grains). — Rev. die recut: big A.
- k. Cat. Rollin & Feuermann, May 1910, lot 439: 11,52 g (177,8 grains).

155. (BT<sup>2</sup>) Obv. Same die, worn and recut as before.

(γχ) Rev. F|A Thunderbolt; wings below curling outwards, one row of feathers under cuticle; volutes above curling outwards; moulding round handle; dart above melting into wavy flame-lines; lower dart a spirally twisted flame between two flame-lines. Wreath similar, seven (?) pairs of leaves on each branch. Shallow circular incuse.

- a. Hirsch, Munich: 11,99 g (185,0 grains).
- b. Jakovtchikoff, St. Petersburg: 11,72 g (180,9 grains).
- c. Vienna: 11,79 g (182,0 grains).
- d. Cat. Egger (Vienna), Dec. 1906, Pl. XI, 394 = Cat. Bourgey (Paris), 15. Feb. 1911, lot 6: 11,91 g (183,8 grains). — Countermarks on obverse (2): scrotum with pubes and penis (seen from the front; cf. no. 28) and another.
- e (Pl. V, BT<sup>2</sup> γχ). Cat. Hirsch XIV (1905), Pl. XII, 443: 11,70 g (180,5 grains).
- f. Cat. Hirsch XXIX (Lambros), Pl. IX, 543: 11,60 g (179,0 grains).

156. (BT<sup>2</sup>) Obv. Same die, worn and recut as before.

(γψ) Rev. F|A Thunderbolt; wings above curling outwards, one row of feathers under cuticle; volutes below curling outwards, over each a tendril curling inwards; moulding round handle; upper dart a spirally twisted flame; lower dart melting into wavy flame-lines. Wreath similar, nine pairs of leaves on each branch. Shallow circular incuse.

- a (Pl. V, [BT<sup>2</sup>] γψ). Berlin: 11,74 g (181,2 grains). — Countermark on obverse.
- b. London: 11,91 g (183,8 grains); B. M. C. Pelop. 39.
- c. Cat. Sotheby, June 1896 (Bunbury), Pl. VII, 1087 = Cat. Sotheby, Feb. 1909 (Benson), Pl. XVIII, 565: 12,15 g (187,5 grains).

157. (BT<sup>2</sup>) Obv. Same die, but much worn and recut for the second time: neck feathers much prolonged downwards, beak slightly lengthened.

(γω) Rev. F|A Thunderbolt; wings above curling outwards, the l. one springing from front of the dart, the r. one from behind it, one row of feathers under cuticle; volutes below curling outwards, a tendril rising

from each, the r. one springs from front of, the l. one from behind a twisted flame-dart; screw-handle with three turns; two flame-lines on either side of central dart above and below. Wreath of two twigs of wild olive fastened below, twisted above, seven pairs of leaves on each branch. Shallow circular incuse.

a. (Pl. V, BT<sup>3</sup>γω). Brussels: 12,25 g (189,0 grains), formerly Baron Hirsch.

b. Seltman, Berkhamsted: 11,36 g (175,3 grains). — Countermarks on obverse (2): scrotum with pubes and penis (seen from the front; cf. no. 28) and another.

c. Cat. Hirsch XIV (1905), Pl. XII, 442 = Cat. Hirsch XXXII (1912), Pl. XIX, 504: 11,84 g (182,7 grains).

158. (BT<sup>3</sup>) Obv. Same die, much worn and recut for the second time as before.

(δα) Rev. F|A Thunderbolt; wings below curling outwards, the l. one springing from front of the dart, the r. one from behind it, one row of feathers under cuticle; volutes above curling outwards, under each a tendril curling outwards; moulding round handle; two wavy flame-lines on either side of central dart above. Wreath similar, six pairs of leaves on each branch. Shallow circular incuse.

a. Boston: 12,33 g (190,3 grains); Regling, Cat. Warren, Pl. XXI, 923. — Slight flaws in reverse die.

b. (Pl. V, [BT<sup>3</sup>]δz). London: 11,68 g (180,2 grains). — Obv. FΔ, graffito of dots, on the ivy-leaf downwards.

159. (BT<sup>3</sup>) Obv. Same die, much worn and recut for the second time as before.

(δβ) Rev. F|A Thunderbolt; wings below curled inwards, the r. one overlapping the l. and the point of the dart, two rows of feathers under dotted cuticle; volutes above curling outwards; moulding round handle; two flame-lines on either side of central dart above. Wreath of two twigs of wild olive fastened by twisting above, six pairs of leaves on each branch. Shallow circular incuse.

a. Baltazes, Athens: 12,10 g (186,7 grains), formerly belonging to Mrs. Helena N. Mavrokordatos; Journ. Intern. XIV (1912), p. 27, 1998, Pl. ζ, 24. — Big flaw in reverse die.

b. (Pl. V, [BT<sup>3</sup>]δβ). Berlin: 12,17 g (187,8 grains). — Slight flaw in reverse die.

c. Count Dessewffy, Budapest: 11,82 g (182,4 grains). — Big flaw in reverse die.

d. Hess, Frankfort: 12,00 g (185,2 grains).

e. Munich: 12,30 g (189,8 grains).

f. Pozzi, Paris: 11,90 g (183,6 grains).

g. Rollin & Fenardent, Paris: 12,00 g (185,2 grains). — Big flaw in reverse die.

h. Weight, Brighton: 11,73 g (181,0 grains). — Big flaw in reverse die.

160. (BT<sup>3</sup>) Obv. Same die, much worn and recut for the second time as before.

(δγ) Rev. F|A Thunderbolt; flame-mass on either side of central flame-dart below; volutes above curling outwards on either side of flame-dart; moulding round handle; flame-line on either side, below springing out from handle, above to r. and l. of dart. Wreath as before, fastened below. Shallow circular incuse. Cf. no. 167.

a. Gotha: 12,12 g (187,0 grains).

b. (Pl. V, [BT<sup>3</sup>]δγ). Hirsch, Munich: 11,99 g (185,0 grains).

c. Hirsch, Munich: 11,87 g (183,2 grains). — Countermark on obverse: no. XXII.

d. Hirsch, Munich: 11,77 g (181,6 grains). — Countermark on obverse.

e. Hirsch, Munich: 11,75 g (181,3 grains).

Series XVIII (Obverse dies BU—BX).

161. (BU) Obv. Round shield with raised rim; on it eagle's head and neck r.  
 (δδ) Rev. F|A On the inside of shield with narrow raised rim and looped handle shown to r. and to l. of the letters, thunderbolt; wavy flame-mass on either side of central dart below; volutes above curling outwards, below each a tendril curling outwards; moulding round handle; wavy flame-line on either side below springing out from handle; two wavy flame-lines on either side of flame-dart above. Shallow circular incuse. Cf. no. 162.
- a (Pl. V, BU δδ). Giesecke, Leipsic: 12,02 g (185,5 grains); Cat. Hirsch XIII (Rhou-sopoulos), Pl. XXIX, 2534. — Countermark on obverse: large incuse F under eagle's beak. — Reverse double-struck.
- b. Sir H. Weber, London: 11,95 g (184,5 grains); Num. Chron. 1892, Pl. XV, 16. — Countermark on obverse: large incuse F as before, but different die.
162. (BV) Obv. Round shield with raised rim; on it eagle l. standing on serpent; wings closed, four rows of feathers; back rounded; tail folded and bent down; head bent down, beak holding neck of serpent l. striking up at eagle's throat, looped at eagle's neck, passing behind it, and under eagle's claws. Border of dots on shield.  
 (δδ) Rev. Same die as no. 161.
- a (Pl. V, BV δδ). London: 12,05 g (186,0 grains); B. M. C. Pelop. 33, Pl. XI, 11; Num. Chron. 1879, Pl. XIII, 13 a. — Reverse double-struck.
163. (BV) Obv. Same die.  
 (δε) Rev. F|A Thunderbolt; two drooping flame-lines on either side of flame-dart below, two wavy intertwined flames-lines on either side springing out from handle; volutes above curling outwards, on each a tendril curling outwards; moulding round handle; two wavy flame-lines on either side of twisted flame-dart above. Shallow circular incuse. Cf. no. 168.
- a. Boston: 10,40 g (160,5 grains); Regling, Cat. Warren, Pl. XXI, 921. — Reverse double-struck.
- b (Pl. V, [BV] δε). London: 12,05 g (186,0 grains); B. M. C. Pelop. 31. — Reverse double-struck.
- c. Sir H. Weber, London: 11,66 g (180,0 grains).
164. (BV) Obv. Same die.  
 (δζ) Rev. F|A (the latter incuse). Similar thunderbolt, but no tendrils on volutes; a drooping blade on either side of central dart below, outside each blade two drooping flame-lines; two small flame-lines above, one below on either side of the dart. In field above to r. and l. two hanging olive-leaves on either side, one straight, one curving inwards. Double border of dots. Shallow circular incuse.
- a (Pl. V, [BV] δζ). Cambridge (McClean Coll.): 12,05 g (185,9 grains); Cat. Sotheby, May 1895 (Asburnham), Pl. III, 119. — Reverse double-struck.
- b. Copenhagen: 11,23 g (173,3 grains).
- c. Cat. Hirsch XIV (1905), Pl. XII, 440 = XVI (1906), Pl. XVI, 559 = XXXII (1912), Pl. XIX, 503: 11,73 g (181,0 grains). — Reverse double-struck.
165. (BV) Obv. Same die.

- ( $\delta\eta$ ) Rev. F|A Thunderbolt; four flame-lines on either side of central dart above; volutes below curling outwards, over each a tendril curling outwards; two flame-lines on either side of the dart below; moulding round handle. Plain border-line. Shallow circular incuse. Cf. no. 169.  
 a (Pl. V, [BV]  $\delta\eta$ ). Athens: 11,65 g (179,8 grains). — Reverse slightly double-struck.
166. (BV) Obv. Same die.  
 ( $\delta\theta$ ) Rev. F|A (the latter incuse). Thunderbolt; wings above curled inwards, the r. one overlapping the l. and the dart, whose point appears above, two rows of feathers; volutes below curling outwards, over each a tendril curling outwards; two flame-lines on either side of the dart below; moulding round handle. Border of dots. Shallow circular incuse. Cf. nos. 170—172.  
 a (Pl. V, [BV]  $\delta\theta$ ). Pozzi, Paris: 11,68 g (180,2 grains); Cat. Hirsch XIII (Rhusopoulos), Pl. XXVIII, 2532. — Reverse double-struck.
167. (BW) Obv. Similar, but eagle's beak holds serpent l. in middle; serpent more undulating, looped only round eagle's head, passing in front of it and striking l. Border of dots on shield.  
 ( $\delta\gamma$ ) Rev. F|A Thunderbolt within wreath as on no. 160 (same die).  
 a (Pl. V, [BW]  $\delta\gamma$ ). Berlin: 12,26 g (189,2 grains).  
 b. Paris: 12,22 g (188,6 grains).  
 c. Rollin & Feuardent, Paris: 11,60 g (179,0 grains).
168. (BW) Obv. Same die.  
 ( $\delta\varepsilon$ ) Rev. F|A Thunderbolt as on no. 163 (same die).  
 a. Berlin: 11,96 g (184,6 grains); Lambros, Peloponnesos, Pl.  $\zeta$ , 6. — Reverse double-struck.  
 b. Giesecke, Leipsic: 11,97 g (184,7 grains); Cat. Hirsch XVI (1906), Pl. XVI, 558. — Reverse slightly double-struck.  
 b'. Jameson, Paris: 11,17 g (172,4 grains); Cat. (1913), vol. I, Pl. LXIII, 1229. — Countermark on obverse. — Reverse double-struck.  
 c (Pl. V, BW  $\delta\varepsilon$ ). London: 11,89 g (183,5 grains); B. M. C. Pelop. 32. — Countermark on obverse: scrotum with pubes and penis (seen from the front; cf. no. 28). — Reverse double-struck.  
 d. Paris: 11,92 g (184,0 grains). — Countermark on obverse: bunch of grapes in incuse square (cf. no. 82 and no. 258, a).  
 e. Pozzi, Paris: 12,30 g (189,8 grains).  
 f. Cat. Hirsch XXV (Philipsen), Pl. XV, 1261: 11,56 g (178,4 grains). — Reverse double-struck.  
 g. Cat. Rollin & Feuardent, May 1910, lot 438: 11,50 g (177,5 grains).
169. (BW) Obv. Same die.  
 ( $\delta\eta$ ) Rev. F|A Thunderbolt as on no. 165 (same die).  
 a (Pl. V, [BW]  $\delta\eta$ ). London: 11,40 g (176,0 grains); B. M. C. Pelop. 35. — Reverse slightly double-struck.  
 b. Cat. Hirsch XIII (Rhusopoulos), Pl. XXVIII, 2531: 11,90 g (183,6 grains). — Reverse slightly double-struck.
170. (BW) Obv. Same die.  
 ( $\delta\theta$ ) Rev. F|A (the latter incuse). Thunderbolt as on no. 166 (= 171 = 172[remade]); same die.  
 a. Berlin: 12,09 g (186,6 grains). — Reverse double-struck. — Flaw (over top) in reverse die.

- b. Berlin: 11,96 g (184,6 grains). — Reverse double-struck.
- c (Pl. V, [BW] δδ). London: 11,86 g (183,0 grains); B. M. C. Pelop. 34. — Reverse double-struck. — Slight flaw (over top) in reverse die.
- d. Paris: 11,93 g (184,1 grains), formerly duc de Luynes. — Reverse slightly double-struck. — Flaw (over top) in reverse die.
171. (BX) Obv. Similar, but eagle stands on back of ram recumbent l., fore-legs outstretched, head raised, eagle's beak touching ram's throat. Border of dots on shield.
- (δδ) Rev. Same die as no. 166 (= 170 = 172[remade]).
- a. Berlin: 11,90 g (183,6 grains). — Reverse double-struck. — Flaw (over top) in reverse die.
- b (Pl. V, [BX] δδ). London: 12,36 g (190,8 grains); B. M. C. Pelop. 36, Pl. XI, 12; B. M. Guide<sup>3</sup> Pl. 14, 33; Gardner, *The Types of Greek Coins*, Pl. VIII, 21 (obv.); Imboof-Blumer and Keller, *Thier- und Pflanzenbilder*, Pl. IV, 36 (obv.). — Reverse double-struck. — Flaw (over top) in reverse die.
- c. New York: 11,91 g (183,8 grains); Hill, *Cat. Ward*, Pl. XIII, 535. — Flaw (over top) in reverse die.
- d. Paris: 12,17 g (187,8 grains), formerly duc de Luynes. — Countermark on obverse: no. XXII. — Reverse slightly double-struck. — Flaw (over top) in reverse die.
- e. Pozzi, Paris: 11,51 g (177,6 grains); *Cat. Hirsch XIII* (Rhosopoulos), Pl. XXVIII, 2533. — Flaw (over top) in reverse die.
- f. *Cat. Hirsch XIV* (1905), Pl. XII, 441 = *Cat. Hirsch XXV* (Philipsen), Pl. XV, 1262: 11,61 g (179,2 grains). — Countermark on obverse. — Two flaws (over top) in reverse die.
- g. *Cat. Hirsch XXI* (Consul Weber), Pl. XXIV, 1920: 12,05 g (186,0 grains). — Two flaws (over top) in reverse die.
172. (BX) Obv. Same die.
- (δδ) Rev. F|A (both incuse). Thunderbolt as on no. 166 (= 170. 171); same die, but remade and flaws corrected.
- a. Berlin: 11,40 g (175,9 grains). — Reverse slightly double-struck.
- b (Pl. V, BX). Brussels: 12,42 g (191,7 grains), formerly Baron Hirsch. — Reverse double-struck.
- c. Cambridge: 12,04 g (185,8 grains); Leake, *Numismata Hellenica* (1856), *European Greece* p. 49. — Reverse double-struck.
- d. Hirsch, Munich: 12,37 g (190,9 grains). — Reverse double-struck.
- e (Pl. V, [BX] δδ). London: 12,15 g (187,5 grains); B. M. C. Pelop. 37; *Num. Chron.* 1879, Pl. XIII, 13 b. — Countermark on obverse: bunch of grapes in incuse square (cf. no. 82 and no. 258, a). — Reverse double-struck.
- f. Paris: 11,66 g (179,9 grains). — Reverse double-struck.
- g. Sir H. Weber, London: 11,70 g (180,6 grains).

It must now be borne in mind that we are dealing, in this and several of the following groups, with one half only of the output of the Olympian mints, since another mint, one sacred to Hera, was opened presumably about this time.

Series XV has two obverse and four reverse dies. The two obverse dies (Pl. V, BO, BP) recall the earlier type of no. 103 (Pl. III, BB); indeed their likeness led Prof. Gardner to place them together (*Num. Chron.* 1879, Pl. XIII, 10.11). Our two pieces must, however, be a good deal later than no. 103. A hemidrachm exists (Pl. VIII, 15) with obverse exactly like BO, and with reverse closely resembling the reverse die of nos. 136. 137 (Pl. IV, γγ) in the foregoing group. I feel

justified, therefore, in placing this series XV at the very beginning of the present group.

On the last three reverses (Pl. IV,  $\gamma\vartheta$ ,  $\gamma\iota$ ,  $\gamma\kappa$ ) of the preceding group the thunderbolt was surrounded by a raised border. Apparently, the decorative effect of this induced the engravers to continue the idea and to improve upon it. The thunderbolt is now for the first time placed within an olive-wreath. Although the general development of the thunderbolt on Olympian coins will be discussed at the end separately after Group GH<sup>1</sup>, it seems desirable to draw attention here to a special one, viz: that on the reverse of no. 143 (Pl. V,  $\gamma\nu$ ). The whole lower portion of this thunderbolt is shaped like a fly, the wings, legs, shoulder-joints, and the end of the abdomen are all characteristic of an insect. Now the primitive Arcadian fly-god, the hero Myiagros<sup>1</sup>), was identified at Olympia with Zeus, called either *Μυίαγρος*, *Μυιάδης*<sup>2</sup>) or *Ἀπόμυιος*<sup>3</sup>). Following the legendary example of Heracles, the Eleans of Olympia offered the yearly sacrifice of a bull to Zeus Apomyios<sup>4</sup>), whereupon the flies were supposed to cease molesting them. While on other thunderbolts we find some portion of them transformed into the Olympian Zeus' eagle, or his sacred lily (lotus-flower), here we find another of his peculiar attributes — a fly — incorporated in his thunderbolt.

Incidentally, I think, that in this die we have yet another indication that Olympia, and not Elis, must be the minting place of the Elean coinage (cf. the introduction). Who but the priestly moneyers of Zeus Olympios, that directed the ritual of the sacrifice to Zeus Apomyios, would introduce such a type — a type which we may perhaps describe as emblematical of a swarm of flies sent like a bolt from Zeus?

Fractions: Hemidrachm. Obv. similar to nos. 141. 142 (BO); rev. similar to nos. 136. 137 ( $\gamma\eta$ ), but with plain border around. London; B. M. C. Pelop. 30, Pl. XI, 10 = Num. Chron. 1879, Pl. XIII, 12; weight: 2,91 g (45,0 grains). — Pl. VIII, 15.

Obol. Obv. similar; rev. like no. 141 ( $\gamma\lambda$ ), but no wreath. London; weight: 0,78 g (12,0 grains). — Pl. VIII, 16.

Series XVI and the first obverse die (with its own four reverse dies) of the next series are contemporary. The artist  $\Delta A$ , presumably the same as he who did the beautiful eagle of no. 137 (Pl. IV, BN), here surpasses himself. His three obverse dies BQ, BR, BS are monuments of Hellenic art at its grandest and best. From a feeling of piety, or artistic fitness, or both, he has not marred his splendid head of Zeus with a signature. But on the reverse of no. 145 (Pl. V,  $\gamma\omicron$ ) on either side of the lower dart of the thunderbolt he has placed the small letters  $\Delta A$ <sup>5</sup>). The other reverse die (Pl. V,  $\gamma\pi$ ) which occurs with these two Zeus-head dies strictly belongs to the contemporary eagle's head of series XVII (Pl. V, BS). Indeed where we find it with nos. 146. 147 it is actually more worn than with most of the known specimens of no. 148, though not with all. The die was more worn

<sup>1</sup>) Pausanias VIII, 26, 7.

<sup>2</sup>) Pliny, Nat. Hist. XXIX, 106; see also *ibid.* X, 75, where the name is „Mysacores“.

<sup>3</sup>) Pausanias V, 14, 1.

<sup>4</sup>) There is an interesting parallel, if nothing more, between this Zeus Apomyios and Baal Zebub.

<sup>5</sup>) On Professor Pozzi's specimen (no. 145, b) these letters are exceedingly clear. On the Berlin example (no. 145, a) the  $\Delta$  is not quite clear. He can hardly be Daedalus of Sicily, as Prof. Gardner suggests (*Num. Chron.* 1879, p. 243). That sculptor worked at Olympia about 400 B. C.

for instance when it struck no. 148, d, than when it struck nos. 147, a and 146, b. But it was most worn of all when it struck no. 146, a, as the flaw shows. Evidently the three obverse dies BQ, BR, BS were used indiscriminately with the reverse die  $\gamma\pi$ .

A vivid picture of the work in the sacred ἀργυροκοπιεῖον rises before the mind's eye. The anvil on which lie the obverse dies BQ, BR, BS, held in place, probably, by being let into sockets; one artificer, who places the heated blanks over these three dies; another, ready with his hammer to strike off the coins; while a third holds the punch bearing the reverse die  $\gamma\pi$ , which he places over the blanks that lie on the three obverse dies one after the other. So it goes on until the flaw or crack in the die  $\gamma\pi$  has become so big that it is no longer usable, whereupon another punch bearing the reverse die  $\gamma\sigma$  is taken up and used till it too cracks. The die BS, a very lasting die, which had already been used to strike no. 149 (BS $\gamma\rho$ ) before it was used contemporaneously with BQ and BR, was now repaired, and repaired somewhat hurriedly as the coarse lengthening of the neck feathers shows. After this it was used with a fourth reverse die,  $\gamma\tau$  (no. 151). When BS had finally to be discarded it was replaced (cf. no. 152: BT<sup>1</sup> $\gamma\tau$ ) by the die BT (of our series XVII), a somewhat inferior copy of the magnificent eagle's head by the artist  $\Delta A$ . This obverse die also proved to be extraordinarily lasting. It was paired with no fewer than nine different reverses (nos. 152—160) and was recut twice, so that we see it in three different phases, which I have named BT<sup>1</sup>, BT<sup>2</sup>, BT<sup>3</sup>. This repeated and somewhat hasty recutting of the obverse dies, as well as the continued usage of dies in a very worn condition, points to a state of great pressure in the business of the mint (cf. below), as also does the system, referred to above, of having three obverse dies on the anvil at a time.

Series XVII. The magnificent specimen from the collection of Mr. Jameson figured on Pl. V must, I think, put an end to the long debated question whether the letters on the leaf of the obverse die BS are AA or  $\Delta A$ . The letters are evidently  $\Delta A$ . The unmistakable reading of  $\Delta A$  on the reverse of no. 145 (Pl. V,  $\gamma\rho$ ) confirms them. Truly, this  $\Delta A$  was a master of his craft. It would be hard to find a coin with a type more beautiful, and yet withal so grand and restrained as this eagle's head with its piercing eye. The die had a long life (cf. above) but soon got so worn that the  $\Delta A$  was scarcely legible. I have already referred to the die BT above under Series XVI.

The reverse die of the last coin of series XVII, no. 160 (Pl. V, [BT<sup>3</sup>]  $\delta\gamma$ ), occurs again more worn in the next series as the reverse die of no. 167 (Pl. V, BW  $\delta\gamma$ ).

Fractions: Hemidrachm. Obv. like nos. 148 ff. (BS); rev.  $\Phi$ , in incuse square. Berlin, formerly Imhoof-Blumer (Num. Chron. 1879, Pl. XII, 12; Imhoof-Blumer, Monnaies Grecques, p. 168, 63, Choix Pl. II, 58); weight: 2,42 g (37,3 grains).

Tetartemorion. Obv. similar, but  $\Phi|A$  above and below; rev.  $\Phi$  and olive-spray, in incuse square. London; B. M. C. Pelop. 51, Pl. XII, 8; weight: 0,27 g (4,2 grains). — Pl. VIII, 17.

Hemidrachm. Obv. like nos. 152 ff. (BT); rev. similar to nos. 146 ff. ( $\gamma\pi$ ), but no volutes outside wings. a. London; B. M. C. Pelop. 41, Pl. XII, 2 (rev. reversed); weight: 2,55 g (39,4 grains). — b. Cat. Hirsch XXV (Philipsen), Pl. XVI, 1264; weight: 2,70 g (41,7 grains).

Obol. Similar. London; B. M. C. Pelop. 42, Pl. XII, 3; weight: 0,68 g (10,5 grains).

Obol. Similar, but on rev. the upper half of the thunderbolt<sup>1)</sup> resembles the lower half of that of nos. 161. 162 (δδ). Cat. Hirsch XVIII (1907), Pl. XXXVI, 2412; weight: 0,97 g (15,0 grains).

Later:<sup>2)</sup>

Hemidrachm. Obv. eagle's head and neck r.; rev. similar to no. 153 (γυ). London; B. M. C. Pelop. 44, Pl. XII, 5; weight: 2,84 g (43,8 grains). — Pl. VIII, 19.

Hemidrachm. Obv. similar, but ΠO below; rev. similar. a. London; B. M. C. Pelop. 45, Pl. XII, 6; weight: 2,70 g (41,7 grains). — b (Pl. VIII, 20, obv.) Seltman, Berkhamsted; weight: 2,71 g (41,8 grains).

Hemidrachm. Similar, but on obv. eagle's head and neck l. instead of r. Jameson, Paris; Cat. (1913), vol. I, Pl. LXIII, 1232; weight: 2,28 g (35,2 grains).

Hemiohol. Obv. eagle's head and neck r.; rev. F|A upper half of thunderbolt. London; B. M. C. Pelop. 50; weight: 0,21 g (3,3 grains). — Pl. VIII, 21.

Tetartemorion. Obv. similar; rev. large incuse T. Berlin, formerly Imhoof-Blumer (Imh.-Bl., Griechische Münzen, Pl. I, 11); weight: 0,22 g (3,4 grains).

Tetartemorion. Obv. similar, but A∇ below; rev. large T. London; weight: 0,21 g (3,2 grains). — Pl. VIII, 18.

In Series XVIII the obverse types are placed upon a round shield<sup>3)</sup>. It is curious that on the reverse die δδ (nos. 161. 162) the inside of this shield with its looped handles for carrying is shown. The eagles on the obverse dies BV, BW and BX are all of a similar design — a design adapted to the circular form of the shield.

The four obverses of this series\* share several reverse dies among them. Attention has already been drawn to no. 167 (Pl. V, BWδγ) which uses the latest reverse of the preceding series in which it appears as no. 160 (Pl. V, BT<sup>3</sup>δγ). The thunderbolts both on this die δγ, and on δε and δη show a copying, perhaps unintentional, of the types of thunderbolt which the Hera mint had adopted as its reverse-types. On the die δζ are the last traces of the wreath of wild olive round the thunderbolt — two leaves only on each side. Henceforth it disappears, though at the mint of the temple of Hera it was continued to the end. The reverse die δθ appears first with BV (no. 166), then with BW (no. 170) when it begins to crack. This flaw, of which no. 170, b shows no sign, becomes visible on no. 170, c as a very thin crack, while on 170, a. d it is fairly wide. By the time δθ was used with BX a second crack had appeared, as nos. 171, f. g show. Instead of destroying the die, however, an engraver repaired it. The cracks were filled in, and, incidentally with them, the F. (The A must have got filled in long ago, for even on no. 166 a raised A is lacking, nor has any example yet turned up with a raised A). The engraver then proceeded to work away so much of the field at the side of the thunderbolt as to leave a raised F on the die even as a raised A had

<sup>1)</sup> The influence of the coinage issued from the mint of Hera shows itself here for the first time. The upper half of the thunderbolt is copied from the thunderbolts on the Hera staters.

<sup>2)</sup> The following fractions are placed here on account of their types, but it is possible that they may have been issued later. It is most unlikely that magistrates would appear on fractions

many years before they appeared on staters. If ΠO on the hemidrachm Pl. VIII, 20 is a magistrate (he can hardly have been an artist with so large a signature), the coin may possibly belong to group G.

<sup>3)</sup> Compare the contemporary Electrum-staters of Cyzicus, which also have as their obverse type an eagle upon a shield, Nomisma VII, Pl. VI, 33. 34.

previously been left<sup>1</sup>). Thus in its third state the die δδ gave coins with F|A incuse, just as in its second state it had given coins with A incuse. Of its first state coins we have no examples left.

For the issue of this series XVIII a new method of casting the blanks seems to have been temporarily adopted. As Gardner (Num. Chron. 1879, p. 245) has pointed out „the blanks . . . were evidently cast in small circular chambers, from one to another of which a passage was cut for the course of the metal. At the sides of the coins still remain traces of such casting in series“.

The extraordinary number of misstruck reverses in this series is perhaps due to some temporary innovation in the method of striking the coins, an innovation which proved unsatisfactory, and which was accordingly abandoned. For it can scarcely be chance that, among the 42 specimens recorded under the numbers 161—172, 28 should actually be double-struck.

There has been a tendency among numismatists, when dealing with these coins, to place them earlier in the series, before the pieces with the eagle's head<sup>2</sup>). But the die sequences that I have established make this impossible. One of our shield coins (no. 167; Pl. V, BW δγ) shares the reverse, as mentioned above, with the eagle's head die BT (no. 160; Pl. V, BT<sup>3</sup> δγ). So, if one would place the shield coins before the eagle's heads, one must reverse the order of the two eagle's head dies, making the poorer one the earlier, and the magnificent prototype by ΔA the later. This would be a perverted sequence. There is nothing forced about our arrangement. The shield coins must be the last set of staters of the mint before the Arcadian occupation of Olympia.

Fractions: Drachm. Obv. like no. 161 (BU), but not on a shield; below lizard running r.; rev. similar to no. 163 (δε), but olive-leaves fastened to volutes. London; B. M. C. Pelop. 43, Pl. XII, 4; weight: 5,33 g (82,3 grains). — **Pl. VIII, 22.**

Hemidrachm. Obv. similar, but F in place of lizard; rev. similar to nos. 161. 162 (δδ), but no handles. London; B. M. C. Pelop. 46; weight: 2,85 g (44,0 grains). — **Pl. VIII, 23.**

Obol. Obv. similar, but no letter; rev. similar to no. 164 (δζ), but no olive-leaves. London; B. M. C. Pelop. 49, Pl. XII, 7; weight: 0,82 g (12,7 grains).

In this group E of 32 staters I have recorded as many as 133 specimens, a great number of coins must therefore have been struck from each pair of dies. The signs of repair in some dies like BS, BT, γφ, δδ, of fracture in others like γξ, γπ, γρ, γσ, γυ, δβ, go to confirm this. The demand for Olympian staters must at this period have been very great (cf. above under Series XVI), too great for the one original mint to cope with. By the first clause of the Peace of Nicias Athens and her allies were to be once more admitted to the oracle of Zeus and the games<sup>3</sup>). Thus the number of visitors and pilgrims would be nearly doubled, and likewise the trade. Moreover, a serious shortage was now being felt in the staple currency of the time. Since the year 456 B. C. no Aeginetan staters had been struck, the island having then become tributary to Athens. The staters would, of course, con-

<sup>1</sup>) That the A, and afterwards both letters F|A, cannot have been added to the individual coins as a countermark is proved by their identical position on all known examples, as well as by the fact that on many specimens, which have a

double-struck reverse, A or F|A are also double-struck.

<sup>2</sup>) Gardner, B. M. Cat. Peloponnesus, pp. 62 f., nos. 31—37 and 38—40. Head, Hist. Num.<sup>2</sup>, p. 421.

<sup>3</sup>) Grote, History of Greece<sup>2</sup>, vol. VII (1851), p. 71.

tinue to circulate for many years more; but by about 420 B. C. must have become depreciated through wear. The demand for their staters being so great, the Eleans, about this time, seem to have decided on opening another mint, which was placed under the patronage of their second deity, Hera. The staters emanating from the Hera mint will be described later.

The 55 years comprised in this period were troublous times for the Elean people. In 421 B. C. they abandoned the Spartan alliance to which they had so long held, and joined that of the Argives, Athenians and Mantineans. By the year 399 B. C. the Spartans, who were then at the zenith of their power and pursuing a career of self-aggrandizement that made them hated throughout Greece, took occasion to punish the Eleans for their defection of 22 years before. Under king Agis they invaded the territory of Elis, a battle was fought at Olympia, and the Eleans were finally forced to become allies of Sparta once more. For 28 years they endured this forced alliance, until the crushing defeat of the Spartans at Leuctra brought it to an end. The consequence of this battle was the establishment of a new power in Greece with a big influence in the Peloponnesus, viz: Thebes, with which state the Eleans concluded an alliance in the following year. The Olympian coins bear no traces of these events, nor should we expect them, for, after all, they affected the city of Elis, rather than Olympia.

### Group F (Series XIX).

#### The Arcadian occupation of Olympia B. C. 365—363.

#### Series XIX (Obverse dies BY, BZ).

Gold piece equivalent to 1½ silver staters:

173. (BY) Obv. Head of Zeus l. bearded, short wavy hair, wreath of broad-leaved laurel around head.

(δi) Rev.  $\square||\xi|A$  between three half thunderbolts, each consisting of lotus-like volutes curling outwards, over each a dart, beneath each a pellet. Shallow circular incuse.

a (Pl. V, BY δi). Berlin: 1,55 g (24,0 grains); Num. Chron. 1879, Pl. XIV, [Pisa] 7; Lambros, Peloponnesos, Pl. Z, 11; Zeitschr. f. Num. XXII (1900), p. 10; Hill, Historical Greek Coins (1906), Pl. V, 39.

Gold piece equivalent to one silver stater:

174. (BZ) Obv. Similar; smaller.

(δz) Rev.  $\square||\xi|A$  Thunderbolt; each half consisting of lotus-like volutes curling outwards, over each a dart; pellet as handle. Shallow circular incuse.

a (Pl. V, BZ δz). London: 1,04 g (16,0 grains); B. M. C. Pelop. 1, Pl. XVI, 8; Num. Chron. 1879, Pl. XIV, [Pisa] 8; Lambros, Peloponnesos, Pl. Z, 12; Zeitschr. f. Num. XXII (1900), p. 10. — Slight flaw (at top of thunderbolt) in reverse die.

The first of these two gold coins turned up as long ago as 1848, when it was found at Gastuni near Elis along with other coins from the Olympian mint, and was acquired by Baron von Prokesch-Osten, at that time Austrian ambassador at Athens. The second originally comes from the Wigan collection. R. Weil (Zeitschr. f. Num. XXII, 1900, pp. 10 ff.) has dealt with these two coins so thoroughly,

and in such a masterly way, that very little that is new remains to be said about them.

The influx of Persian gold into Greece at the beginning of the fourth century had lowered the value of that metal. Whereas formerly it stood at 1:13,3, it now fell to 1:12. The second of the two coins weighs 1,04 g (16 grains), the first half as much again 1,55 g (24 grains). Their reverse types clearly indicate that they are to pass as equivalent to one and one-and-a-half Olympian silver staters respectively. This, at the above mentioned ratio of 1:12 for gold to silver, gives a silver stater of 12,44 g (192 grains), a weight which, I think, we may definitely accept as the Elean standard of that time (cf. below on „The Olympian Standard“).

Briefly, the history of the years 365—363 B. C. is as follows<sup>1</sup>). In the year 365 the Arcadians, thirsting for power and territorial expansion, seized Olympia, fortified the hill Kronion, which dominated the Altis, and garrisoned it. They then tried to revive the long dormant state of the Pisatans. Since the towns of ancient Pisatis had been destroyed, the Arcadians united the scattered villagers round Olympia into a community that received the name of Pisa. These successors of the ancient Pisatans then took over the presidency of the Olympian games. While the celebration of the 104th Olympiad (B. C. 364) was in progress, the Eleans made a gallant attempt to recapture Olympia. But, though they displayed great valour, their troops were beaten off. The Arcadians, as the absolute masters of Olympia, had meanwhile annexed much of the sacred treasure to pay the militia of joint Arcadia (the ἐπάρτοι), and had doubtless also prompted or empowered the Pisatans to strike coins from the sacred treasury for the occasion of the 104th Olympiad. It is two of these coins that we evidently have before us in nos. 173. 174, the two small gold pieces<sup>2</sup>). Curtius (*Zeitschr. f. Num.* II, 1875, p. 275) has already accounted for their great rarity, by pointing out how ephemeral was the existence of this revived state of Pisa. For in the next year, 363, Mantinea, giving vent to the public feeling about the matter, protested against the perversion of the Olympian temple treasures to the war-chest of the militia. The Arcadian League, after some internal bickerings, accordingly acknowledged the injustice of its policy, made peace with Elis, and withdrew all claims to, and troops from, Olympia. Naturally the ephemeral state of Pisa vanished. The circumstance that the only two pieces of its money, that have so far survived, are in such perfect preservation is probably to be accounted for by the fact that the Eleans would doubtless proclaim the money with the name of their hated rivals upon it as sacrilegious and accursed. This would put a speedy and effectual end to its circulation<sup>3</sup>).

<sup>1</sup>) Xenophon, *Hellen.* VII, 4, 14. 28 ff.; cf. Pauly-Wissowa's *Real-Encyclopädie*, vol. V, 2 (1905), columns 2403 ff. (Swoboda).

<sup>2</sup>) The small silver piece published in the *Numism. Zeitschr.* VIII (Vienna 1877), p. 1 is a cast from the gold piece in the British Museum (above no. 174), as has already been rightly supposed by Gardner (*Num. Chron.* 1879, p. 250). Cf. Weil, *Zeitschr. f. Num.* XXII (1900), p. 10, footnote 1.

<sup>3</sup>) M. Fränkel (*Sitzungsberichte der Berliner Akademie* 1898, pp. 635 ff.) has published an inscription in the Museum at Argos concerning which R. Weil has shown that it does not deal with these Pisan gold coins, as the editor believes, but most probably with gold staters of Alexander the Great (*Zeitschr. f. Num.* XXII, pp. 15 ff.). Fränkel contradicts him on somewhat insufficient grounds; cf. *Corpus Inscript. Peloponnesi* etc., I (1902), p. 105 (no. 616).

The types placed by the Pisatans on these coins were a challenge to the Eleans, for by them the former asserted their right to be the protectors and the administrators of the Olympian Zeus. How the Eleans answered this challenge will be seen in the next group.

**Group G (Series XX. XXI).**

ca. B. C. 363 to ca. B. C. 343.

Summary of staters:

Obverse dies 14 (CA—CO). Obverse dies using more than one reverse 6.  
Reverse dies 22 (δλ—εθ). Reverse dies used with more than one obv. 5.  
Coins 27. Number of specimens recorded 55.

Series XX (Obverse dies CA—CE).

175. (CA) Obv. **FAΛEION** to l. outwards. Head of Zeus l. bearded, beard and short hair formally curled, wreath of broad-leaved laurel around head.  
(δλ) Rev. **ΟΛΥΜΠΙΑ** to r. outwards. Female head r., wavy hair in sphenone which is narrow over forehead and broad behind ear, the hair from the temples waved across it; single pendant earring. Shallow circular incuse.
- a. (Pl. VI, [CA] δλ). Berlin: 12,14 g (187,3 grains); Cat. Photiadès Pacha (Paris 1890), Pl. V, 1031; Lambros, Peloponnesos, Pl. Z, 1.
  - b. Jameson, Paris: 12,07 g (186,3 grains); Cat. (1913), vol. I, Pl. LXIII, 1235; Cat. Hirsch XVI (1906), Pl. XVI, 572.
  - c. London: 10,34 g (159,6 grains); B. M. C. Pelop. 71, Pl. XIII, 1; Num. Chron. 1879, Pl. XIV, [V] 1; Hill, Historical Greek Coins, Pl. V, 40.
  - d. London: 12,38 g (191,0 grains); B. M. C. Pelop. 72; Zeitschr. f. Num. II (1875), p. 266.
  - e. Pozzi, Paris: 11,98 g (184,9 grains); Cat. Hirsch XXI (Consul Weber), Pl. XXIV, 1931.
176. (CA) Obv. Same die.  
(δμ) Rev. Eagle r., seated on top of capital of Ionic column; wings folded, four rows of feathers; tail hanging down. Shallow circular incuse.
- a. Berlin: 12,41 g (191,5 grains); Zeitschr. f. Num. XV (1887), Pl. I, 2 (obv.).
  - b. The Hague: 11,75 g (181,3 grains), formerly Six. — Both dies worn.
  - c. (Pl. VI, CA). London: 12,31 g (190,0 grains); B. M. C. Pelop. 73, Pl. XIII, 2; B. M. Guide<sup>2</sup> Pl. 23, 33; Num. Chron. 1879, Pl. XIV, [V] 2; Gardner, The Types of Greek Coins, Pl. VIII, 26 (obv.); Lambros, Peloponnesos, Pl. Z, 2; Head, Hist. Num.<sup>2</sup>, p. 423, fig. 232. — Graffito **A|ξ** on reverse.
  - d. (Pl. VI, [CA] δμ). London: 12,15 g (187,5 grains); B. M. C. Pelop. 74.
  - e. Cat. Hirsch VIII (1903), Pl. VII, 1249.
  - f. Cat. Sotheby, July 1910, Pl. I, 24: 12,08 g (186,5 grains).
177. (CB) Obv. No inscription. Similar, but head r.  
(δν) Rev. **F|A** Similar. Shallow circular incuse.
- a. (Pl. VI, CB δν). Cambridge (McClellan Coll.): 11,84 g (182,8 grains); Cat. Sotheby, March 1897 (Montagu), Pl. III, 209; Cat. Sotheby, Nov. 1902 (Bush), lot 134.
  - b. Sir H. Weber, London: 12,16 g (187,6 grains).
178. (CC) Obv. Similar, but head l.  
(δξ) Rev. **F|A** Similar. Shallow circular incuse.

- a (Pl. VI, CC δ5). Berlin: 11,97 g (184,7 grains); Zeitschr. f. Num. XV (1887), Pl. I, 3 (obv.).
179. (CC) Obv. Same die.  
 (δo) Rev. F|A Similar. Shallow circular incuse.  
 a (Pl. VI, [CC] δo). London: 11,99 g (185,0 grains).
180. (CC) Obv. Same die.  
 (δπ) Rev. F|A Similar. Shallow circular incuse. Cf. no. 182.  
 a. Boston (Bartlett Coll.): 11,60 g (179,0 grains); Cat. Sotheby, May 1894 (Carfrae), lot 173, Pl. VII, 4.  
 b (Pl. VI, [CC] δπ). Brussels: 12,26 g (189,2 grains).  
 c. Sir H. Thompson, London: 12,06 g (186,2 grains); Cat. Hirsch XIII (Rhusopoulos), Pl. XXIX, 2554.
181. (CD) Obv. Similar; curls of hair and beard rather less formal.  
 (δρ) Rev. F|A Similar. Shallow circular incuse.  
 a (Pl. VI, CD). Berlin: 12,26 g (189,2 grains); Zeitschr. f. Num. XV (1887), Pl. I, 4 (obv.). — Reverse misstruck.  
 b. Boston: 12,06 g (186,1 grains); Regling, Cat. Warren, Pl. XXI, 928.  
 c (Pl. VI, [CD] δρ). Copenhagen: 11,71 g (180,7 grains).
182. (CD) Obv. Same die.  
 (δπ) Rev. F|A Similar. Shallow circular incuse. Cf. no. 180.  
 a. Anderson, Athens: 12,15 g (187,5 grains).  
 b. Rollin & Feuardent, Paris: 11,80 g (182,1 grains).  
 c (Pl. VI, [CD] δπ). Sir H. Weber, London: 12,26 g (189,2 grains).
183. (CD) Obv. Same die.  
 (δσ) Rev. FAΛ|EIQV to l. and r. around inwards. Eagle r., seated on top of small capital of Ionic column; wings folded, four rows of feathers; tail hidden. Shallow circular incuse.  
 a. Berlin: 11,70 g (180,5 grains). — Flaw (in field r.) in obverse die. — Reverse die worn.  
 b (Pl. VI, [CD] δσ). Cambridge (McClellan Coll.): 12,13 g (187,2 grains); Cat. Photiades Pacha (Paris 1890), Pl. V, 1033. — Flaw (in field r.) in obverse die.
184. (CD) Obv. Same die.  
 (δτ) Rev. FAΛ|EIQN to l. and r. around inwards. Similar. Shallow circular incuse. Cf. no. 186.  
 a (Pl. VI, [CD] δτ). Cambridge (McClellan Coll.): 12,02 g (185,5 grains). — Flaw (in field r.) in obverse die. — Slight flaw (at l. leg) in reverse die.  
 b. Cat. Hirsch XIII (Rhusopoulos), Pl. XXIX, 2553 = Cat. Hirsch XXIX (Lambros), Pl. IX, 546 (wrongly described as from Photiades sale): 12,20 g (188,3 grains). — Flaw (in field r.) in obverse die. — Flaw (at l. leg) in reverse die.
185. (CD) Obv. Same die.  
 (δυ) Rev. FAΛE|IQV to l. and r. around inwards. Similar, but eagle l. Shallow circular incuse.  
 a (Pl. VI, [CD] δυ). Berlin: 11,90 g (183,6 grains); Cat. Sotheby, June 1896 (Bunbury), lot 1092. — Flaw (in field r.) in obverse die. — Countermark on reverse: horse's head and neck l. in deep circular incuse.
186. (CE) Obv. Head of Zeus r. bearded, hair wavy, long and flowing, lips parted, wreath of small pointed laurel-leaves around head.  
 (δτ) Rev. FAΛ|EIQN to l. and r. around inwards. Similar, but eagle r. Shallow circular incuse. Cf. no. 184.

- a (Pl. VI, [CE] δτ). Berlin: 12,27 g (189,3 grains); Zeitschr. f. Num. XV (1887), Pl. I, 1. — Flaw (at l. leg) in reverse die.
- b. Boston: 12,03 g (185,6 grains); Cat. Photiadès Pacha (Paris 1890), lot 1039; Cat. Sotheby, March 1896 (Montagu), lot 411; Regling, Cat. Warren, Pl. XXI, 929. — Flaw (at l. leg) in reverse die.
- c. Paris: 12,13 g (187,2 grains), formerly duc de Luynes. — Flaw (at l. leg) in reverse die.
- d. Vicomte de Sartiges, Paris: 12,12 g (187,0 grains); Cat. Hirsch XXV (Philipsen), Pl. XVI, 1274. — Flaw (at l. leg) in reverse die.
- e. Cat. Sotheby, May 1895 (Ashburnham), Pl. IV, 121: 12,12 g (187,1 grains). — Flaw (at l. leg) in reverse die.
187. (CE) Obv. Same die.  
 (δφ) Rev. FAA|EIQN Similar. Shallow circular incuse.  
 a (Pl. VI, CE δφ). London: 12,18 g (188,0 grains); B. M. C. Pelop. 82, Pl. XIII, 8.  
 b. Sir H. Weber, London: 12,23 g (188,7 grains).
188. (CE) Obv. Same die.  
 (δγ) Rev. FAA|EIQV Similar. Shallow circular incuse.  
 a (Pl. VI, [CE] δγ). Berlin: 12,04 g (185,8 grains).  
 b. Copenhagen: 12,01 g (185,3 grains).
189. (CE) Obv. Same die.  
 (δψ) Rev. FAA|EIQN Similar. Shallow circular incuse.  
 a (Pl. VI, [CE] δψ). Cat. Rollin & Feuardent, May 1910, Pl. X, 440: 11,50 g (177,5 grains), formerly Hoffmann; Lambros, Peloponnesos, Pl. Z, 4.

Series XXI (Obverse dies CF—CO).

190. (CF) Obv. Head of Zeus r. bearded, beard curly, hair fairly short and straight, wreath of large pointed laurel-leaves around head.  
 (δω) Rev. F|A Eagle r., seated on top of capital of Ionic column(?); wings K|P(?) folded, four rows of feathers; tail hanging down. Shallow circular incuse.  
 a (Pl. VI, CF δω). Giesecke, Leipsic: 11,97 g (184,7 grains). — Reverse double-struck
191. (CG) Obv. Similar, but beard and short hair curly, wreath of broad-leaved laurel around head.  
 (εα) Rev. F|A Similar. Shallow circular incuse.  
 Δ|  
 a (Pl. VI, CG εα). Berlin: 11,85 g (182,9 grains).
192. (CH) Obv. Similar, but wreath of large pointed laurel-leaves around head.  
 (εβ) Rev. F|A Similar. Shallow circular incuse. Cf. no. 193.  
 A|P  
 a (Pl. VI, CH εβ). Paris: 12,35 g (190,6 grains), formerly duc de Luynes.
193. (CJ) Obv. Similar.  
 (εβ) Rev. Same die as no. 192.  
 a (Pl. VI, CJ εβ). Berlin: 12,15 g (187,5 grains); Zeitschr. f. Num. XVII (1890), Pl. I, 6. — Small flaw (between eagle's l. wing and A) in reverse die.
194. (CK) Obv. Similar, but hair long and wavy.  
 (εγ) Rev. F|A Eagle similar, but seated on head of ram r. with curled A|P horn. Shallow circular incuse. Cf. no. 195.  
 a. Allatini, London: 11,47 g (177,0 grains). — Flaw (below truncation of neck) in obverse die.

- b (Pl. VI, CK). Jakountchikoff, St. Petersburg: 12,18 g (188,0 grains). — Flaw (below truncation of neck) in obverse die.
- c. Jameson, Paris: 12,06 g (186,1 grains); Cat. (1913), vol. I, Pl. LXIV, 1244; Cat. Sotheby, Dec. 1894 (Montagu), Pl. I, 183. — Flaw (below truncation of neck) in obverse die.
- d (Pl. VI, [CK]εγ). Sir H. Weber, London: 11,86 g (183,0 grains). — Flaw (below truncation of neck) in obverse die.
195. (CL) Obv. Similar.  
 (εγ) Rev. Same die as no. 194.  
 a (Pl. VI, CL εγ). London: 12,23 g (188,8 grains); B. M. C. Pelop. 122, Pl. XV, 2. — Flaw (at l. leg) in reverse die.
196. (CM) Obv. Similar.  
 (εδ) Rev. F|A Eagle similar, but seated on top of capital of Ionic column, five rows of feathers on wings. In field r. below A small thunderbolt placed horizontally, both ends twisted flame-darts with volutes. Shallow circular incuse.  
 a (Pl. VI, CM εδ). Cambridge: 12,16 g (187,7 grains); Leake, Numismata Hellenica, Europ. Greece p. 49.  
 b. Matiaux, Paris: 12,00 g (185,2 grains). — Slight flaw in reverse die.
197. (CM) Obv. Same die.  
 (εε) Rev. F|A Similar. Shallow circular incuse.  
 a (Pl. VI, [CM]εε). Paris: 12,03 g (185,6 grains).
198. (CM) Obv. Same die.  
 (εζ) Rev. F|A Similar. Shallow circular incuse.  
 a (Pl. VI, [CM]εζ). Pozzi, Paris: 12,24 g (188,9 grains); Cat. Hirsch XIII (Rbousopoulos), Pl. XXIX, 2581.
199. (CN) Obv. Similar.  
 (εη) Rev. F|A Similar, but thunderbolt placed vertically and to l. under F. Shallow circular incuse.  
 a (Pl. VI, CN εη). Berlin: 12,32 g (190,1 grains).
200. (CN) Obv. Same die.  
 (εθ) Rev. F|A Similar, but thunderbolt placed vertically and to r. under A. Shallow circular incuse. Cf. no. 201.  
 a (Pl. VI, [CN]εθ). Mathey, Paris: 12,44 g (192,0 grains).
201. (CO) Obv. Similar.  
 (εθ) Rev. Same die as no. 200.  
 a (Pl. VI, CO εθ). London: 12,21 g (188,5 grains); Cat. Photiadès Pacha (Paris 1890), Pl. V, 1035; Cat. Sotheby, March 1896 (Montagu), Pl. VI, 408; Num. Chron. 1897, Pl. IV, 10. — Reverse double-struck.

Series XX. The challenge of the Pisatans was taken up by the Eleans as soon as they regained possession of the sacred mint. The former had presumed to put the head of the Olympian Zeus on their money, thereby claiming to be his administrators. Such a claim could not be allowed to go unchallenged; so the head of Zeus appears as the main type of the Elean coins of Olympia. And to make the contradiction of the Pisan claim sufficiently emphatic, the head of the nymph Olympia was placed on the reverse of what is, presumably, the first coin struck after the anolympiad of 364 B. C. (Pl. VI, CA δλ). ΦΑΛΕΙΟΝ ΟΛΥΜΠΙΑ, the

coin reads, fulfilling withal the double purpose of a proclamation and a commemorative medal<sup>1)</sup>. Along with the ΟΛΥΜΠΙΑ die another reverse die (δμ.) was used with the obverse CA, its type a splendid eagle perched on the capital of an Ionic column.

The head of Zeus on the die CA and those on the two following dies (Pl. VI, CB, CC) fall far short in artistic merit of the grand heads by the artist ΔΑ produced some fifty years earlier (nos. 145—147; Pl. V, BQ, BR). Perhaps the comparatively poor quality of the work is to be accounted for by the fact that the engraver was striving after a new conception of the god — a new ideal which sculpture was already attaining —, but was cramped by the tradition which demanded a head of Zeus of an earlier type on the coinage. For money has always been one of the most conservative of things. The die CD has been more successful. Here all the grandeur of the old conception of the „Father of Gods“ is retained without any of the archaistic coarseness of the three other dies. And then suddenly, without warning, the „new“ Zeus appears (Pl. VI, CE). The die CD actually shares a reverse die (δτ) with CE, and yet the character of the two heads is utterly different. The former severe, with short crisp hair, crowned with a wreath of broad-leaved laurel; the latter genial, with flowing locks, and small-leaved wreath. The contemporary staters of the Arcadian League show us just the same juxtaposition of the two types — the „old“ and the „new“, the „severe“ and the „leonine“ Zeus — as may be seen from the two coins on Pl. VIII, 26. 27<sup>2)</sup>. The two heads actually share the reverse die there figured, just as our CD and CE share the reverse die δτ. Prof. von Sallet (*Zeitschr. f. Num.* XV, 1887, p. 9) has already pointed out that these two obverses (CD and CE) are contemporary; but he seems not to have known of their mutual reverse die, which confirms his contention.

The reverses of this series XX mark another point of transition, this time an epigraphic one. On the obverse die CA we have the latest case of O used for Ω, on the reverses δσ to δφ we meet Ω for the first time in the coinage of the mint<sup>3)</sup>.

Henceforth the head of Zeus remains the obverse type, the eagle the reverse type, of the staters of the mint of the temple of Zeus at Olympia.

Fractions: Tritemoron. Obv. similar to no. 177 (CB), but with taenia instead of laurel-wreath; rev. F|A|A in the intervals between three large T's placed like the spokes of a wheel. a. London; B. M. C. Pelop. 81, Pl. XIII, 7; weight: 0,63 g (9,7 grains). — b (Pl. VIII, 25). *Cat. Merzbacher*, Nov. 1910, Pl. 10, 559; weight: 0,56 g (8,6 grains).

<sup>1)</sup> At the mint of the temple of Hera, as will be seen below in group GH<sup>1</sup>, the head of the patron goddess is displaced about the same time by that of the nymph Olympia, by way of commemorating the return of the Eleans.

<sup>2)</sup> No. 26 (obv.) is from the Bunbury collection (*Cat. Sotheby*, June 1896, Pl. VII, 1125), no. 27 (obv.) is the British Museum coin *Cat. Pelop.* 48. The reverse on the plate is from the Brit. Mus. coin *Cat. Pelop.* 49 (with the same obverse die as 48). This reverse die was likewise used to strike staters (e. g. in the Berlin and Paris collections) together with the obverse die of

the Bunbury coin.

<sup>3)</sup> The earliest inscription found at Olympia with Ω in place of the archaic O can be dated exactly. It is a Proxeny decree of the Pisatans issued in the famous 104th Olympiad (B. C. 364) for two citizens of Sicyon (*Olympia*, vol. V, no. 36, columns 73. 74). Epigraphically, inscriptions are usually somewhat in advance of coin-legends. Therefore, we may rightly expect to find O on the coins for a few years after an inscription with Ω has appeared; but the change must be expected soon, and as the dies δσ etc. show we are not disappointed.

Tetartemorion. Obv. head of nymph Olympia similar to that on rev. of no. 175 (δλ); rev. F|A on either side of a large T. London; weight: 0,19 g (3,0 grains). — Pl. VIII, 24.

Series XXI. The heads on the first four coins of this series (nos. 190—193; Pl. VI, CF—CJ) seem to hesitate between the old and the new ideals of Zeus. A finer head of the god than that on no. 192 (Pl. VI, CH) would be hard to find<sup>1)</sup>. On the die CK, however, the new type of Zeus seems clearly defined. The old ideal does not appear again. CH and CJ share a reverse die, as do CK and CL, and CN and CO. In the two former cases fractures of the reverse dies show us the order in which the obverses were used with them. The eagles call for no special comment, save that the bird on nos. 194. 195 (εγ) is perched on a ram's head, instead of a capital<sup>2)</sup>.

The first letters of what must be magistrates' names now begin to appear on the staters. We have KP, ΔI, AP, and a small thunderbolt — presumably a magistrate's signet — on these staters<sup>3)</sup>. In view of the priestly character of the mint, I am inclined to think that these magistrates were probably priests. It is curious that on the reverse die of nos. 194. 195 (εγ) two forms of A occur, that of the moneyer's name having the form A.

Fractions: Hemidrachm. Obv. similar to nos. 194—201 (CK—CO); rev. like nos. 196—201 (εδ—εθ), but no thunderbolt. London: B. M. C. Pelop. 83, Pl. XIII, 9; weight: 2,64 g (40,8 grains).

Obol. Obv. similar; rev. F|A eagle r. looking back. London; B. M. C. Pelop., p. 67, no. 85, Pl. XIII, 10; 0,85 g (13,1 grains) and no. 86; 0,86 g (13,3 grains).

Obol. Obv. similar; rev. F|A eagle l. looking back. London; B. M. C. Pelop. 87, Pl. XIII, 11; weight: 0,82 g (12,7 grains).

Diobol. Obv. similar to no. 196 (CM); rev. eagle's head r. Berlin, formerly Imhoof-Blumer (Num. Chron. 1879, Pl. XVI, 5; Imhoof-Blumer, Monn. gr., p. 169, 68, Choix Pl. II, 62); weight: 1,49 g (23,0 grains). — Pl. VIII, 28.

Of the history of this period little can be said. The Eleans, as has been mentioned, regained possession of Olympia in B. C. 363. In the twenty years which followed, the power of all the Greek states became gradually overshadowed by that of the king of Macedonia, Philip II. I have already noted the close parallel between the earlier staters of the present group and those of the Arcadian League. Philip's coins bear much less resemblance to the Olympian staters, though contemporary, and though his Zeus is the Olympian Zeus. This, however, is not to be wondered at. Philip would draw his Greek die-engravers from the Greek cities nearest to him, the cities of the Olynthian Confederacy. A glance at the British Museum Guide<sup>2</sup> Plates 21 and 22 (nos. 11 and 17.18 respectively) will show the remarkable similarity of feeling and artistic expression between Philip's and the Chalcidian pieces. This much, however, Philip's heads of Zeus do owe to the Olympian heads: they represent the new ideal with long hair and wreath of pointed laurel.

<sup>1)</sup> The well-known stater of Locri Epizephyrii (Head, Hist. Num.<sup>2</sup>, p. 102, fig. 56) seems to be a copy of this coin. The head of Zeus is remarkably like. It is usually dated about 350 B. C., which accords well with the date of our Olympian piece.

<sup>2)</sup> What is almost certainly a contemporary piece, struck at the mint of the temple of Hera, also has a ram's head in the same position.

<sup>3)</sup> Possibly ΠO on the hemidrachm Pl. VIII, 20, mentioned at the end of series XVII, belongs to this series of magistrates.

The coins of this group cannot well be brought down to a later date than B. C. 343. For in the year 342 B. C. Alexander the son of Neoptolemus succeeded to the throne of Epirus, and the head of the Dodonaean Zeus on his silver staters is most evidently copied from some of the heads on the Olympian staters of our next group.

**Group H (Series XXII).**

ca. B. C. 343 to ca. B. C. 323.

Summary of staters:

Obverse dies 6 (CP—CU). Obverse dies using more than one reverse 2.  
Reverse dies 12 ( $\epsilon\tau$ — $\epsilon\nu$ ). Reverse dies used with more than one obv. 0.  
Coins 12. Number of specimens recorded 22.

Series XXII (Obverse dies CP—CU).

202. (CP) Obv. Head of Zeus in high relief r., bearded, hair wavy, long and flowing, wreath of broad-leaved laurel around head.  
( $\epsilon\tau$ ) Rev. F|A Eagle r. (wings folded, six rows of feathers, tail hanging H|P down) standing upon tail of spotted serpent looped once and rearing, striking up l. at eagle's head, tongue protruding. In field r. vertically, small thunderbolt, both ends flame-darts. Shallow circular incuse.  
a (Pl. VII, CP  $\epsilon\tau$ ). Brussels: 12,17 g (187,8 grains).
203. (CQ) Obv. Similar; relief not so high; three rows of leaves on upper part of wreath, leaves smaller.  
( $\epsilon\kappa$ ) Rev. F|A, and H between eagle's leg and serpent. Similar, but four rows of feathers. Small vertical thunderbolt in field l. below F. Shallow circular incuse.  
a (Pl. VII, CQ  $\epsilon\kappa$ ). Cambridge (McClellan Coll.): 11,78 g (181,8 grains).  
b. Kellner, Hamburg.  
c. Paris: 12,12 g (187,0 grains).
204. (CR) Obv. Similar; low relief.  
( $\epsilon\lambda$ ) Rev. Similar. Shallow circular incuse.  
a. Athens: 11,40 g (175,9 grains), formerly Soutzos; Journ. Intern. VII (1904), p. 370, no. 153, Pl. XIV, 6.  
b (Pl. VII, CR  $\epsilon\lambda$ ). Berlin: 11,77 g (181,6 grains).  
c. London: 12,01 g (185,3 grains); B. M. C. Pelop. 132, Pl. XV, 8.  
d. Milan, Brera Museum: 12,23 g (188,7 grains).  
e. Cat. Ratto (Genoa), Nov. 1908, Pl. II, 443 = Apr. 1909, Pl. XIII, 2986: 12,10 g (186,7 grains).
205. (CS) Obv. Similar.  
( $\epsilon\mu$ ) Rev. Similar. Shallow circular incuse.  
a. Boston (Bartlett Coll.): 11,97 g (184,8 grains).  
b (Pl. VII, CS  $\epsilon\mu$ ). Brussels: 12,08 g (186,4 grains), formerly Baron Hirsch.
206. (CS) Obv. Same die.  
( $\epsilon\nu$ ) Rev. Similar, but with H instead of H. Shallow circular incuse.  
a (Pl. VII, [CS]  $\epsilon\nu$ ). Vienna: 11,55 g (178,2 grains).
207. (CT) Obv. Similar; higher relief; wreath with two rows of leaves only.

- (εξ) Rev. Similar, but with H. Shallow circular incuse.  
 a (Pl. VII, CT εξ). Cambridge: 11,95 g (184,4 grains); Leake, Numismata Hellenica, Europ. Greece p. 49.
208. (CT) Obv. Same die.  
 (εο) Rev. Similar. Shallow circular incuse.  
 a (Pl. VII, [CT] εο). Cat. Sotheby, Feb. 1909 (Benson), Pl. XIX, 576: 12,31 g (190,0 grains). — Flaw (over head of eagle and A) in reverse die.
209. (CT) Obv. Same die.  
 (επ) Rev. Similar. Shallow circular incuse.  
 a. London: 11,74 g (181,2 grains); B. M. C. Pelop. 133.  
 b (Pl. VII, [CT] επ). Mathey, Paris: 12,31 g (190,0 grains). — Tested by deep cut.  
 c. Munich: 11,70 g (180,5 grains); Cat. Hirsch XVI (1906), Pl. XVII, 586.  
 d. Pozzi, Paris: 12,25 g (189,0 grains).
210. (CT) Obv. Same die.  
 (ερ) Rev. Similar. Shallow circular incuse.  
 a (Pl. VII, [CT] ερ). Berlin: 10,96 g (169,1 grains). — Flaws in reverse die.
211. (CT) Obv. Same die.  
 (εσ) Rev. Similar; bigger vertical thunderbolt with two lines at each side of each dart. Shallow circular incuse.  
 a (Pl. VII, [CT] εσ). Copenhagen: 11,96 g (184,6 grains). — Obverse die worn.
212. (CT) Obv. Same die.  
 (ετ) Rev. Similar; broad eagle with spread tail; wings with three rows of feathers. Big thunderbolt with three lines at each side of each dart. Shallow circular incuse.  
 a (Pl. VII, [CT] ετ). Cat. Egger XL (Prowe), Pl. XX, 1118: 11,89 g (183,5 grains). — Obverse die worn.
213. (CU) Obv. Similar; high relief; wreath with two rows of leaves and twig with three leaves on it springing upwards from the middle of it.  
 (ευ) Rev. FA in field r. below. Eagle r. standing with feet apart; wings open, part of l. wing shown in front of breast, four rows of feathers; head turned back looking l.; tail closed. Shallow circular incuse.  
 a (Pl. VII, CU ευ). London: 11,79 g (182,0 grains); B. M. C. Pelop. 112, Pl. XIV, 12; B. M. Guide<sup>2</sup> Pl. 32, 23; Num. Chron. 1879, Pl. XV, [X]1; Gardner, The Types of Greek Coins, Pl. XII, 25 (obv.); Head, Hist. Num.<sup>2</sup>, p. 424, fig. 233.

Series XXII. The earliest coin of this group H is a drachm figured on Pl. VIII, 29. The piece forms a distinct link between the preceding period and the one we are dealing with. The head of Zeus may almost be said to be of the old severe type, so strongly reminiscent is it of staters like nos. 181 ff. (Pl. VI, CD). The reverse, however, corresponds exactly to the reverses of the staters of this series XXII. A magnificent head is the one of the die CP, Praxitelean almost in its feeling, though somewhat effeminate for the „Father of the Gods“. The artist seems to have striven after benevolence and to have lost strength. In the next die (Pl. VII, CQ), the head has more strength, but less benevolence. Perhaps the combination of the two has been most cleverly attained on the die CU, the last of our group. Of the other three obverse dies nothing need be said, save that CR and CS seem to have been the prototypes from which the staters of Alexander,

son of Neoptolemus, king of Epirus, were copied. Note especially the stater of that king figured in the *Cat. Hirsch XIII* (Rhousopoulos), Pl. XX, 1541. The similarity is remarkable. This fact, as pointed out in the previous group, gives us a valuable index to the dating of this group.

The eagle fighting with the serpent is no new type to the Olympian mint, though it is here treated in a new and somewhat clumsy way. The awkwardness is not too apparent in the prototype, the die  $\epsilon$ , where the eagle stands upon a considerable portion of the serpent's tail. But on most of the dies which follow it becomes absurd, the reptile standing up on the tip of its tail to strike at the bird. Perhaps it was a feeling for the awkwardness of this type that led to its abandonment<sup>1)</sup>, and to the substitution of the fine eagle with the outspread wings of no. 213 (Pl. VII,  $\epsilon$  $\nu$ ). With regard to this last coin it is difficult to say whether it should be placed under this group, or the next. Its head forms a link with the earliest head of the next group. But the attitude of the eagle reminds one of the bird on the latest staters issued from the mint of the temple of Hera, which mint, it seems, was closed about 323 B. C. or shortly after. I believe that, in spite of its being artistically much superior to the latest Hera mint coins (such as B. M. C. Pelop. 101, Pl. XIV, 5), it is, nevertheless, contemporary with them. Style at this period is no certain criterion. The Hera mint staters are bad, because they are a conventionalized type deteriorated by repeated copying<sup>2)</sup>. The die  $\epsilon$  $\nu$  is good, because it is a new type to the engraver, and he has had to work carefully.

Fractions: Drachm. Obv. like nos. 181 ff. (CD); rev. similar to no. 202 ( $\epsilon$ ), but no magistrate's name nor thunderbolt. a. London; Num. Chron. 1894, Pl. I, 6; weight: 2,74 g (42, grains). — b (Pl. VIII, 29). Seltman, Berkhamsted; weight: 2,67 g (41,2 grains) Bronze<sup>3)</sup>, mm 20. Obv. similar to no. 213 (CU), but head l.; rev. F|A eagle similar to that of no. 213 ( $\epsilon$  $\nu$ ), but l. London; B. M. C. Pelop. 115, Pl. XIV, 15.

The steady rise of Macedonia, the steady decline of free Hellas, is the main theme of the history of the beginning of this period. Philip's connection with Olympia was very close, for it was part of his policy to patronize it. In doing so he stood forth avowed as the Hellen that he always wished to be thought. So it is not surprising that there is less falling off in the coinage of Olympia<sup>4)</sup> than in that of any other city of Greece proper<sup>5)</sup> during the latter part of the reign of Philip II. The foundations of the Philippeion, the witness of the Macedonian's favour, are still to be seen at Olympia.

Then in the second portion of our period came the great „rush to the east“. The centre of political gravity was entirely shifted. Greece in Asia became of far more account than Greece in Europe. Even Olympia, the spot that once might have fitly been termed the „hub of Hellas“, was affected by this great change. Only Athens and Corinth, of all the cities of European Greece, retained some of

<sup>1)</sup> In the next group, J, the serpent is not introduced. It appears again in group K, but the sense of beauty and composition seems to have almost vanished at that period.

<sup>2)</sup> For the same deterioration at the Zeus mint compare Pl. VII,  $\epsilon$  $\tau$  with Pl. VII,  $\epsilon$  $\tau$ .

<sup>3)</sup> This is the first appearance of bronze coins

at Olympia.

<sup>4)</sup> In addition to the coins of the present group, it must not be forgotten that there was also a large contemporary issue from the Hera mint.

<sup>5)</sup> Corinth perhaps is an exception to this statement, but then that great emporium was usually unaffected by politics.

their former prosperity, and that only because they were in close touch with Asiatic Greece. And so as the Greeks spread and gradually broke up into rival states of big dimensions, Olympia which had been a band of union (religious, if nothing else) between the old city states, lost its old importance. Gradually, it is true, but surely the Olympiad changed from being the great national and religious festival to a great quadrennial sporting event.

**Group J (Series XXIII).**

ca. B. C. 323 to ca. B. C. 271.

Summary of staters:

Obverse dies 5 (CV—CZ). Obverse dies using more than one reverse 3.  
Reverse dies 14 (εφ—ζκ). Reverse dies used with more than one obv. 1.  
Coins 15. Number of specimens recorded 21.

Series XXIII (Obverse dies CV—CZ).

214. (CV) Obv. Head of Zeus in high relief r., bearded, aquiline nose, hair wavy, long and flowing, wreath of pointed laurel-leaves around head.  
(εφ) Rev. F|A Eagle r. standing, wings folded, four rows of feathers, tail A|P hanging down. In field, l. olive-wreath stalks upwards, to r. vertical thunderbolt of darts with flame-lines. Shallow circular incuse.  
a (Pl. VII, [CV] εφ). Vienna: 12,00 g (185,2 grains).
215. (CV) Obv. Same die.  
(εχ) Rev. F A Eagle similar, standing on rough ground. In field, l. vertical A|P thunderbolt of darts with flame-lines, to r. olive-wreath stalks upwards. Shallow circular incuse. Cf. no. 216.  
a (Pl. VII, CV εχ). Brussels: 11,96 g (184,6 grains).
216. (CW) Obv. Similar; nose not aquiline, laurel-leaves smaller.  
(εχ) Rev. Same die as no. 215.  
a. Athens: 11,95 g (184,4 grains).  
b (Pl. VII, [CW] εχ). London: 12,04 g (185,8 grains); B. M. C. Pelop. 120, Pl. XV, 1; Num. Chron. 1879, Pl. XV, [XI]1.  
c. Paris: 12,06 g (186,1 grains).
217. (CW) Obv. Same die.  
(εψ) Rev. Similar; two rows of feathers; no rough ground. Pellet in field l. between thunderbolt and eagle's back. Shallow circular incuse.  
a (Pl. VII, CW). Berlin: 12,20 g (188,3 grains); Lambros, Peloponnesos, Pl. Z, 8.  
b (Pl. VII, [CW] εψ). Cambridge: 11,97 g (184,8 grains); Leake, Numism. Hellenica, Europ. Greece p. 49.
218. (CW) Obv. Same die.  
(εω) Rev. Similar. No pellet. Shallow circular incuse.  
a. Munich: 11,40 g (175,9 grains).  
b (Pl. VII, [CW] εω). Cat. Hirsch XIII (Rhousopoulos), Pl. XXIX, 2580 = Cat. Rollin & Feuardent, May 1908, Pl. VIII, 312: 11,60 g (179,0 grains).
219. (CW) Obv. Same die.  
(ζα) Rev. Similar. In field, l. olive-wreath stalks upwards, to r. thunderbolt, bigger, twisted flame-dart with four flame-lines and short volutes at each end. Shallow circular incuse.

- a (Pl. VII, [CW]ζα). Jameson, Paris: 12,00 g (185,2 grains); Cat. (1913), vol. I, Pl. LXIV, 1245.
220. (CX) Obv. Similar, but bigger; lower relief, laurel-wreath narrower.  
(ξβ) Rev. Similar, eagle standing on rough ground. In field, l. thunderbolt, long and thin, dart with two flame-lines at each end, to r. olive-wreath stalks upwards. Shallow circular incuse.  
a (Pl. VII, [CX]ξβ). Cambridge (McClellan Coll.): 12,06 g (186,2 grains).  
b. Cat. Merzbacher, Nov. 1910, Pl. 10,564: 11,71 g (180,7 grains).
221. (CX) Obv. Same die.  
(ζγ) Rev. Similar, but dart of thunderbolt with four flame-lines at each end. Shallow circular incuse.  
a (Pl. VII, CX ζγ). Cat. Sotheby, May 1900 (Late Collector), Pl. VI, 291 = Cat. Hirsch XXV (Philipsen), Pl. XVI, 1293: 11,64 g (179,6 grains).
222. (CX) Obv. Same die.  
(ξδ) Rev. Similar. Thunderbolt short and broad, twisted flame-dart between flame-lines over short volutes at each end. Shallow circular incuse.  
a. Gotha: 11,98 g (184,9 grains).  
b (Pl. VII, [CX]ξδ). London: 12,08 g (186,5 grains); B. M. C. Pelop. 121.
223. (CX) Obv. Same die.  
(ξε) Rev. F|A Similar; no rough ground. Thunderbolt as before, but longer.  
A|P| Shallow circular incuse.  
a (Pl. VII, [CX]ξε). Cat. Sotheby, Feb. 1909 (Benson), Pl. XIX, 577: 12,12 g (187,0 grains). — Flaw (touching upper lip) in obverse die.
224. (CX) Obv. Same die.  
(ξζ) Rev. Similar; rough ground. Thunderbolt shorter. Shallow circular incuse.  
a (Pl. VII, [CX]ξζ). In the trade. — Flaw (touching upper lip) in obverse die. — Reverse double-struck. — Flaw (over field before eagle) in reverse die.
225. (CX) Obv. Same die.  
(ξη) Rev. F|A Eagle similar, standing on rough ground. In field, l. olive-wreath stalks upwards, to r. thunderbolt (as before). Shallow circular incuse.  
A|P|  
a (Pl. VII, [CX]ξη). Cat. Sotheby, May 1908 (O'Hagan), Pl. VIII, 463 = Cat. Egger XL (Prowe), 1117: 12,11 g (186,9 grains). — Flaw (touching upper lip) in obv. die.
226. (CX) Obv. Same die.  
(ξθ) Rev. Similar. Shallow circular incuse.  
a (Pl. VII, [CX]ξθ). Berlin: 12,11 g (186,9 grains). — Flaw (touching upper lip) in obverse die.
227. (CY) Obv. Similar, but bigger; wreath of big, broad, overlapping laurel-leaves.  
(ζ) Rev. Similar; no rough ground; four rows of feathers on wing. In field, l. thunderbolt (as before), to r. wreath (?). Shallow circular incuse.  
a (Pl. VII, CY ζ). Copenhagen: 11,42 g (176,2 grains). — Flaw (in field r.) in reverse die.
228. (CZ) Obv. Similar, coarse head; wreath of big laurel-leaves, a berry between each pair.  
(ζκ) Rev. Similar. In field, l. thunderbolt (as before), to r. olive-wreath stalks upwards. Shallow circular incuse.  
a (Pl. VII, CZ ζκ). Berlin: 11,78 g (181,8 grains).

Series XXIII. There is some similarity between the first two heads (CV, CW) in this group and the head CU which I have placed at the end of the former group. Of the two CW is perhaps likest CU. The Zeus of CV has an almost Jewish cast of face. CV and CW share a reverse die (εχ). The other three heads in this series are larger, in lower relief, and in consequence — apparently — of poorer style. The die CX must have seen many years of usage, since seven reverse dies are recorded as having been used with it alone. The awkwardly designed serpent which was so prominent in the foregoing group has been dropped in this. The reverses show a somewhat tedious uniformity of design and lack of originality. A small thunderbolt, an olive-wreath, and the letters API run through the whole series. The number of coins recorded here shows that the theory of Prof. Gardner (Num. Chron. 1879, pp. 259 ff.) that API is Aristotimus, tyrant for five months of the city of Elis, is untenable. Besides, the coinage is the money of Olympia not Elis, a temple, not a state, issue. Had the tyrant recorded his name on coins, it must have been upon some other than the sacred Olympian money. It has been suggested by Lambropoulos<sup>1)</sup> either that API may stand for the officina of a mint at which Elis, Argos and Corinth all had their coins struck<sup>2)</sup>, or that the letters were put upon the coins of these three states because they probably formed a monetary alliance at the same time as their political alliance of B. C. 421, or somewhat later. He goes on to suggest that they expressed this same monetary alliance by mutually placing these letters API upon their coins. But the API coins of Olympia are apparently later in date than the AP<sup>3)</sup> and API coins of Corinth and Argos. Besides, calmly to segregate AP and API from the long series of magistrates' names at these two cities is a very arbitrary proceeding.

Fractions: Hemidrachm. Obv. similar to no. 227 (CY); rev. F|A eagle r. seated on Ionic capital, in field r. A. New York; Hill, Cat. Ward, Pl. XIII, 547; weight: 2,36 g (36,4 grains). — Pl. VIII, 30.

It has been generally contended<sup>4)</sup> that the Elean coinage ceased about B. C. 323, as did that of most cities in Greece, owing to the oppressiveness of the Macedonian rule. But I see no reason why it should be thought that this coinage was interrupted. First of all, note the easy unbroken sequence of the staters. It would be arbitrary to point to one particular piece and say: „here is the last coin struck in B. C. 323, several years elapsed before this next piece was struck“. And, secondly, would Antipater, Ptolemy, Cassander or any other Macedonian venture to veto the coinage of the Olympian Zeus? After all, the most absolute ruler must consider popular sentiment, and especially popular sentiment in regard to religion. For Antipater to have entirely abolished the issue of the renowned Olympian staters, the sacred money of Zeus, would have been an insult to the god, rather than to the Eleans, and too great an outrage on Hellenic feeling. With

<sup>1)</sup> Ἐφημερίς Ἀρχαιολογική, vol. III (1896), columnus 179 ff.

<sup>2)</sup> Head, Hist. Num.<sup>2</sup>, p. 425 seems to endorse this suggestion.

<sup>3)</sup> API does not occur at Corinth.

<sup>4)</sup> Gardner, Num. Chron. 1879, p. 254; Head, Hist. Num.<sup>2</sup>, p. 425. The number of staters I have

been able to get together shows that the chronology adopted in the latter work is quite impossible. To crowd all the pieces, from the successors of the Pisan gold coinage down to the last and latest of our group K, into a space of 40 years is out of the question. Could a piece like our no. 237 be dated B. C. 323?

the coinage of the Hera mint it was different. It was, after all, only a secondary issue. Antipater, or one of his successors, seems quietly to have closed that mint. But such an insult could not be offered by any Philhellenic Macedonian to the Olympian Zeus. The ubiquity of the Alexandrine tetradrachms, their popularity and commercial value doubtless injured the staters of the old Elean standard, a standard which the dignity of the god could not permit to be changed. Henceforth far fewer staters were struck, because far fewer were wanted.

Telesphorus, a general in the service of Antigonos, king of Asia, rebelled against his commander-in-chief, Ptolemy, nephew of Antigonos, and in B. C. 312 established himself in Elis and seized some of the sacred treasure at Olympia to pay his troops with (Diod. XIX, 87). Naturally we have no numismatic record of this event on the Olympian coins. Such troops at such a time would only accept cash of one type — Alexandrine tetradrachms. If such were struck at Olympia they might probably have been the pieces (Müller, Numismatique d'Alex. le Grand, nos. 894—896), which have as symbol a thunderbolt somewhat resembling the reduced drachm Pl. VIII, 33, or such pieces as Müller's no. 883, which has in the field a trophy of arms facing, and under the throne OA in an olive-wreath. Ptolemy, nephew of Antigonos, marched upon Elis, drove out Telesphorus and restored the stolen treasure to Olympia.

### Group K (Series XXIV).

ca. B. C. 271 to ca. B. C. 191.

#### Summary of staters:

Obverse dies 8 (DA—DH). Obverse dies using more than one reverse 3.  
Reverse dies 10 (ζλ—ζν). Reverse dies used with more than one obv. 1.  
Coins 11. Number of specimens recorded 23.

#### Series XXIV (Obverse dies DA—DH).

229. (DA) Obv. Head of Zeus r. bearded, hair long, eye staring, wreath of small pointed laurel-leaves around head.  
(ζλ) Rev. F|A Eagle r. standing, wings folded, three rows of feathers; tail Δ| hanging down. In field r. below, vertical thunderbolt of darts with flame-lines. Shallow circular incuse.  
a. Berlin: 11,93 g (184,1 grains).  
b (Pl. VII, DA ζλ). New York: 12,14 g (187,4 grains); Hill, Cat. Ward, Pl. XIII, 545.
230. (DA) Obv. Same die.  
(ζμ) Rev. F|A Eagle as before. In field r. serpent rearing up l., tail at Δ| eagle's l. claw, looped once in middle. Shallow circular incuse. Cf. no. 231.  
a (Pl. VII, [DA] ζμ). Berlin: 12,17 g (187,8 grains); Friedlaender and von Sallet, Das Königliche Münzkabinet<sup>2</sup>, Pl. II, 138.
231. (DB) Obv. Similar, but bigger and lower relief; wreath with triple row of leaves.  
(ζμ) Rev. Same die as no. 230.  
a (Pl. VII, DB ζμ). Berlin: 12,13 g (187,2 grains). — Flaw (between eagle and serpent) in reverse die.

- b. London: 11,94 g (184,2 grains); B. M. C. Pelop. 131, Pl. XV, 7; B. M. Guide<sup>2</sup> Pl. 43, 26; Num. Chron. 1879, Pl. XVI, [XII] 1; Gardner, The Types of Greek Coins, Pl. XII, 51 (obv.); Head, Hist. Num.<sup>2</sup>, p. 425, fig. 234. — Flaw (between eagle and serpent) in reverse die.
232. (DC) Obv. Similar, not so broad; two rows of leaves on wreath.  
(ζν) Rev. F|A Similar, eagle broader. Serpent as before. In field l. broad vertical thunderbolt, flame-dart between volutes at each end. Shallow circular incuse.  
a (Pl. VIII, [DC] ζν). Cambridge (McClellan Coll.): 11,94 g (184,2 grains).  
b. Rollin & Feuermann, Paris: 12,00 g (185,2 grains). — Flaw (at nose) in obverse die.  
c (Pl. VIII, DC). Cat. Sotheby, May 1908 (O'Hagan), Pl. VIII, 461: 12,12 g (187,0 grains). — Flaw (at nose) in obverse die. — Reverse double-struck.
233. (DC) Obv. Same die.  
(ζξ) Rev. [F]|A Similar. Shallow circular incuse.  
a (Pl. VIII, [DC] ζξ). Berlin: 12,04 g (185,8 grains). — Big flaw (at nose) in obverse die. — Reverse double-struck.
234. (DD) Obv. AP below truncation of neck. Similar head of Zeus, eye not staring.  
(ζο) Rev. F|A Similar; broad eagle, point of l. wing appearing behind r. wing. No serpent. In field r. vertical thunderbolt, three flame-lines branching from each side of each dart. Shallow circular incuse.  
a. Boston (Bartlett Coll.): 11,74 g (181,2 grains).  
b. Vicomte de Jonghe, Brussels: 12,70 g (196,0 grains); Cat. Hirsch XXIX (Lambros), Pl. IX, 551.  
c (Pl. VIII, [DD] ζο). London: 11,83 g (182,6 grains).  
d (Pl. VIII, DD). Paris: 12,00 g (185,2 grains), formerly duc de Luynes.  
e. Vicomte de Sartiges, Paris: 11,88 g (183,3 grains); Cat. Hirsch XXV (Philipsen), Pl. XVI, 1294.  
f. Cat. Hirsch XIV (1905), Pl. XII, 456: 10,90 g (168,2 grains).  
g. Cat. Hirsch XXI (Consul Weber), Pl. XXIV, 1945 = Cat. Hirsch XXXIII (1913), Pl. XVII, 777: 12,07 g (186,3 grains).
235. (DE) Obv. AP below truncation of neck. Similar; laurel-leaves in line.  
(ζπ) Rev. F|A Very broad eagle standing l.; wings folded, four rows of feathers; broad tail; claws on tail of bearded serpent rearing up r. looped once in middle. Shallow circular incuse.  
a. Berlin: 12,04 g (185,8 grains). — Obverse and reverse double-struck. — Flaw (over eagle's beak) in reverse die.  
b (Pl. VIII, [DE] ζπ). Cat. Hirsch XXVI (1910), Pl. XVIII, 528: 11,82 g (182,4 grains). — Flaw (over eagle's beak) in reverse die.
236. (DE) Obv. Same die.  
(ζρ) Rev. F|A Similar type r.; serpent l.; coarser work. Shallow circular incuse.  
a (Pl. VIII, DE ζρ). Paris: 11,54 g (178,1 grains).
237. (DF) Obv. Coarse head of Zeus r. bearded, hair long, wreath of laurel-leaves standing out from stalk around head.  
(ζσ) Rev. F|A Similar, but not so broad. Double loop in middle of serpent.  
A|P Shallow circular incuse.  
a (Pl. VIII, DF ζσ). London: 11,91 g (183,8 grains); B. M. C. Pelop. 123; Num. Chron. 1879, Pl. XV, [XI] 3.

238. (DG) Obv. Similar; low relief; eye staring; wreath of small laurel-leaves.  
 (ζτ) Rev. F|A Similar, but eagle bending slightly back. Serpent looped once  
 A|ϑ near tail. Shallow circular incuse.  
 a (Pl. VIII, DG ζτ). London: 12,01 g (185,3 grains); B. M. C. Pelop. 124, Pl. XV, 3.  
 — Reverse slightly double-struck.
239. (DH) Obv. Coarse head of Zeus l. bearded, hair long, high relief; wreath of  
 small thick laurel-leaves around head.  
 (ζυ) Rev. F|A Hawk-like eagle r. standing on rock, wings folded, five rows  
 A|Π of feathers. In field l. small, thick, vertical thunderbolt of  
 darts between volutes, in field r. laurel-wreath stalks upwards. Shallow  
 circular incuse.  
 a (Pl. VIII, DH ζυ). Berlin: 12,30 g (189,8 grains).  
 b. Paris: 12,10 g (186,7 grains), formerly duc de Luynes.

Series XXIV. We have now reached a time when „style of the period“ as such does not exist. The characteristic of the art of this period is, generally speaking, characterless work<sup>1)</sup>. And so we find our first two obverse dies DA and DB with heads of Zeus that are complete contrasts. And yet they share a reverse die (ζμ). Clearly the engraver who made DA had some old Olympian stater before him, while he who cut DB was copying the Dodonaean Zeus on the Italian coinage of Pyrrhus. The next three dies (Pl. VIII, DC, DD, DE) bear a shaggy type of head, reminiscent of the head of Poseidon on the Macedonian tetradrachms of Antigonus (Head, Hist. Num.<sup>2</sup>, p. 231, fig. 143). DF and DG are coarse and weak, and like the last of the series, DH, closely resemble the hemidrachms of the Achaean League. This last die, with the head to the left, is a curious one, unlike any other. Its lateness is shown by the fact that the head on the obverse of one of the first coins of the Achaean League, struck in the name of the Eleans (Pl. VIII, 31), has been deliberately copied from it.

The style of the reverses is naturally as mixed as that of the obverses. Some of the eagles resemble those of earlier periods, others are quite Ptolemaic in their style. The serpent which occurred in a former series is reintroduced on some of the dies, usually in an attitude even more impossible than the attitude it assumed on the reverses of series XXII.

- Fractions: Hemidrachm. Obv. coarse head of Zeus r.; rev. F|A thunderbolt, and A|Π or A|P or no name; all in olive-wreath. London; B. M. C. Pelop. 125—128. 139. 140, Pl. XV, 4. 5. 12; weight: 2,64—2,28 g (40,8—35,2 grains).
- Bronze, mm 19. Obv. head of Zeus r.; rev. F|A horse r. trotting or galloping and A|Π. London; B. M. C. Pelop. 129. 130, Pl. XV, 6.
- Bronze, mm 22. Obv. similar; rev. FA horse trotting l. London: B. M. C. Pelop. 144, Pl. XV, 15.
- Bronze, mm 19. Obv. head of Zeus l.; rev. FA horse trotting r. London; B. M. C. Pelop. 145.
- Bronze, mm 22. Obv. head of Zeus r., behind Δ|; rev. F|AΛ horse galloping r., below Δ. London; B. M. C. Pelop. 146, Pl. XV, 16.

<sup>1)</sup> A good example of this lack of definite style will be found by looking at Pl. XIII of Hill's Coins of Ancient Sicily which coincides roughly

with the present period. Note the medley of styles there depicted, Hellenistic reminiscences of promiscuous earlier periods.

I made it clear in the foregoing group that I attach no significance to the coincidence that the name of an ephemeral Elean tyrant should begin with the same three letters as those which appear on the coins of the whole of the last series. My reason for ending the last group about B. C. 271 — which happens to be the date of Aristotimus' tyranny — is connected, not with the tyrant, but with Pyrrhus. The reign of the latter came to an end in B. C. 272, and it seems pretty clear to me that one of the first dies of the present series, DB, owes its inspiration — unconsciously perhaps — to the Italian tetradrachms of Pyrrhus. Nearly a century before, when Olympia was still in all its glory, we found a didrachm of the Epizephyrian Locrians manifestly copied from a stater of Olympia (cf. above on Series XXI). Now by far the best die-sinking was being done in the West, and so we find the debt repaid. An Olympian stater is copied from a tetradrachm of the Epirate king struck in the mint of the Epizephyrian Locrians.

There is no event in the history of Olympia during the third century B. C. which has any bearing upon the coinage. It may be objected that I have spread the coins of this and the foregoing groups over too large a number of years. But we know that the Eleans did not join the Achaean League until B. C. 191. And not till B. C. 191 would they reduce their coin standard to the standard of their enemies. A coin like no. 239 (Pl. VIII, DH ζφ) is of remarkably good weight, since the two recorded specimens weigh 12,30 and 12,10 g (189,8 and 186,7 grains). Yet it must be placed quite at the end of this series, both on account of fabric, and because a League coin is copied from it. So I feel justified in placing my last group L after B. C. 191. But more of this below.

### Group L (Series XXV).

Reduced standard, ca. B. C. 191 to —?

Series XXV (Obverse dies DJ, DK).

240. (DJ) Obv. Head of Zeus r. bearded, coarse work, hair long, wreath of long thin laurel(?) -leaves around head.  
 (ζφ) Rev. F|A Broad eagle r. standing, wings folded, three rows of feathers;  
 A|PI tail hanging down. In field r. below, small vertical thunder-bolt of darts with flame-lines branching from each. Shallow circular incuse.  
 a (Pl. VIII, DJ ζφ). Sir H. Weber, London: 10,72 g (165,5 grains).
241. (DK) Obv. Similar.  
 (ζχ) Rev.  $\frac{F|A}{\overline{P}}$  Similar. Shallow circular incuse.  
 a (Pl. VIII, DK ζχ). Berlin: 10,56 g (163,0 grains).  
 b. Jakountchikoff, St. Petersburg: 10,65 g (164,3 grains).

Two obverse dies and two reverse dies are all that are known at present of this last series of the mint of the temple of Zeus. Both heads are late in style, weak copies of dies like DC and DD in the foregoing group. The wreath they wear is hardly like a laurel-wreath, so long and thin are its leaves. Both eagles, on the reverses, are like birds on the late coins of the Ptolemies.

Fractions: Reduced drachm. Obv. eagle r., wings raised over back, head down, beak touching head and claws grasping back of hare in running attitude r.; in field l. below  $\xi$ ; rev. F|A thunderbolt, two volutes on either side of central dart above and below, bird's wings often attached to middle of handle; in field below  $\xi|\Omega$ , in field r. wreath. London; B. M. C. Pelop. 136, Pl. XV, 10; weight: 4,34 g (67,0 grains). — Pl. VIII, 33.

Reduced drachm. Obv. similar, but no letter; rev. F|A thunderbolt, two volutes on either side of central dart above, wings attached to top of lower dart. a (Pl. VIII, 34, rev.). New York; Hill, Cat. Ward 546; weight: 4,36 g (67,3 grains). — b. Cat. Hirsch XXV (Philipsen), Pl. XVI, 1297; weight: 4,65 g (71,8) grains).

Reduced drachm. Obv. similar; rev. F|A thunderbolt; upper half, heart-shaped pomegranate over two large petals, eight wavy flame-lines upwards over it; lower half, two volutes curling outwards, on them pine-cone and eight wavy flame-lines downwards. a (Pl. VIII, 35, rev.). London; B. M. C. Pelop. 134, Pl. XV, 9; weight: 4,48 g (69,2 grains). — b. Cambridge (McClellan Coll.), weight: 4,70 g (72,1 grains).

Reduced hemidrachm. Obv. coarse head of Zeus r.; rev. F|A eagle r. seated on capital, in field l.  $\xi\Omega$ . London; B. M. C. Pelop. 137, Pl. XV, 11; weight: 2,24 g (34,6 grains).

The staters of this last group L are evidently struck on the same standard as the coinage of the Achaean League. Supposing their full weight is 10,70 g (165 grains), half staters should weigh 5,35 g (82,5 grains) and quarter staters 2,67 g (41,25 grains). Now as a fact the heaviest hemidrachm of the Achaean League coinage in the British Museum (a triobol of Dyme: B. M. C. Pelop. p. 4, no. 34) weighs 2,79 g (43,1 grains). The two next in weight (triobols of Megara and Capryae: *ibid.* p. 2, no. 11 and p. 10, no. 109) weigh 2,56 g (39,5 grains). Most of them, it is true, fall below this weight, but this is only natural in a coinage consisting only of small silver pieces with no larger denominations. Such small pieces would not be weighed in market transactions. Our staters, then, are clearly struck on the Achaean standard, and we can hardly be justified in dating them before the time that the Eleans actually entered the League. It was in the year B. C. 191 that the Eleans under compulsion, and with great reluctance, joined it. Of all the Peloponnesian states they were its latest members. Before B. C. 191 rivalry of the strongest kind between the Eleans, members of the Aetolian League, and the Achaeans forbade an assimilation of standards. A further proof that they are posterior to B. C. 191 appears on comparing them with the actual League triobols of Elis, e.g. Pl. VIII, 32, the head of which is an almost exact reproduction of the head on the staters (DJ and DK) and points clearly to their contemporaneity.

Whether the Achaean League triobols were struck at Elis or Olympia is uncertain. The existence of this group L consisting of pieces manifestly struck, like their predecessors, at Olympia, inclines me to the opinion that the League pieces were struck in the city of Elis. And so, superseded by the League coinage, the Olympian mint quietly closed. Just as the Macedonian monarchs did not dare to abolish the sacred temple money, so the heads of the Achaean League did not venture to excite public feeling by closing the mint; hence these few coins of the light weight, which they did enforce. But they set up a new and flourishing mint presumably at Elis itself, and the old temple mint of Olympia died a natural death. Only the die-sinkers at Elis, from a patriotic feeling, strove at first to make the heads of Zeus on their League triobols as like the head of the great Olympian god

as possible; witness the triobols Pl. VIII. 31. 32, copies of the latest staters struck at the mint at Olympia.

Dying patriotism is apt to be archaistic. „Let us hide“, people say, „the existence of our present dishonour by a revival of the symbols of our past glory“. And presumably some such motive underlay the curious revival of the oldest types of the Olympian coinage on the drachms Pl. VIII, 33—35, the last of all autonomous pieces struck from the mint. The eagle with the hare, the thunderbolt of Zeus, types that the fifth and sixth centuries saw, appear again, and the mint ends with the types with which it began. There is something fine about this. It is like the last rally in some great battle, this attempt to revive again the ancient splendour of the coinage that issued, at the time when Hellas was greatest, from the temple mint of Zeus Olympios.

The three following groups, E<sup>1</sup>, E<sup>2</sup>, GH<sup>1</sup>, comprise the coins issued from the mint of the temple of the Olympian Hera, as has already been explained in the Introduction. A glance over Plates IX—XII will make it plain what a satisfactory sequence of these staters can be established, a sequence complete in itself and quite independent of the contemporary issues from the mint of the temple of Zeus. Among the staters of the principal mint we find an extraordinarily large number of countermarked examples in groups A—C, rather fewer in group D, fewer still in group E, while in group G one solitary instance only is recorded; and, corresponding to this decrease, in the issues of the auxiliary mint, which are contemporary with groups E, G, H, the countermarks are also few and far between. Besides a few indistinguishable countermarks (cf. nos. 251, c. 274, c. 275, c. 292, d. 332, a. c) we find three of the countermarks tabulated in the Introduction: no. II (cf. no. 312, c), the bunch of grapes (cf. no. 258, a), and the E (cf. no. 242, f). In addition one new countermark appears: the head of a trident (cf. no. 243, e).

### Group E<sup>1</sup> (Series XXVI. XXVII).

ca. B. C. 421 to ca. B. C. 385.

#### Summary of staters:

Obverse dies 14 (EA—EO).	Obverse dies using more than one reverse 13.
Reverse dies 30 (ηα—θζ).	Reverse dies used with more than one obv. 14.
Coins 48.	Number of specimens recorded 154.

#### Series XXVI (Obverse dies EA—EG).

242. (EA) Obv. HP|A over the stephanos. Head of Hera in high relief r.; hair, short and curly, hiding the ear; wearing tall stephanos rising in centre, front and back, hiding crown of head, three palmettes and two tendrils shown on it. In field r. below chin Λ.

(ηα) Rev. F|A Thunderbolt; thick wavy flame-line on each side of central dart above and below. All in wreath of wild olive, fastened below, touching above, six pairs of leaves on each twig. Circular incuse.

- a (Pl. IX, EA  $\eta\alpha$ ). Cambridge: 11,86 g (183,1 grains); Leake, *Numismata Hellenica*, Europ. Greece p. 49.
- b. Gedney-Beatty, New York: 11,80 g (182,2 grains).
- c. Jameson, Paris: 12,04 g (185,8 grains); Cat. (1913), vol. I, Pl. LXIII, 1233.
- d. London: 12,28 g (189,5 grains); B. M. C. Pelop. 60, Pl. XII, 13; Num. Chron. 1879, Pl. XII, 2 c; Lambros, Peloponnesos, Pl.  $\zeta$ , 10.
- e. Paris: 12,03 g (185,6 grains).
- f. Paris: 11,32 g (174,7 grains). — Countermark on obverse: E in circular incuse (apparently same die as on no. 88, b).
243. (EA) Obv. Same die.
- ( $\eta\beta$ ) Rev. F|A Similar thunderbolt, but double flame-line on each side of each dart. Wreath as before. Shallow circular incuse. Cf. no. 247.
- a. Anderson, Athens: 11,95 g (184,4 grains).
- b. Count Dessewffy, Budapest: 12,11 g (186,9 grains); Cat. Hirsch XVI (1906), Pl. XVI, 569.
- c (Pl. IX, [EA]  $\eta\beta$ ). London: 12,14 g (187,4 grains); B. M. C. Pelop. 61.
- d. Newell, New York: 11,92 g (184,0 grains). — Big flaw (over bottom of A) in reverse die.
- e. Vienna: 11,63 g (179,5 grains). — Countermark on obverse: head of trident. — Big flaw (over bottom of A) in reverse die.
- f. Prinz zu Windisch-Grätz, Vienna: 12,00 g (185,2 grains); Cat. V (1899), no. 1247
244. (EA) Obv. Same die.
- ( $\eta\gamma$ ) Rev. F|A Similar thunderbolt, rather bigger. Wreath not touching above, five pairs and an odd leaf on each twig. Shallow circular incuse Cf. no. 248.
- a. Berlin: 12,00 g (185,2 grains).
- b. Boston: 12,11 g (186,9 grains); Regling, Cat. Warren, Pl. XXI, 926.
- c (Pl. IX, [EA]  $\eta\gamma$ ). Cambridge (McClellan Coll.): 11,56 g (178,4 grains). Cat. Photiadès Pacha (Paris 1890), lot 1050.
- d. Paris: 12,00 g (185,2 grains).
- e. Pozzi, Paris: 12,15 g (187,5 grains).
- f. Thorburn, Godalming: 12,21 g (188,5 grains).
245. (EA) Obv. Same die.
- ( $\eta\delta$ ) Rev. F|A Similar, but wreath touching (?) above, six pairs and an odd leaf on each (?) twig. Shallow circular incuse.
- a (Pl. IX, [EA]  $\eta\delta$ ). Berlin: 11,88 g (183,3 grains).
- b. Cat. Hirsch VIII (1903), Pl. VII, 1248 = Cat. Hirsch XIV (1905), Pl. XII, 446: 11,85 g (182,9 grains).
246. (EA) Obv. Same die.
- ( $\eta\epsilon$ ) Rev. F|A Similar thunderbolt, still bigger. Wreath not touching above, six pairs of leaves on each twig. Shallow circular incuse.
- a. Hirsch, Munich: 11,19 g (172,7 grains).
- b (Pl. IX, [EA]  $\eta\epsilon$ ). Jakountchikoff, St. Petersburg: 12,06 g (186,1 grains); Cat. Sotheby, March 1896 (Montagu), Pl. VI, 407.
- c. Naples: 12,00 g (185,2 grains); Fiorelli, Cat. del Mus. Naz. I (1870), no. 7522.
- d. Sir H. Weber, London: 11,79 g (182,0 grains).
- e. Cat. Sotheby, Feb. 1911 (C. C. Jones), lot 233: 11,92 g (184,0 grains).
247. (EB) Obv. Similar head of Hera; stephanos rather bigger. No letters above or in field.
- ( $\eta\zeta$ ) Rev. Same die as no. 243.

- a (Pl. IX, EB  $\eta\beta$ ). London: 12,21 g (188,5 grains); B. M. C. Pelop. 58; Num. Chron. 1879, Pl. XII, 2 b.
- b. London: 12,18 g (188,0 grains).
- c. Munich: 12,10 g (186,7 grains). — Big flaw (over bottom of A) in reverse die.
248. (EB) Obv. Same die.
- ( $\eta\gamma$ ) Rev. Same die as no. 244.
- a (Pl. IX, [EB]  $\eta\gamma$ ). Cat. Ratto, April 1909, Pl. XII, 2978: 11,70 g (180,5 grains).
249. (EB) Obv. Same die.
- ( $\eta\zeta$ ) Rev. F|A Similar to no. 253. Shallow circular incuse.
- a (Pl. IX, [EB]  $\eta\zeta$ ). Greene, Providence: 12,10 g (186,7 grains); Cat. Egger, Dec. 1906, Pl. XI, 395.
250. (EB) Obv. Same die.
- ( $\eta\eta$ ) Rev. F|A Similar thunderbolt. Wreath fastened above, touching below, five pairs and an odd leaf on l. twig, six pairs on r. Shallow circular incuse. Cf. nos. 251. 254.
- a (Pl. IX, [EB]  $\eta\eta$ ). Spink, London: 12,18 g (188,0 grains).
251. (EC) Obv. Similar head of Hera; crown of head seen over stephanos, which is a broad band with lower edge beaded, on it in front and at back a palmette between which two lilies, in the spaces H|P|A.
- ( $\eta\eta$ ) Rev. Same die as nos. 250. 254.
- a (Pl. IX, [EC]  $\eta\eta$ ). Berlin: 12,07 g (186,3 grains).
- b. Berlin: 11,81 g (182,3 grains).
- c. Cambridge: 11,74 g (181,2 grains); Leake, Numismata Hellenica, Europ. Greece p. 49. — Countermark on obverse.
- d. Cockerell, London: 12,15 g (187,5 grains).
- e. Jaekel, Leipsic: 12,05 g (186,0 grains).
- f. Munich: 11,80 g (182,1 grains).
- g. Cat. Egger, Dec. 1906, Pl. XI, 396: 11,94 g (184,3 grains).
- h. Cat. Hirsch XIV (1905), Pl. XII, 447: 12,07 g (186,3 grains).
252. (EC) Obv. Same die.
- ( $\eta\theta$ ) Rev. F|A Similar thunderbolt. Wreath fastened below, not touching above, seven pairs of small leaves on each twig. Shallow circular incuse.
- a (Pl. IX, EC  $\eta\theta$ ). Sangorski, London: 12,22 g (188,6 grains); Cat. Hirsch XXV (Philipsen), Pl. XVI, 1268.
253. (EC) Obv. Same die.
- ( $\eta$ ) Rev. F|A Similar thunderbolt. Wreath as before, but five pairs of long leaves on each twig. Shallow circular incuse. Cf. no. 255.
- a. Anderson, Athens: 12,05 g (186,0 grains).
- b. Athens: 12,30 g (189,8 grains).
- c. London: 11,92 g (184,0 grains); B. M. C. Pelop. 62.
- d (Pl. IX, [EC]  $\eta$ ). Paris: 12,30 g (189,8 grains), formerly duc de Luynes.
- e. Rollin & Feuardent, Paris: 12,00 g (185,2 grains).
254. (ED) Obv. Similar head of Hera, but bigger; higher relief, ear shown, two „corkscrew“ curls hang down behind, and one in front of ear; stephanos as before, but only one double-lily on it between the two palmettes, in the spaces H|PA. Upon the neck  $\wedge$ .
- ( $\eta\eta$ ) Rev. Same die as nos. 250. 251.
- a (Pl. IX, [ED]  $\eta\eta$ ). McEwen, Leith: 11,46 g (176,8 grains).

255. (ED) Obv. Same die.  
( $\eta$ ) Rev. Same die as no. 253.  
a. The Hague: 11,89 g (183,5 grains), formerly Six.  
b. Hirsch, Munich: 11,57 g (173,5 grains).  
c (Pl. IX, ED). Paris: 12,01 g (185,3 grains).  
d (Pl. IX, [ED] $\eta$ ). Sir H. Weber, London: 12,08 g (186,5 grains).
256. (ED) Obv. Same die.  
( $\eta$ <sup>2</sup>) Rev. F|A Similar thunderbolt, but small. Wreath as before, but fastened above, touching below. Shallow circular incuse. Cf. no. 259 (same die as nos. 257. 258, but the upper half remade).  
a (Pl. IX, [ED] $\eta$ <sup>2</sup>). Seltman, Berkhamsted: 12,07 g (186,3 grains). — Flaw (in the wreath to r. below) in reverse die.
257. (EE) Obv. Similar head of Hera; ear shown, no curls; stephanos as before; but two single lilies on it between the two palmettes. No letters on stephanos or upon the neck.  
( $\eta$ <sup>1</sup>) Rev. Same die as no. 258 and [remade] nos. 256. 259.  
a. Glasgow: 12,01 g (185,4 grains); Macdonald, Cat. Hunter, vol. II, p. 135, 4.  
b (Pl. IX, EE $\eta$ <sup>1</sup>). New York: 11,51 g (177,7 grains); Hill, Cat. Ward, Pl. XIII, 539. — Small flaw (in the wreath to r. below) in reverse die.  
c. Seltman, Berkhamsted: 12,00 g (185,2 grains). — Very small flaw (in the wreath to r. below) in reverse die.  
d. Cat. Bourgey, April 1908, Pl. V, 145.  
e. Cat. Rollin & Feuarent, May 1910, Pl. X, 441: 12,10 g (186,7 grains). — Small flaw (in the wreath to r. below) in reverse die.
258. (EF) Obv. Similar, but relief less high; two double-lilies on stephanos.  
( $\eta$ <sup>1</sup>) Rev. Same die as no. 257 and [remade] nos. 256. 259.  
a (Pl. IX, [EF] $\eta$ <sup>1</sup>). Boston: 12,09 g (186,6 grains); Regling, Cat. Warren, Pl. XXI, 924. — Countermark on obverse: bunch of grapes in incuse square (same die as on nos. 82. 133, a. 168, d. 172, e).  
b (Pl. IX, EF). Jameson, Paris: 11,91 g (183,8 grains); Cat. (1913), vol. I, Pl. LXIII, 1234; Cat. Hirsch XVI (1906), Pl. XVI, 566. — Small flaw (in the wreath to r. below) in reverse die.  
c. Pozzi, Paris: 11,30 g (174,4 grains). — Same flaw (somewhat larger) in reverse die.
259. (EF) Obv. Same die.  
( $\eta$ <sup>2</sup>) Rev. Same die as no. 256 [remade] and nos. 257. 258.  
a. Jakountchikoff, St. Petersburg: 12,05 g (186,0 grains). — Flaw (in the wreath to r. below) in reverse die.  
b. Oman, Oxford: 12,08 g (186,5 grains). — Same flaw in reverse die.  
c (Pl. IX, [EF] $\eta$ <sup>2</sup>). Paris: 12,07 g (186,3 grains). — Same flaw in reverse die.  
d. Cat. Egger XLI (1912), Pl. XIII, 497: 11,73 g (181,0 grains). — Same flaw in reverse die.
260. (EF) Obv. Same die.  
( $\eta$ <sup>1</sup>) Rev. F|A Similar thunderbolt, but bigger. Wreath of wild olive fastened below, not touching above. Shallow circular incuse.  
a. Budapest.  
b. Copenhagen: 11,92 g (184,0 grains).  
c. Gotha: 11,10 g (171,3 grains).  
d. Hirsch, Munich: 11,95 g (184,4 grains).  
e (Pl. IX, [EF] $\eta$ <sup>1</sup>). London: 12,19 g (188,1 grains); B. M. C. Pelop. 59.

Series XXVII (Obverse dies EG—EO).

261. (EG) Obv. Head of Hera in low relief r., large, hair short and curly hiding the ear, wearing stephanos which is a broad band, both edges plain, four palmettes and three tendrils shown on it, in the spaces H|P|A.  
 (ημ) Rev. F|A Thunderbolt; two wavy flame-lines on each side of thick central dart above and below. All in wreath of wild olive, fastened below, six pairs of leaves on each twig. Shallow circular incuse.  
 a. Hirsch, Munich: 11,75 g (181,3 grains). — Slight flaw (at nose) in obverse die.  
 b. (Pl. IX, [EG] ημ). Seltman, Berkhamsted: 11,89 g (183,5 grains).  
 c. Vienna: 12,35 g (190,6 grains).
262. (EG) Obv. Same die.  
 (ην) Rev. F|A Similar. Shallow circular incuse.  
 a. (Pl. IX, EG ην). Berlin: 12,11 g (186,9 grains). — Slight flaw (at nose) in obverse die.  
 b. Copenhagen: 11,89 g (183,5 grains). — Slight flaw (at nose) in obverse die.  
 c. London: 12,18 g (188,0 grains); B. M. C. Pelop. 64. — Slight flaw (at nose) in obverse die.
263. (EG) Obv. Same die.  
 (ηξ) Rev. F|A Similar. Six pairs and an odd leaf on each twig. Shallow circular incuse. Cf. no. 264.  
 a. (Pl. IX, [EG] ηξ). Cambridge: 12,51 g (193,0 grains); Leake, Numismata Hellenica, Europ. Greece p. 49. — Slight flaw (at nose) in obverse die.
264. (EH) Obv. Similar head of Hera, ear showing among the curls; stephanos has both edges beaded, on it two palmettes and, between them, two single lilies. No letters.  
 (ηξ) Rev. Same die as no. 263.  
 a. Berlin: 11,99 g (185,0 grains).  
 b. (Pl. IX, EH ηξ). London: 12,14 g (187,4 grains); B. M. C. Pelop. 55, Pl. XII, 11; B. M. Guide<sup>2</sup> Pl. 14, 30; Num. Chron. 1879, Pl. XII, 2a; Gardner, The Types of Greek Coins, Pl. VIII, 15 (obv.); Hill, Historical Greek Coins, Pl. III, 28; Head, Hist. Num.<sup>2</sup>, p. 422, fig. 231.  
 c. Cat. Sotheby, Feb. 1909 (Benson), Pl. XVIII, 569: 11,99 g (185,0 grains).
265. (EH) Obv. Same die.  
 (ηο) Rev. F|A Similar. Four pairs of leaves on each twig. Shallow circular incuse. Cf. no. 270.  
 a. Gedney-Beatty, New York: 11,20 g (172,8 grains).  
 b. (Pl. IX, [EH] ηο). New York: 11,84 g (182,8 grains); Hill, Cat. Ward, Pl. XIII, 538 (obv.).  
 c. Seltman, Berkhamsted: 11,35 g (175,2 grains).
266. (EH) Obv. Same die.  
 (ηπ) Rev. F|A Similar thunderbolt, but each dart covered and flanked by wavy flame-lines. Wreath fastened below, four pairs and an odd leaf on each twig. Shallow circular incuse.  
 a. (Pl. IX, [EH] ηπ). Cambridge (McClellan Coll.): 11,81 g (182,2 grains).
267. (EH) Obv. Same die.  
 (ηρ) Rev. F|A Similar thunderbolt. Wreath as before, but seven (?) pairs of leaves on each twig. Shallow circular incuse.  
 a. (Pl. IX, [EH] ηρ). Seltman, Berkhamsted: 11,99 g (185,0 grains).

268. (EH) Obv. Same die.  
 (ησ) Rev. F|A Similar thunderbolt, but two wavy flame-lines at each side of each dart. Wreath as before. Shallow circular incuse.  
 a (Pl. IX, [EH] ησ). St. Petersburg: 11,85 g (182,9 grains).
269. (EH) Obv. Same die.  
 (ητ) Rev. F|A Similar thunderbolt. Wreath twisted above, six pairs of leaves on each (?) twig. Shallow circular incuse. Cf. no. 271.  
 a (Pl. IX, [EH] ητ). Rollin & Feuarent, Paris: 12,00 g (185,2 grains).
270. (EJ) Obv. Similar head of Hera; stephanos has both edges plain.  
 (ηο) Rev. Same die as no. 265.  
 a (Pl. IX, [EJ] ηο). Meletopoulos, Athens: 11,40 g (175,9 grains).
271. (EJ) Obv. Same die.  
 (ητ) Rev. Same die as no. 269.  
 a (Pl. IX, [EJ] ητ). Picard, Paris: 11,98 g (184,9 grains); Cat. Merzbacher, Nov. 1909, Pl. 27, 2998.
272. (EJ) Obv. Same die.  
 (ηυ) Rev. F|A Similar thunderbolt, but bigger. Wreath fastened below. Shallow circular incuse. Cf. nos. 275. 277.  
 a (Pl. IX, [EJ] ηυ). Anderson, Athens: 12,00 g (185,2 grains).  
 b. Seltman, Berkhamsted: 11,60 g (179,0 grains).
273. (EJ) Obv. Same die.  
 (ηφ) Rev. F|A Similar. Shallow circular incuse. Cf. no. 278.  
 a (Pl. IX, [EJ] ηφ). Athens: 11,85 g (182,9 grains).  
 b. Hirsch, Munich: 11,97 g (184,7 grains).  
 c. Hirsch, Munich: 11,66 g (179,9 grains).  
 d. Cat. Hirsch XXIX (Lambros), no. 545: 11,22 g (173,1 grains).  
 e. Cat. Hirsch XXXIII (1913), Pl. XVII, 776: 12,00 g (185,2 grains).
274. (EJ) Obv. Same die.  
 (ηχ) Rev. F|A Similar thunderbolt. Wreath fastened below, six pairs and an odd leaf on each twig. Shallow circular incuse.  
 a (Pl. IX, [EJ] ηχ). Berlin: 11,94 g (184,3 grains). — Big flaw (on stephanos) in obverse die.  
 b (Pl. IX, EJ). Cambridge: 11,11 g (171,5 grains); Leake, Numismata Hellenica, Europ. Greece p. 49.  
 c. Hirsch, Munich: 11,90 g (183,6 grains). — Countermark on obverse (on cheek).  
 d. Naples: 11,82 g (182,4 grains); Fiorelli, Cat. del Mus. Naz. I (1870), no. 7521.  
 e. Pozzi, Paris: 11,95 g (184,4 grains).  
 f. St. Petersburg: 11,95 g (184,4 grains).  
 g. Seltman, Berkhamsted: 11,91 g (183,8 grains).  
 h. Sir H. Weber, London: 11,95 g (184,5 grains).  
 i. Cat. Hirsch XXIX (Lambros), no. 544: 11,88 g (183,3 grains).  
 k. Cat. Sotheby, June 1896 (Bunbury), Pl. VII, 1090: 12,12 g (187,0 grains).
275. (EK) Obv. Similar head of Hera, higher relief; stephanos narrow, lower edge beaded, two double-lilies between the palmettes, in the spaces H|P|A. In the field r. below chin Λ.  
 (ηο) Rev. Same die as nos. 272. 277.  
 a. Athens: 11,90 g (183,6 grains). — Double-struck.  
 b. Baltatzes, Athens: 11,67 g (180,1 grains), formerly belonging to Mrs. Helena N Mavrokordatos; Journ. Intern. XIV (1912), p. 27, no. 2001, Pl. ζ, 27.

- c. Copenhagen: 11,93 g (184,1 grains). — Countermark on obverse (on neck).  
d (Pl. IX, EK ηυ). London: 11,96 g (184,6 grains); B. M. C. Pelop. 63, Pl. XII, 14; Num. Chron. 1879, Pl. XII, 2d.  
e. London: 12,12 g (187,0 grains).  
f. New York: 11,86 g (183,0 grains); Hill, Cat. Ward, Pl. XIII, 541 (obv.).
276. (EK) Obv. Same die.  
(ηψ) Rev. F|A Similar thunderbolt. Wreath with five pairs of leaves on each twig, an odd one above. Shallow circular incuse.  
a (Pl. IX, [EK] ηψ). Newell, New York: 11,86 g (183,0 grains), formerly Imhoof-Blumer; Lambros, Peloponnesos, Pl. ζ, 9.
277. (EL) Obv. Similar head of Hera, very high relief; stephanos narrow, both edges plain, no letters.  
(ηυ) Rev. Same die as nos. 272. 275.  
a (Pl. X, [EL] ηυ). Vicomte de Sartiges, Paris: 12,12 g (187,0 grains); Cat. Hirsch XVI (1906), Pl. XVI, 567; Cat. Sotheby, 20. April 1909 (Hobart Smith), Pl. I, 30.
278. (EL) Obv. Same die.  
(ηφ) Rev. Same die as no. 273.  
a (Pl. X, EL ηφ). Boston: 12,14 g (187,3 grains); Regling, Cat. Warren, Pl. XXI, 925.
279. (EL) Obv. Same die.  
(ηω) Rev. F|A Similar thunderbolt. Wreath with five pairs of leaves on each twig. Shallow circular incuse.  
a (Pl. X, [EL] ηω). Cambridge (McClellan Coll.): 11,95 g (184,5 grains).
280. (EL) Obv. Same die.  
(θα) Rev. F|A Similar. Shallow circular incuse. Cf. no. 282.  
a. Newell, New York.  
b. Rollin & Feuardent, Paris: 11,80 g (182,1 grains).  
c. Rollin & Feuardent, Paris: 11,30 g (174,4 grains).  
d. Seltman, Berkhamsted: 11,76 g (181,5 grains).  
e. Cat. Hirsch XVI (1906), Pl. XVI, 565: 11,93 g (184,1 grains).  
f (Pl. X, [EL] θα). Cat. Sotheby, May 1908 (O'Hagan), Pl. VIII, 459: 12,12 g (187,0 grains).
281. (EL) Obv. Same die.  
(θβ) Rev. A∇ Horizontal thunderbolt, formed as before, dividing the wreath of two olive-branches with stalks r.; seven pairs and an odd leaf on the upper, seven pairs on the lower twig. Shallow circular incuse. Cf. no. 283.  
a. Anderson, Athens: 11,15 g (172,0 grains). — Obverse with big graffito IEPA, reverse with big graffito A∇.  
b (Pl. X, [EL] θβ). Cambridge: 11,92 g (184,0 grains); Leake, Numismata Hellenica, Europ. Greece p. 49.  
c. Hirsch, Munich: 11,65 g (179,8 grains).  
d. Newell, New York.  
e. Rollin & Feuardent, Paris: 12,00 g (185,2 grains).  
f. Seltman, Berkhamsted: 11,76 g (181,5 grains).  
g. Hobart Smith, Brooklyn: 11,77 g (181,7 grains).
282. (EM) Obv. Similar head of Hera, lower relief; stephanos rather broader, the palmettes and lilies joined by lines. No letter.  
(θα) Rev. Same die as no. 280.  
a (Pl. X, [EM] θα). Berlin: 11,53 g (177,9 grains). — Obverse slightly double-struck.

283. (EM) Obv. Same die.  
 (ϑϩ) Rev. Same die as no. 281.  
 a (Pl. X, [EM] ϑϩ). Berlin: 11,00 g (169,7 grains).  
 b. Bieder, Hamburg: 11,80 g (182,1 grains).  
 c. New York: 11,34 g (175,0 grains); Hill, *Cat. Ward*, Pl. XIII, 540.
284. (EM) Obv. Same die.  
 (ϑγ) Rev. F|A Similar thunderbolt. Wreath twisted above and points twining below, five pairs of leaves on each twig. Shallow circular incuse.  
 a. London: 12,03 g (185,7 grains); B. M. C. Pelop. 57, Pl. XII, 12.  
 b. Munich: 12,50 g (192,9 grains).  
 c (Pl. X, EM ϑγ). Paris: 12,02 g (185,5 grains).  
 d. St. Petersburg: 11,85 g (182,9 grains).  
 e. Seltman, Berkhamsted: 12,05 g (186,0 grains); *Cat. Sotheby*, July 1911 (Butler Pl. III, 112).  
 f. Sheperd, London: 11,72 g (180,9 grains).  
 g. *Cat. Sotheby*, March 1897 (Montagu), Pl. III, 207 = *Cat. Hirsch XXV* (Philipsen) Pl. XVI, 1267: 11,88 g (183,3 grains).
285. (EN) Obv. Similar head of Hera, very high relief; stephanos without lines joining the palmettes and lilies.  
 (ϑδ) Rev. F|A Similar thunderbolt. Wreath twisted below, five pairs of leaves on each twig. Shallow circular incuse.  
 a (Pl. X, [EN] ϑδ). Vicomte de Jonghe, Brussels.  
 b. Rollin & Feuarent, Paris: 11,30 g (174,4 grains).
286. (EN) Obv. Same die.  
 (ϑε) Rev. F|A Similar thunderbolt. Wreath with six pairs and an odd leaf on l. twig, five pairs on r. Shallow circular incuse. Cf. no. 288.  
 a (Pl. X, [EN] ϑε). Berlin: 11,81 g (182,3 grains).  
 b. Berlin: 11,72 g (180,9 grains).  
 c. Cook, Cambridge: 11,66 g (180,0 grains).  
 d. Gedney-Beatty, New York: 11,43 g (176,4 grains).  
 e. Hirsch, Munich: 11,50 g (177,5 grains).  
 f. London: 12,15 g (187,5 grains).  
 g (Pl. X, EN). Paris: 12,07 g (186,3 grains), formerly duc de Luynes.  
 h. Rollin & Feuarent, Paris: 11,75 g (181,3 grains).
287. (EN) Obv. Same die.  
 (ϑζ) Rev. F|A Similar thunderbolt. Wreath with longer leaves, five pairs on each twig. Shallow circular incuse. Cf. no. 289.  
 a (Pl. X, [EN] ϑζ). *Cat. Hirsch XXI* (Consul Weber), Pl. XXIV, 1928: 11,89 g (183,5 grains). — Reverse double-struck.
288. (EO) Obv. Similar head of Hera, lower relief; bigger eye and nose.  
 (ϑε) Rev. Same die as no. 286.  
 a (Pl. X, EO ϑε). Berlin: 11,96 g (184,6 grains); Friedlaender and von Sallet, *Das Königliche Münzkabinet*<sup>2</sup>, Pl. II, 140.  
 b. Cambridge (McClellan Coll.): 11,70 g (180,5 grains).  
 c. Hirsch, Munich: 12,05 g (186,0 grains).  
 d. London: 12,18 g (188,0 grains).
289. (EO) Obv. Same die.  
 (ϑζ) Rev. Same die as no. 287.  
 a (Pl. X, [EO] ϑζ). London: 11,91 g (183,8 grains); B. M. C. Pelop. 56

I have called this group and the next E<sup>1</sup> and E<sup>2</sup>, because they seem to be approximately contemporary with that group of staters, issued from the Zeus mint, which I have called E.

Series XXVI differs from the next series mainly in this, that its thunderbolts are comparatively small and set in closely-leaved wreaths of wild olive, while in series XXVII they are large and surrounded by sparsely-leaved wreaths. The noble head of Hera of the die EA (Pl. IX) is evidently the first one of the series. Even if the internal evidence of die sequences and combinations were lacking, it would be clear that this somewhat archaic head was the earliest. The closely curling hair, the big eye — of which quite three-quarters are shown —, the whole iris and the heavy lids all point to a date at which the archaic influence had not yet entirely departed from the die-sinker's art. It has been the custom<sup>1)</sup>, when arranging Elean coins, to treat the large head of Hera (Pl. IX, EH) as the earliest, regarding it as contemporary with the early head of Zeus on a stater of the older mint (Pl. V, BR). The probability is that these heads of Hera and Zeus are nearly contemporary. But our die EA is earlier than either. It seems, therefore, to be the first die made at Olympia bearing the device of a human head.

Being the first die produced by the new mint of the temple of Hera, the moneymen seem to have thought it desirable that the coins struck from it should be labelled to show that they were issued under the protection of Hera and not of Zeus. So above the head, touching the top of the stephanos, they put the letters HP|A. This must surely have been their motive rather than a wish to prevent any misconception as to the identity of the goddess. To the Greeks, more even than to us, the head was so unmistakably that of Hera that to name her was quite gratuitous. But to indicate that the coin had been issued from the mint of Hera was desirable. Engravers of later dies, however, disregarded the primary object of the three letters, and, seeing them above the head, thought to improve upon this first die by putting HPA on the stephanos (Pl. IX, EC. ED. EG. EK). In the field below the chin on this die (EA) is a small  $\Lambda$ , presumably an artist's initial. This  $\Lambda$  is particularly clear on nos. 242, e. 243, c. 244, c. d. 246, c.

EB is a die that has simply been copied by a less accomplished engraver from the die EA. They share two thunderbolt reverses. One of these reverses ( $\eta\beta$ ) shows a flaw on nos. 243, d. e and 247, c, which is absent on nos. 243, a. b. c. f and 247, a. b. The two obverse dies EA and EB must, therefore, have been used simultaneously<sup>2)</sup> with the reverse die  $\eta\beta$  (cf. below).

The next obverse, EC, is, in the writer's opinion, one of the most beautiful and noble of all Greek coin types. In the Olympian series it is only equalled by the famous head Pl. IX, EH. Of EH we have unfortunately no specimen in such beautiful preservation as no. 252, the example of EC shown upon the plate. It is instructive to compare EC with the head of the world-famous bronze Thorn-Picker<sup>3)</sup>,

<sup>1)</sup> Gardner, Num. Chron. 1879, p. 240, Pl. XII, 1. 2a. B. M. Cat. Peloponnesus, Pl. XII, 10. 11.

<sup>2)</sup> Cf. the remarks on such a method of working in the mint of Zeus, above (under Group E, Series XVI), where I have described how three

dies probably lay upon the anvil at a time, and the operator struck coins from them alternately.

<sup>3)</sup> Probably one of the few original Greek bronzes of the fifth century B. C. which still remain.

in the Palazzo dei Conservatori at Rome, the little boy seated with his left foot upon his right knee, picking a thorn from the sole of his foot. We see the same chaste profile in both, the same curly hair parted from the crown of the head. This head of Hera and the little boy are both great masterpieces of the fifth century B. C., the greatest century in the history of art. Upon the stephanos the artist has put the letters H|P|A between two lilies that seem to grow and live. EC shares a reverse ( $\eta\eta$ ) with the preceding die EB, and two ( $\eta\eta$  and  $\eta$ ) with the die that follows<sup>1</sup>).

Of the three next heads (Pl. IX, ED, EE, EF) ED has the letters H|PA on the stephanos, the other two lack them. The curls which hang down on the neck of the former head give it an attractive appearance. It is the biggest head of the series. Upon the neck is the letter  $\Lambda$ <sup>2</sup>). The other two heads (EE and EF) call for little comment. They were used simultaneously with the reverse die  $\eta\kappa$ , just as EA and EB, to which attention has already been drawn above, were in use at the same time. Proof of this lies in the fact that nos. 257, a. d and 258, a show no sign of the flaw which first appears (in the olive-wreath to r. below) slightly on 257, c, then somewhat larger on 257, b. e and 258, b, and larger still on 258, c. This same reverse die  $\eta\kappa$  then evidently developed another more serious flaw which spread over a large part of the upper portion of the die. The first small flaw (to r. below) was scarcely worth the trouble of repairing, but the second big crack seems to have been mended hastily and roughly. Then the die was used once more, first of all with EF again, and afterwards with ED. So we have this reverse die in two different states, which I have distinguished by calling them  $\eta\kappa^1$  and  $\eta\kappa^2$ . It has already been remarked above (Series XVI) that such hasty repairing of fractured dies and their reemployment, as well as the simultaneous use of two obverse dies with a mutual reverse die, point to a state of great pressure in the business of the mint (cf. below).

Two of the six obverse dies just mentioned are signed by the artist  $\Lambda$ . They are EA and ED. In the next series there occurs a third die bearing his initial (Pl. IX, EK). These three heads show an interesting progress in the development of this particular engraver's technique. EK is free of all archaic influence<sup>3</sup>) such as still existed in EA. ED seems just midway between them in point of style.

The wreaths which surround the thunderbolts (which will be dealt with later) on the reverses of these coins are, on the whole, more decorative and effective than those appearing on the staters issued from the mint of the temple of Zeus. Nevertheless the reverses are more monotonous than the reverses of the latter, because the thunderbolts themselves lack variety.

Fractions: Hemidrachm. Obv. similar to nos. 251 ff. (EC), but with HPA across the stephanos between two palmettes; rev. F|A thunderbolt with two flame-lines on each side of the lower dart, and a volute curling outwards on each side of the upper. Border

<sup>1</sup>) So the reverse die  $\eta\eta$  occurs with EB, EC and ED, with the latter much worn.

<sup>2</sup>) This  $\Lambda$  on the neck gives us an interesting parallel to certain tetradrachms of Syracuse, of somewhat earlier date than this coin, which

have the letter A on the neck of the nymph Arethusa, under the ear. Cf. Cat. Hirsch. XXXII (1912), Pl. IX, 272. 283.

<sup>3</sup>) Whether to its advantage or detriment must remain a matter of opinion.

of dots. London; B. M. C. Pelop. 69, Pl. XII, 17; weight: 2,88 g (44,5 grains). — Pl. XII, 3.

Obol. Obv. similar; rev. similar, but below, instead of flame-lines, two wings. No dotted border. London; B. M. C. Pelop. 70, Pl. XII, 18; weight: 0,94 g (14,5 grains). — Pl. XII, 4.

Series XXVII has, generally speaking, larger designs both on the obverse and reverse than the series which precedes it. As yet no die seems to have turned up that is common to both. But the internal evidence of die-sequences is as clear in this series as in the former, so that Pl. IX, EG must be the first, Pl. X, EO the last obverse die of this series. Grounds of style make it clear that it is right to place series XXVI before XXVII.

EG has a strange type of head, somewhat heavy, but, nevertheless, fine and majestic. It shares one reverse ( $\eta\acute{\epsilon}$ ) with EH, the most famous of all the heads of Hera on the coins of the ancient Greeks. This wonderful head has been rightly associated with the famous head of Zeus (Pl. V, BR) to which it forms a fitting companion, though actually, it would seem, the coin from the mint of Zeus (Pl. V, BR) was issued a few years earlier than this piece<sup>1)</sup>. The simple majesty of this head is unsurpassed in the die-engraver's art. I have recorded six different reverses ( $\eta\acute{\epsilon}$ — $\eta\tau$ ) used with it, of which two ( $\eta\rho$  and  $\eta\tau$ ) were used again, though in a more worn condition, with the next head EJ. EJ, which I have found with five different thunderbolts<sup>2)</sup>, is but a poor imitation — a caricature as it were — of EH. It is interesting to note in this mint how, every here and there, a die has been made by some great artist, to be followed by a die done by some inferior man, a die that is sometimes almost a caricature of the one that has gone before. Examples in this group are EA, ED, EH, EK, done by master-hands, EB, EE, EJ, EL, the weaker works of copists. Though the general level of art at this period stands very high, we nevertheless meet with these unattractive heads, which are the results of inferior, imitative workmanship, although they unmistakably bear the stamp of the style of the period<sup>3)</sup>.

The next obverse die is EK, signed by  $\wedge$  beneath the chin, a die to which reference has already been made above. EL (Pl. X), though only a copy of EK, is of fairly good workmanship, and seems to be the most deeply cut of any die of the mint<sup>4)</sup>. It uses five reverses, two of which it shares with the next die EM. EM and the two last dies of the series (Pl. X, EN, EO) are more coarsely made than any of the others. All three, it would seem, are from the hand of a second-rate engraver.

The reverses here call for little comment, since the design gives little scope

) Compare the style of the second head signed  $\wedge$  (Pl. IX, ED) with the earlier of the two heads of Zeus by  $\Delta\Delta$  (Pl. V, BQ).

) Of its five reverses it shares two, as mentioned, with EH, one ( $\eta\rho$ ) with EK, and two ( $\eta\rho$ ,  $\eta\tau$ ) with EL.

) An interesting parallel is cited by von Fritze, *Nomisma VI*, p. 30, where he comes to the conclusion that „(man) bei Datierungsversuchen

auf Grund des Stiles allein sich der auch dieser Methode gezogenen Grenzen bewußt bleiben (muß), . . . daß (aber) eine sachgemäße Stilkritik das Ziel nur selten verfehlen wird“.

<sup>4)</sup> The specimen shown on Pl. X (no. 278) might lead one to believe that an engraver's initial was present in the field before the face. Other specimens, however, show that it is only a small flaw in the die.

for variety. Only the die ⚄ (Pl. X, with EL and EM), stands by itself in that the thunderbolt is treated as being horizontal instead of vertical, the letters A<sup>7</sup> being placed above it.

Fractions: Hemidrachm. Obv. similar to nos. 264 ff. (EH); rev. similar to no. 264 (ηξ), but border of dots instead of wreath. a. London; B. M. C. Pelop. 67, Pl. XII, 16; weight: 2,70 g (41,7 grains). — b (same dies; Pl. XII, 5). Cat. Hirsch XXV (Philipsen), Pl. XVI, 1269; weight: 2,82 g (43,5 grains).

Obol. Obv. similar; rev. similar, but above, instead of flame-lines, two volutes curling outwards. Cat. Hirsch XVIII (1907), Pl. XXXVI, 2413; weight: 0,72 g (11,1 grains).

— Pl. XII, 6.

My reason for tentatively assigning the first of these coins issued from the mint of Hera to the year B. C. 421 has no connection whatever with the fact that in that year incidentally Elis concluded an alliance with Argos and Mantinea. That was a political event which concerned the city of Elis. But what concerned Olympia was the fact that the next year B. C. 420 was an Olympiad. To the games there were coming at least twice as many Greeks as had come for the last ten years. For ten years, not Athens only but all her allies too, had been denied access to the great Pan-hellenic temples. The first clause of the Peace of Nicias had altered that<sup>1)</sup>. Money had been little in demand, trade had been low at Olympia. Now money would be wanted in „cart-loads“, for the strangers who came to Olympia came on a holiday; there was peace in the Hellenic world, and they came to spend. The lack of money caused by ten years of war, years of a much reduced output of coins, could not possibly be made up in a few months by the little mint of the temple of Zeus. The money must be found, or the „Bank of Olympia“ would be „broken“. So the only solution was to open another mint; and since the old mint was under the protection of Zeus, of course, the new one would be placed under the protection of Hera. Both mints were called upon to turn out a great quantity of coins within a very short time, in order to meet the enormous demand; and, as we have seen above in series XVI and series XXVI, there are abundant traces on the coins of this „high-pressure“ work.

The style of the two parallel issues — group E (Zeus) and group E<sup>1</sup> (Hera) — justifies one in making them contemporary. Reference has already been made to the artistic similarity existing between the heads of Zeus (Pl. V, BQ, BR) and the heads of Hera (Pl. IX, ED, EH). A further similarity of style will be observed between the reverse of the obol of series XXVI (Pl. XII, 4) and the reverses of the last staters struck in the Zeus mint before B. C. 421 (Pl. IV, γη, γθ, γι). This obol, as well as the hemidrachm Pl. XII, 3, the earliest fractions issued from the Hera mint, cannot have been struck long after B. C. 421.

The fact that Elis concluded an alliance about this time with Argos, and that both states worshipped Hera, has nothing to do with the placing of the head of that goddess upon the Olympian coins. It has been customary<sup>2)</sup>, because the idea seemed attractive, to date the Argive staters with the head of Hera as early as B. C. 421. The inscriptions on these staters have been adduced as an argument in favour of their early date. Λ for Γ, Ρ for Π are found upon their reverses. But

<sup>1)</sup> Groote, History of Greece<sup>2</sup>, vol. VII (1851), p. 71. See above at the end of Group D.      <sup>2)</sup> Gardner, Num. Chron. 1879, pp. 238 f. Head, Hist. Num.<sup>2</sup>, p. 438.

other reverses, which share the same obverse dies, have upon them  $\Omega$  for  $O^1$ ). Now, archaic forms may persist locally on coins long after their general abandonment, witness  $\varphi$  at Corinth and  $F$  at Olympia. But  $\Omega$ , we do know, did not come to be generally accepted in Peloponnesus until about B. C. 365<sup>2</sup>). The drachms of Argos, too, with  $\Omega$  in their legend and Diomedes with the Palladium as their type, should, like the staters, rather be dated after B. C. 365. At that time Argos, as the victorious ally of Thebes fighting against the crippled Lacedaemonians, had good reason from a patriotic motive to glorify her national hero Diomedes upon her coins<sup>3</sup>). Finally, let the Argive staters and drachms (B. M. C. Pelop., Pl. XXVII, 9. 11—13) be compared with coins issued from the Hera mint at Olympia after B. C. 363 (our Plate XI, EZ, FB, FC), and a much greater similarity will be observed than that which exists between the Argive pieces and the Olympian coins of this group E<sup>1</sup>.

### Group E<sup>2</sup> (Series XXVIII).

ca. B. C. 385 to ca. B. C. 365.

#### Summary of staters:

Obverse dies 6 (EP—EU). Obverse dies using more than one reverse 4.  
Reverse dies 11 ( $\vartheta\eta$ — $\vartheta\eta$ ). Reverse dies used with more than one obv. 4.  
Coins 15. Number of specimens recorded 44.

#### Series XXVIII (Obverse dies EP—EU).

290. (EP) Obv.  $\Phi\Lambda\epsilon\iota\omicron\nu\alpha$  around. Head of Hera r., hair curly, wearing as stephanos a band, on which five (?) palmettes with tendrils between them.  
( $\vartheta\eta$ ) Rev. Eagle standing r., head l.; r. wing raised, five rows of feathers; tail slightly spread; to r. of it  $\square$ . All within wreath of wild olive, twisted below, ends touching above, ten pairs of leaves on r. twig, nine on l. Shallow circular incuse. Cf. no. 291.  
a (Pl. X, EP  $\vartheta\eta$ ). Berlin: 11,81 g (182,3 grains); Zeitschr. f. Num. XV (1887), Pl. I, 6 (obv.) = Ibid. XIX (1895), Pl. III, 2.
291. (EQ) Obv.  $\Phi\Lambda$  Similar head of Hera; on the stephanos five palmettes with tendrils between.  
( $\vartheta\eta$ ) Rev. Same die as no. 290.  
a (Pl. X, [EQ]  $\vartheta\eta$ ). Brussels: 12,24 g (188,9 grains).
292. (EQ) Obv. Same die.  
( $\vartheta\vartheta$ ) Rev. Eagle similar, but four rows of feathers, tail hanging down; in field, to l.  $\square$ , to r.  $O$ . Wreath tied below, points twisted above, five pairs of leaves on r. twig, six on l. Shallow circular incuse. Cf. no. 293.

<sup>1</sup>) The issue of these Argive staters was a small one. I have been able to discover only three dies with the head of Hera, dies which share several reverses between them: a) Paris; b) B. M. C. Pelop., Pl. XXVII, 11; c) loc. cit., Pl. XXVII, 9 = Cat. Hirsch XIII (Rhousopoulos), Pl. XXX, 2676. 2677. The coin no. 2678 is false, and was condemned when it appeared again in the Benson sale (Cat. Sotheby, Feb. 1909, lot 579).

<sup>2</sup>) Cf. the date of the first appearance of  $\Omega$  at Olympia: above under Group G of the Zeus mint.

<sup>3</sup>) The Locrians not many years before had set the fashion in Greece proper of placing the national hero upon the coins (Head, Hist. Num.<sup>2</sup>, p. 336, fig. 190). The head of the nymph on the obverse being copied from the Syracusan decadrachms of Euainetos compels us to place the Locrian coins after 400 B. C.

- a. Berlin: 11,82 g (182,4 grains); Zeitschr. f. Num. XV (1887), Pl. I, 5 (obv.) = Ibid. XIX (1895), Pl. III, 3.
- b. Jameson, Paris: 12,12 g (187,0 grains); Cat. (1913), vol. I, Pl. LXIII, 1238; Cat. Hirsch XVI (1906), Pl. XVI, 577.
- c (Pl. X, EQ 99). Paris: 11,72 g (180,9 grains), formerly duc de Luynes.
- d. Pozzi, Paris: 12,15 g (187,5 grains). — Countermark on obverse.
293. (ER) Obv. F|A Similar head of Hera, but hair waved; wearing pendant earring and plain necklace; on the stephanos six palmettes with tendrils between. [Flaw at back of head].
- (99) Rev. Same die as no. 292.
- a (Pl. X, [ER] 99). Cambridge (McClellan Coll.): 12,12 g (187,1 grains); Cat. Sotheby, May 1894 (Carfrae), lot 175, Pl. VII, 6.
294. (ER) Obv. Same die. [Flaw at back of head].
- (94) Rev. Eagle similar; tail slightly spread. No letters. Wreath with five pairs of leaves on each twig. Shallow circular incuse.
- a (Pl. X, [ER] 94). London: 12,28 g (189,5 grains); B. M. C. Pelop. 95.
- b. Newell, New York: 11,73 g (181,0 grains).
- c. Spink, London: 11,92 g (184,0 grains).
- d. Cat. Bourgey, May 1911, Pl. VI, 153: 11,60 g (179,0 grains).
- e. Cat. Egger XLI (1912), Pl. XIII, 498: 11,89 g (183,5 grains).
- f. Cat. Hirsch XIII (Rhosopoulos), Pl. XXIX, 2558 = Cat. Hirsch XX (Hoskier), Pl. XII, 337 = Cat. Sotheby, 20. April 1909, Pl. I, 31: 11,82 g (182,5 grains).
- g. Cat. Sotheby, Feb. 1911 (C. C. Jones), lot 234: 12,18 g (188,0 grains).
295. (ER) Obv. Same die. [Flaw at back of head].
- (9x) Rev. Eagle standing r., head l.; wings folded, three rows of feathers; tail under wings. All within wreath of wild olive, tied below, five pairs of leaves on each twig. Shallow circular incuse. Cf. no. 296.
- a. Berlin: 12,02 g (185,5 grains).
- b (Pl. X, ER 9x). London: 12,41 g (191,5 grains); B. M. C. Pelop. 94, Pl. XIV, 1; Num. Chron. 1879, Pl. XIV, 3; Gardner, The Types of Greek Coins, Pl. VIII, 99 (obv.). — Flaws in reverse die.
- c. Paris: 11,65 g (179,8 grains), formerly duc de Luynes.
- d. Cat. Sotheby, Jan. 1898 (Evans), Pl. VI, 122 = Cat. Sotheby, Feb. 1909 (Benson), Pl. XVIII, 571: 11,99 g (185,0 grains).
296. (ES) Obv. F|A Similar head of Hera; high relief, hair rolled, pendant earring, necklace; stephanos a band on which wreath of olive, six pairs of leaves shown.
- (9x) Rev. Same die as no. 295.
- a (Pl. X, [ES] 9x). Boston: 12,27 g (189,3 grains); Regling, Cat. Warren, Pl. XXI, 930. — Flaws in reverse die.
297. (ES) Obv. Same die.
- (9λ) Rev. Similar. Wreath with four pairs of leaves on each twig. Shallow circular incuse.
- a (Pl. X, [ES] 9λ). Gotha: 12,18 g (188,0 grains).
298. (ES) Obv. Same die.
- (9μ) Rev. Eagle similar, tail hanging down. Wreath with six pairs of leaves on each twig. Shallow circular incuse. Cf. no. 300.
- a (Pl. X, ES 9μ). London: 12,21 g (188,5 grains); B. M. C. Pelop. 88, Pl. XIII, 12; Num. Chron. 1879, Pl. XIV, [VI or VII] 1; Gardner, The Types of Greek Coins,

Pl. VIII, 29 (obv.); Inhoof-Blumer and Keller, Thier- und Pflanzenbilder, Pl. IV, 40 (rev.).

299. (ES) Obv. Same die.

(ϑv) Rev. Eagle similar. Wreath with five pairs of leaves on each twig. Shallow circular incuse.

a. Berlin: 11,88 g (183,3 grains); Cat. Phiotiades Pacha (Paris 1890), lot 1058; Cat. Sotheby, March 1897 (Montagu), Pl. III, 208. — Flaw (on temple) in obverse die. — Flaws in reverse die.

b (Pl. X, [ES] ϑv). Berlin: 11,80 g (182,1 grains).

c. Newell, New York: 12,05 g (186,0 grains); Cat. Hirsch XIII (Rhusopoulos), Pl. XXIX, 2556.

300. (ET) Obv. F|A Similar head of Hera, rather bigger; on the stephanos a wreath of olive, four pairs of leaves shown, in front, and at back, a palmette. [Flaw at top of head].

(ϑμ) Rev. Same die as no. 298.

a. Berlin: 12,19 g (188,1 grains).

b. Cambridge (McClellan Coll.): 11,94 g (184,2 grains); Cat. Hirsch XIII (Rhusopoulos), Pl. XXIX, 2557.

c (Pl. X, ET ϑμ). Vienna: 12,06 g (186,1 grains).

301. (EU) Obv. F|A Similar head of Hera, smaller; on the stephanos five palmettes, the two front ones near together, tendrils joining them all, in the spaces H|P|A.

(ϑξ) Rev. Eagle standing l., head r.; r. wing slightly forward, l. wing raised, five rows of feathers. All within wreath of wild olive tied below, seven pairs of leaves on r. twig, six on l. Shallow circular incuse.

a. Berlin: 12,14 g (187,3 grains).

b. Berlin: 11,60 g (179,0 grains), pierced.

c. Jameson, Paris: 12,22 g (188,6 grains); Cat. (1913), vol. 1, Pl. LXIII, 1239; Cat. Hirsch XVI (1906), Pl. XVI, 573. — Reverse die retouched.

d (Pl. X, EU ϑξ). London: 12,27 g (189,3 grains); B. M. C. Pelop. 90, Pl. XIII, 13; Num. Chron. 1879, Pl. XIV, 2 a. — Reverse die retouched.

e. Meletopoulos, Athens: 12,70 g (196,0 grains). — Reverse die retouched.

f. Paris: 11,93 g (184,1 grains).

g. Rollin & Feuillant, Paris: 11,30 g (174,4 grains). — Reverse die retouched.

h. Cat. Sotheby, Feb. 1909 (Benson), Pl. XIX, 570: 12,12 g (187,0 grains).

302. (EU) Obv. Same die.

(ϑο) Rev. Similar. Shallow circular incuse.

a (Pl. X, [EU] ϑο). Munich: 12,12 g (187,0 grains).

b. Oman, Oxford: 12,12 g (187,0 grains).

c. Paris: 11,65 g (179,8 grains), formerly duc de Luynes.

d. Cat. Hirsch XXIX (Lambros), Pl. IX, 548: 12,10 g (186,7 grains).

e. Cat. Hirsch XXXII (1912), Pl. XIX, 505: 12,20 g (188,3 grains).

303. (EU) Obv. Same die.

(ϑπ) Rev. Eagle similar, but standing r., head l.; six rows of feathers on wing. Wreath as before, with six pairs of leaves on each twig. Shallow circular incuse.

a. Corpus Christi College, Cambridge (Lewis Coll.): 11,92 g (184,0 grains).

b (Pl. X, [EU] ϑπ). London: 12,38 g (191,0 grains); B. M. C. Pelop. 89.

c. Seltman, Berkhamsted: 12,18 g (188,0 grains).

304. (EU) Obv. Same die.

(ϑρ) Rev. Eagle similar; three rows of feathers; in field above over eagle's head All. Wreath with four pairs of leaves on r. twig, five on l. Shallow circular incuse.

a (Pl. X, [EU] ϑρ). Sir H. Weber, London: 12,15 g (187,5 grains); Num. Chron. 1892, Pl. XVI, 1.

In many mints instances may be found of familiarity breeding contempt among engravers for a certain coin-type, the natural result being that that coin-type deteriorates. Such an instance was before us at the end of the preceding group E<sup>1</sup>. The two last coins of that group — nos. 288 and 289 (Pl. X, EO ϑ<sub>2</sub> and EO ϑ<sub>3</sub>) — were poor examples of the engraver's art. When this sort of thing happens we may usually expect the introduction of, either a new type, or a new way of treating the type, that brings with it a marked revival of art. This we find here at the beginning of group E<sup>2</sup>. The thunderbolt is replaced by a new type; the head of Hera is treated in a new manner<sup>1</sup>).

The head EP (no. 290) is known to us unfortunately from one example only. It is a beautiful head, as characteristic of the first half of the fourth century B. C., as the head EA was of the latter half of the fifth. Around the head is the full ethnic FAΛEION. The die EQ shows a remarkable fineness of detail and technique, though the expression of the face is not altogether pleasing. ER, however, has a head which is beautiful in every respect. It is the earliest head of the goddess adorned with an earring. ER shares a reverse die with EQ and another with ES. The two next heads ES and ET, which share an eagle between them, wear a new type of stephanos decorated with a wreath of wild olive. Henceforward the heads of Hera all have earrings, down to the period of the closing of the mint. The latest head of this series (EU) is wearing the old type of stephanos once more, adorned with palmettes and lilies. EU has borrowed the idea of putting HPA on the stephanos from the preceding group of staters with the thunderbolt reverses.

We now come to the eagles, which permanently take the place, within the wreath, of the thunderbolts of the former group. The two first (Pl. X, ϑη, ϑθ) are magnificent birds both from dies which bear the signature ΓΟ. It remains an open question whether these letters are the initials of an artist or those of a magistrate, as they evidently are on the somewhat later hemidrachms of the Zeus mint (cf. above Series XVII, Fractions: Later). Gardner (Num. Chron. 1879, p. 244), who favours the former suggestion, thinks of the younger Polyclethus. He flourished at the beginning of the fourth century B. C., and the dies are worthy of him. More one cannot say. For ΓΟ is a common set of initials, and the identification of artists with similar initials is a very speculative business<sup>2</sup>). The die ϑι is a

<sup>1</sup>) For a parallel cf. Regling, Terina (1906), where Pl. I, HH and I I of somewhat deteriorated style are followed by the new heads, treated in a new manner, Pl. I, LL and MM.

<sup>2</sup>) Note how at Syracuse we find Euainetos, Eucharidas, Eukleidas, Eumenes, Euth . . . ., all artists whose name begins with EY. — In

„Olympia“, vol. V, no. 638 = Loewy, Inschriften griech. Bildhauer (1885), no. 72 we have the record of another artist ΓΟ who worked at Olympia. It is a fourth century inscription on a base reading Πολύμνηστος Ἀθηναῖος ἐπάση. We also have the signature of this same artist preserved in his own home on two bases

good, though inferior, imitation of the two dies just referred to.  $\vartheta\kappa$ ,  $\vartheta\lambda$ ,  $\vartheta\mu$  and  $\vartheta\nu$  have eagles differently treated from those on the three earlier dies. Instead of standing facing with open wings the bird is seen in profile with closed wings, its head turned back. The disorder of the neck feathers caused by this turning of the head is admirably rendered. There is a great similarity between this bird and the bird upon the shield on the contemporary staters issued from the mint of Zeus (Pl. V, BV, BW, BX). Both lots of eagles have the same correct proportions, the same life-like bearing. The four remaining reverse dies of this group ( $\vartheta\xi$ — $\vartheta\rho$ ) all return to the type of an eagle with open wings. The first issues of group E<sup>2</sup> had borne eagles of this design ( $\vartheta\eta$ — $\vartheta\iota$ ), a design which, in the following series XXIX of group GH<sup>1</sup>, falls into the background in favour of an eagle with closed wings (of the 27 reverse dies of series XXIX only 8 have a bird with open wings), while in series XXX it once more becomes the standard type.  $\vartheta\xi$  was an enduring die, for we still have eight examples struck from it. The olive-wreath, as well as parts of the eagle, were retouched, hence nos. 301, c. d. e. g appear at first sight to be struck from a different die to nos. 301, a. b. f. h. The coarsest of these four last lies is  $\vartheta\rho$ ; it bears the letters AII above the eagle's head, the initials, either of an inferior engraver, or, as Sir Hermann Weber suggests (Num. Chron. 1892, pp. 195 f.), those of a magistrate.

Fractions: Hemidrachm. Obv. similar to nos. 293 ff. (ER), but on stephanos F|A between three palmettes; four big locks of hair across neck and cheek; rev. similar to no. 294 ( $\vartheta\iota$ ), but no wreath. a. Berlin; weight: 2,71 g (41,8 grains). — b (Pl. XII, 7). In the trade; weight: 2,80 g (43,2 grains).

Drachm. Obv. similar to nos. 301 ff. (EU), but on the stephanos HPA between two palmettes; rev. similar to no. 301 ( $\vartheta\xi$ ), but border of dots instead of olive-wreath. Cat. Sotheby, Feb. 1909 (Benson), Pl. XIX, 572; weight: 5,93 g (91,5 grains).

Drachm. Obv. same die; rev. similar, but eagle's feet together. a (Pl. XII, 8). Jameson, Paris; Cat. (1913), vol. I, Pl. LXIII, 1240; weight: 5,79 g (89,3 grains). — b (same dies). London; B. M. C. Pelop. 91, Pl. XIII, 14; weight: 5,68 g (87,6 grains).

Hemidrachm. Obv. similar; rev. similar, but eagle's feet apart; no border of dots. London; B. M. C. Pelop. 92, Pl. XII, 15 = Num. Chron. 1879, Pl. XIV, 2 b; weight: 2,99 g (46,2 grains). — Pl. XII, 9.

Obol. Obv. similar to nos. 309 ff. (EX), but the stephanos narrower; rev. eagle's head and neck r. in wreath of olive twisted below. a. Berlin, formerly Imhoof-Blumer (Imh.-Bl., Monnaies Grecques, p. 169, 66, Choix Pl. II, 60); weight: 0,93 g (14,3 grains). — b (same dies; Pl. XII, 10). London; B. M. C. Pelop. 100, Pl. XIV, 4 = Num. Chron. 1879, Pl. XIV, [VI or VII] 6; weight: 0,88 g (13,6 grains).

Hemiobol. Obv. similar; rev. F|A thunderbolt with volutes curling outwards above, wings and volutes curling outwards below. London; B. M. C. Pelop. 80, Pl. XIII, 6 = Num. Chron. 1879, Pl. XIV, [V] 6; weight: 0,38 g (5,9 grains).

Group E<sup>2</sup> stands separated from E<sup>1</sup> by reason of a difference of types. Somewhere between 421 and 365 B. C. this new reverse type must have started, and I have named the year 385 B. C. as its approximate starting point because the proportion of dies in group E<sup>1</sup> to dies in group E<sup>2</sup> warrants some such date. As to the lower date B. C. 365, more will be said about it under the next group. It is

(Loewy, nos. 70. 71). The first of the two Attic inscriptions (no. 70) has in one place E | for H (otherwise always H) showing that it is, epigraphically, of a transitional date.

the one date that we can be sure of in arranging the Olympian coinage, on account of the memorable occupation of Olympia by the Arcadians in B. C. 365–363.

**Group GH<sup>1</sup> (Series XXIX. XXX).**

ca. B. C. 363 to ca. B. C. 323 or later.

Summary of staters:

Obverse dies 15 (EV—FK). Obverse dies using more than one reverse 11.  
Reverse dies 44 (θσ—λν). Reverse dies used with more than one obv. 12.  
Coins 60. Number of specimens recorded 151.

Series XXIX (Obverse dies EV—FF).

305. (EV) Obv. F|A Female head r., wavy hair in sphendone, which is narrower over forehead and broader behind ear, the hair from the temples waved across it, a lock of hair hanging down in front of ear; single pendant earring, plain necklāce.  
(θσ) Rev. Eagle standing l., head r.; wings closed, four rows of feathers. All within wreath of wild olive tied below, five pairs of leaves on r. twig, six on l. Shallow circular incuse. Cf. no. 306.  
a (Pl. X, EV θσ). London: 12,18 g (188,0 grains); B. M. C. Pelop. 76, Pl. XIII, 4.
306. (EW) Obv. F|A Similar head, but larger; no lock of hair in front of ear.  
(θσ) Rev. Same die as no. 305.  
a. Baltatzes, Athens: 11,55 g (178,2 grains), formerly belonging to Mrs. Helena N. Mavrokordatos; Journ. Intern. XIV (1912), p. 27, no. 2002, Pl. σ, 28.  
b. Boston: 12,08 g (186,4 grains); Regling, Cat. Warren, Pl. XXI, 927.  
c (Pl. X, EW θσ). Brussels: 12,11 g (186,9 grains), formerly Baron Hirsch.  
d. Cambridge: 12,30 g (189,8 grains); Leake, Numismata Hell., Europ. Greece p. 49.  
e. Copenhagen: 11,92 g (184,0 grains).  
f. The Hague: 11,62 g (179,3 grains).  
g. Jameson, Paris: 12,22 g (188,6 grains); Cat. (1913), vol. I, Pl. LXIII, 1236; Cat. Sotheby, June 1896 (Bunbury), Pl. VII, 1091; Cat. Sotheby, Feb. 1909 (Benson), Pl. XVIII, 573.  
h. London: 12,16 g (187,7 grains); B. M. C. Pelop. 75, Pl. XIII, 3; Num. Chron. 1879, Pl. XIV, 4; Gardner, The Types of Greek Coins, Pl. VIII, 27 + 30; Lambros, Peloponnesos, Pl. Z, 3.  
i. Sangorski, London: 11,90 g (183,7 grains).
307. (EW) Obv. Same die.  
(θτ) Rev. FA (downwards) in front. Eagle standing r. on capital of Ionic column, very upright; wings closed, two rows of feathers; tail hidden; in field l. behind it upright caduceus. Wreath ends twisted above, five pairs of leaves on each twig. In field above outside the wreath Δ(?). Shallow circular incuse.  
a (Pl. X, [EW] θτ). Sir H. Weber, London: 12,17 g (187,9 grains).
308. (EW) Obv. Same die.  
(θυ) Rev. Eagle standing r., head l.; wings closed; tail showing. Wreath tied below, not twisted above, five pairs of leaves on r., four pairs and an odd leaf on l. twig. Shallow circular incuse.  
a (Pl. X, [EW] θυ). Seltman, Berkhamsted: 11,99 g (185,0 grains).

309. (EX) Obv. F|A Head of Hera r., hair wavy, the back portion turned up over the back of the stephanos, a lock in front of ear, three locks behind on neck; the stephanos a narrow band pointed in front, a palmette on the front, a lily on the side; single pendant earring.  
 (ϑφ) Rev. Eagle r., head l.; wings closed; tail hanging down. All within wreath of wild olive tied below, six (?) pairs of leaves on each twig. Shallow circular incuse.  
 a (Pl. XI, [EX] ϑφ). Berlin: 11,00 g (169,7 grains).
310. (EX) Obv. Same die.  
 (ϑχ) Rev. Similar. Shallow circular incuse.  
 a (Pl. XI, [EX] ϑχ). Pozzi, Paris: 12,35 g (190,6 grains).  
 b. Pozzi, Paris: 12,15 g (187,5 grains).  
 c. Seltman, Berkhamsted: 11,92 g (184,0 grains).  
 d (Pl. XI, EX). Spink, London: 11,33 g (182,6 grains); Cat. Sotheby, May 1894 (Carfrae), lot 174, Pl. VII, 5; Cat. Sotheby, June 1905 (H. P. Smith), lot 214; Pl. II, 218; Cat. Hirsch XX (Hoskier), Pl. XII, 338.  
 e. Cat. Hirsch XVI (1906), Pl. XVI, 580: 12,20 g (188,3 grains).
311. (EX) Obv. Same die.  
 (ϑϕ) Rev. Eagle similar, but nearly facing, head l. Wreath with six pairs of leaves on r., five on l. twig. Shallow circular incuse.  
 a (Pl. XI, [EX] ϑϕ). Berlin: 11,92 g (184,0 grains).  
 b. Copenhagen: 10,50 g (162,0 grains), pierced.  
 c. The Hague: 11,82 g (182,4 grains); Cat. Egger XL (Prowe), Pl. XX, 1114.
312. (EX) Obv. Same die.  
 (ϑω) Rev. Eagle standing r., very upright; wings closed, two rows of feathers; feet together. Wreath with five pairs of leaves on each twig. Shallow circular incuse. Cf. nos. 321. 323.  
 a. Berlin: 11,42 g (176,2 grains).  
 b. Paris: 11,47 g (177,0 grains). — Obverse die recut: letters much larger; reverse die slightly worn (as on no. 321, a).  
 c (Pl. XI, [EX] ϑω). Spink, London: 12,14 g (187,3 grains); Cat. Hirsch XXV (Philipsen), Pl. XVI, 1290. — Obverse die recut: letters much larger; reverse die somewhat more worn. — Countermark on obverse: no. II (on cheek).
313. (EX) Obv. Same die.  
 (α) Rev. Eagle standing l., head r.; wings closed; tail showing. Wreath with five pairs of leaves on each twig. Shallow circular incuse.  
 a (Pl. XI, [EX] α). Cambridge (McClean Coll.): 11,82 g (182,5 grains). — Obv. die recut: letters much larger.  
 h. In the trade.
314. (EX) Obv. Same die, recut: letters much larger.  
 (ιβ) Rev. Eagle r.; wings open, r. wing raised, five rows of feathers; tail spread; l. foot in front of r. Wreath tied below, twisted above, four pairs and an odd leaf on each twig. Shallow circular incuse.  
 a. Jameson, Paris: 12,06 g (186,1 grains); Cat. (1913), vol. I, Pl. LXIII, 1241; Cat. Hirsch XVI (1906), Pl. XVI, 579.  
 b (Pl. XI, [EX] ιβ). London: 12,25 g (189,0 grains); Cat. Photiadès Pacha (Paris 1890), Pl. V, 1056; Cat. Sotheby, March 1896 (Montagu), Pl. VI, 409; Num. Chron. 1897, Pl. IV, 11.

315. (EX) Obv. Same die, recut as before.  
(ιγ) Rev. Eagle similar, but smaller; four rows of feathers on wings  
Wreath with six pairs of leaves on each twig. Shallow circular incuse  
a. Anderson, Athens: 12,15 g (187,5 grains).  
b. Athens: 12,15 g (187,5 grains).  
c. (Pl. XI, [EX]ιγ). Berlin: 12,27 g (189,3 grains).  
d. Pozzi, Paris: 11,96 g (184,6 grains); Cat. Hirsch XIII (Rhusopoulos), Pl. XXIX  
2565.  
e. Sir H. Weber, London: 11,76 g (181,6 grains); Num. Chron. 1892, Pl. XVI, 2.  
f. Cat. Hess, March 1906 (Berlin Duplicates), Pl. III, 911 = Cat. Hirsch XXV (Phi  
lipsen), Pl. XVI, 1286: 11,80 g (182,1 grains).
316. (EX) Obv. Same die, recut as before.  
(ιδ) Rev. Eagle similar, but bigger, more upright, nearly facing and head  
turned l.; feet together. Wreath as before. Shallow circular incuse.  
a. (Pl. XI, [EX]ιδ). The Hague: 11,37 g (175,5 grains).
317. (EX) Obv. Same die, recut as before.  
(ιε) Rev. Eagle standing r., head raised; wings closed, three rows of fea-  
thers; l. foot before r.; in front of l. foot ▷. All within wreath of  
wild olive tied below, five pairs of leaves on each twig. Shallow cir-  
cular incuse. Cf. no. 322.  
a. (Pl. XI, [EX]ιε). Sir H. Weber, London: 12,15 g (187,6 grains).
318. (EX) Obv. Same die, recut as before and worn: flaw at the root of the nose.  
(ις) Rev. Eagle similar. No letter. Wreath with six pairs of leaves on  
each twig. Shallow circular incuse.  
a. (Pl. XI, [EX]ις). Berlin: 11,87 g (183,2 grains).  
b. Vienna: 12,05 g (186,0 grains).  
c. Cat. Ratto (Milan), May 1912, Pl. XVII, 803: 11,99 g (185,0 grains).
319. (EX) Obv. Same die, recut and worn as before.  
(ιζ) Rev. Eagle similar, but to l.; feet together. Wreath of wild olive  
tied above, four pairs of leaves on each twig. Shallow circular incuse.  
Cf. nos. 324. 327.  
a. Athens: 11,85 g (182,9 grains). — Slight flaw (at eagle's neck) in reverse die.  
b. (Pl. XI, [EX]ιζ). Cambridge (McClellan Coll.): 12,17 g (187,8 grains); Cat. Hirsch  
XXI (Consul Weber), Pl. XXIV, 1938. — Slight flaw (at eagle's neck) in reverse die.
320. (EX) Obv. Same die, recut and worn as before.  
(ιθ) Rev. Small eagle r., head l.; wings closed, three rows of feathers;  
seated on ram's head r. All within wreath of wild olive tied below, five  
pairs of leaves on r., seven on l. twig. Shallow circular incuse. Cf. no.  
334.  
a. (Pl. XI, [EX]ιθ). Seltman, Berkhamsted: 11,99 g (185,0 grains).
321. (EY) Obv. F/A Similar head of Hera r., but no locks on neck and cheek;  
stephanos not pointed, on it two palmettes with a lily between; single  
pendant earring.  
(ϑω) Rev. Same die as nos. 312. 323.  
a. (Pl. XI, [EY]ϑω). Copenhagen: 12,02 g (185,5 grains). — Rev. die slightly worn  
(as on no. 312, b).  
b. New York: 12,06 g (186,1 grains); Hill, Cat. Ward, Pl. XIII, 543.  
c. Cat. Hirsch XVI (1906), Pl. XVI, 578: 12,17 g (187,8 grains).

322. (EY) Obv. Same die.  
(15) Rev. Same die as no. 317.  
a (Pl. XI, EY 15). Athens: 12,10 g (186,7 grains).  
b. Seltman, Berkhamsted: 12,12 g (187,0 grains); Cat. Hirsch XXI (Consul Weber), Pl. XXIV, 1937.
323. (EZ) Obv. F|A Similar head of Hera; hair hiding most of the stephanos; two loose locks on forehead, one on cheek, two on neck; stephanos pointed, on it a palmette and a lily; single pendant earring.  
(3ω) Rev. Same die as nos. 312. 321.  
a (Pl. XI, EZ 3ω). Paris: 12,09 g (186,6 grains). — Flaw (at eagle's beak) in reverse die.  
b. Cat. Rollin & Feuardent, May 1910, Pl. X, 443. — Same flaw in reverse die.
324. (EZ) Obv. Same die.  
(17) Rev. Same die as nos. 319. 327.  
a (Pl. XI, [EZ] 17). Anderson, Athens: 12,06 g (186,1 grains).  
b. Pozzi, Paris: 12,15 g (187,5 grains).
325. (EZ) Obv. Same die.  
(11) Rev. Eagle similar, but with head turned r. Wreath tied below, five pairs of leaves on r., six on l. twig. Shallow circular incuse.  
a. Berlin: 11,67 g (180,1 grains).  
b. Jameson, Paris: 11,92 g (184,0 grains); Cat. (1913), vol. 1, Pl. LXIV, 1242; Cat. Hirsch XVI (1906), Pl. XVII, 583.  
c. Pozzi, Paris: 12,20 g (188,3 grains).  
d. Vicomte de Sartiges, Paris: 11,99 g (185,0 grains).  
e (Pl. XI, [EZ] 11). Spink, London: 12,18 g (188,0 grains).  
f. Cat. Bourgey, June 1909, Pl. VII, 277.  
g. Cat. Hirsch XVI (1906), Pl. XVI, 581 = Cat. Hirsch XXV (Philipsen), Pl. XVI, 1292: 12,20 g (188,3 grains).  
h. Cat. Hirsch XVI (1906), Pl. XVII, 582 = Cat. Hirsch XXXIV (1914), Pl. XIV, 447: 12,00 g (185,2 grains).
326. (FA) Obv. F|A Similar head of Hera, but coarser.  
(12) Rev. Similar to no. 312 (= 321. 323). Shallow circular incuse.  
a (Pl. XI, FA 12). Rollin & Feuardent, Paris: 11,85 g (182,9 grains), pierced. — Reverse double-struck.
327. (FB) Obv. F|A Similar head of Hera; the stephanos a broad band high on the head not hidden by hair, but hiding crown of head; on it sun-flower design in centre, at either side of it a lily and a palmette over tendrils; single drop earring with cross-bar; plain necklace.  
(17) Rev. Same die as nos. 319. 324.  
a (Pl. XI, FB 17). Cat. Bourgey, April 1908, Pl. V, 144 = Cat. Hirsch XXIX (Lambros), Pl. IX, 549: 12,00 g (185,2 grains).  
b. Cat. Hirsch XVI (1906), Pl. XVII, 584: 12,25 g (189,0 grains).
328. (FC) Obv. F|A Similar head of Hera, but bigger; two locks on cheek, three on neck; stephanos a narrow band round the head, on it four palmettes show; pendant earring; plain necklace.  
(12) Rev. Eagle r., head l.; wings open, r. wing raised, five rows of feathers; tail downwards. All within wreath of wild olive tied below, four pairs of leaves on each twig. Shallow circular incuse.  
a (Pl. XI, FC 12). London: 12,16 g (187,6 grains); B. M. C. Pelop. 96.

329. (FC) Obv. Same die.  
 (ιμ) Rev. Similar, but eagle rather more upright. Shallow circular incuse  
 a. Athens: 12,05 g (186,0 grains).  
 b. Boston; Catherine P. Perkins Coll. no. 356.  
 c (Pl. XI, [FC] ιμ). Brussels: 12,22 g (188,6 grains), formerly Baron Hirsch.  
 d. Meletopoulos, Athens: 12,57 g (194,0 grains).  
 e. Prinz zu Windisch-Grätz, Vienna: 12,00 g (185,2 grains); Cat. V (1899), no. 1245
330. (FC) Obv. Same die.  
 (iv) Rev. Eagle similar. Wreath with six pairs of leaves on each (?) twig  
 Shallow circular incuse.  
 a (Pl. XI, [FC] iv). Cat. Hirsch XIV (1905), Pl. XII, 449 = Cat. Hirsch XXV (Philipsen), Pl. XVI, 1280: 11,72 g (180,9 grains).
331. (FC) Obv. Same die. [Flaw at truncation of neck].  
 (ιξ) Rev. Eagle similar, but to l., head r.; claws grasping belly of hare  
 upside-down r., legs in running attitude, head drooping. All within  
 wreath of wild olive tied below, seven pairs of leaves on each twig.  
 Shallow circular incuse.  
 a. Boston: 12,02 g (185,5 grains); Regling, Cat. Warren, p. 147, no. 931; Num. Chron. 1880, Pl. I, 7.  
 b. Corpus Christi College, Cambridge (Lewis Coll.): 11,60 g (179,0 grains).  
 c (Pl. XI, [FC] ιξ). London: 12,16 g (187,6 grains); B. M. C. Pelop. 98, Pl. XIV, 3.
332. (FC) Obv. Same die. [Flaw at truncation of neck].  
 (ιω) Rev. Eagle similar, but claws grasping nose of stag's head with branching  
 antlers r. Wreath with six pairs of leaves on r., seven on l. twig.  
 Shallow circular incuse. Cf. nos. 333. 335. 341.  
 a (Pl. XI, [FC] ιω). Cambridge (McClellan Coll.): 12,09 g (186,6 grains). — Countermark on obverse.  
 b. The Hague: 12,00 g (185,2 grains), formerly Six.  
 c. London: 12,16 g (187,6 grains); B. M. C. Pelop. 97, Pl. XIV, 2; Lambros, Peloponnesos, Pl. Z, 5. — Countermark on obverse.  
 d. Munich: 12,00 g (185,2 grains).  
 e. Pozzi, Paris: 12,25 g (189,0 grains).
333. (FD) Obv. F|A Similar head of Hera, but coarser; neck longer; no necklace.  
 (ιω) Rev. Same die as nos. 332. 335. 341.  
 a (Pl. XI, FD ιω). Cat. Hirsch XXV (Philipsen), Pl. XVI, 1282: 11,80 g (182,1 grains).
334. (FE) Obv. Similar head of Hera, but to l., one lock on cheek; stephanos  
 still narrower, on it three palmettes, between them F|A; pendant earring.  
 (ιθ) Rev. Same die as no. 320.  
 a (Pl. XI, FE ιθ). Sir H. Weber, London: 12,02 g (185,5 grains); Cat. Photiades Pacha (Paris 1890), Pl. V, 1047.
335. (FE) Obv. Same die.  
 (ιω) Rev. Same die as nos. 332. 333. 341.  
 a (Pl. XI, [FE] ιω). Seltman, Berkhamsted: 11,99 g (185,0 grains).
336. (FE) Obv. Same die.  
 (ιτ) Rev. Eagle standing r., head slightly raised; wings closed; feet together. Wreath of wild olive tied below, five pairs of leaves on each twig.  
 Shallow circular incuse.  
 a (Pl. XI, [FE] ιτ). Berlin: 11,90 g (183,6 grains).

337. (FE) Obv. Same die.

(ϕ) Rev. Eagle similar, but l.; behind it vertical thunderbolt, with straight wings with two rows of feathers above, volutes curling outwards below, club-shaped central darts. All within wreath as before. Shallow circular incuse.

a (Pl. XI, [FE]ϕ). Berlin: 11,55 g (178,2 grains).

b. J. Hamburger, Frankfort: 11,35 g (175,1 grains).

c. Paris: 12,00 g (185,2 grains).

d. Seltman, Berkhamsted: 11,82 g (182,4 grains); Cat. Hirsch XXV (Philipsen), no. 1291.

338. (FE) Obv. Same die.

(ω) Rev. Eagle similar, but shorter; shorter thunderbolt, wings below, volutes and flame-lines above, pointed central darts. Wreath with six pairs of leaves on each twig. Shallow circular incuse.

a. Berlin: 11,55 g (178,2 grains).

b (Pl. XI, [FE]ω). Paris: 12,27 g (189,3 grains), formerly duc de Luynes.

c. Pozzi, Paris: 11,85 g (182,9 grains).

339. (FF) Obv. F|A Similar head of Hera; one lock on forehead, two on neck; on stephanos four very small palmettes, tendrils joining them; pendant earring.

(τ) Rev. Eagle similar, but bigger; no thunderbolt. Wreath with five pairs of leaves on each twig. Shallow circular incuse.

a. Jameson, Paris: 12,03 g (185,6 grains); Cat. (1913), vol. I, Pl. LXIV, 1243.

b. London: 12,08 g (186,5 grains); B. M. C. Pelop. 113, Pl. XIV, 13; Num. Chron. 1879, Pl. XV, 9.

c. Seltman, Berkhamsted: 11,95 g (184,5 grains).

d (Pl. XI, FFτ). Vienna: 12,08 g (186,4 grains).

e. Cat. Hirsch XIII (Rhusopoulos), Pl. XXIX, 2576: 12,22 g (188,6 grains).

340. (FF) Obv. Same die.

(ω) Rev. Eagle similar; in front of r. leg Δ. Wreath as before. Shallow circular incuse.

a (Pl. XI, [FF]ω). Berlin: 12,17 g (187,8 grains).

Series XXX (Obverse dies FG—FK).

341. (FG) Obv. F|A Head of Hera r.; hair waved, one lock on cheek; stephanos a narrow band on which FAΛEION; triple pendant earring with rosette in centre; necklace of pearls.

(ω) Rev. Eagle l., head r.; wings open, five rows of feathers; claws grasping nose of stag's head with branching antlers r. All within wreath of wild olive tied below, six pairs of leaves on r., seven on l. twig. Shallow circular incuse. Same die as nos. 332. 333. 335.

a. Copenhagen: 12,27 g (189,3 grains).

b (Pl. XI, [FG]ω). London: 12,38 g (191,0 grains); B. M. C. Pelop. 103, Pl. XIV, 6.

342. (FG) Obv. Same die.

(ϕ) Rev. Eagle similar; claws grasping oval object; in field before r. leg <. Wreath as before, seven (?) pairs of leaves on each (?) twig. Shallow circular incuse.

a (Pl. XI, FGϕ). Earle Fox, London: 12,19 g (188,1 grains). — Rev. die fractured.

343. (FG) Obv. Same die. [Flaw at tip of nose].  
(ϕ) Rev. Eagle similar; no letter. Wreath with seven pairs of leaves on r., seven pairs and an odd leaf on l. twig. Shallow circular incuse.  
a (Pl. XI, [FG]ϕ). Berlin: 11,90 g (183,6 grains); Imhoof-Blumer and Keller, Thier- und Pflanzenbilder, Pl. IV, 39 (rev.); Lambros, Peloponnesos, Pl. Z, 6.  
b. Paris: 11,77 g (181,6 grains).  
c. Cat. Sotheby, Feb. 1909 (Benson), Pl. XIX, 575: 11,82 g (182,5 grains).
344. (FG) Obv. Same die. [Flaw at tip of nose].  
(ιψ) Rev. Eagle similar. Wreath with six pairs of leaves on each twig. Shallow circular incuse. Cf. no. 346.  
a. Boston: 12,04 g (185,8 grains); Regling, Cat. Warren, Pl. XXI, 932.  
b (Pl. XI, [FG]ιψ). Cambridge (McClellan Coll.): 12,30 g (189,8 grains).  
c. New York: 11,91 g (183,8 grains); Hill, Cat. Ward, Pl. XIII, 542.  
d. Paris: 12,17 g (187,8 grains).  
e. Vienna: 12,14 g (187,3 grains).  
f. Vierordt, Leipsic: 12,04 g (185,8 grains); Cat. Hirsch XIV (1905), Pl. XII, 451.  
g. Cat. Hirsch XIII (Rhusopoulos), Pl. XXIX, 2561: 12,17 g (187,8 grains).  
h. Cat. Hirsch XXV (Philipsen), Pl. XVI, 1283: 11,88 g (183,3 grains).
345. (FG) Obv. Same die. [Flaw at tip of nose].  
(ω) Rev. Eagle similar. Wreath with seven pairs of leaves on r., six pairs and an odd leaf on l. twig. Shallow circular incuse. Cf. no. 347.  
a. Corpus Christi College, Cambridge (Lewis Coll.): 11,34 g (175,0 grains).  
b. Paris: 12,00 g (185,2 grains), formerly duc de Luynes.  
c (Pl. XI, [FG]ω). Pozzi, Paris: 12,20 g (188,3 grains).  
d. Stockholm.  
e. Cat. Egger XLI (1912), Pl. XIII, 499: 12,20 g (188,3 grains).  
f. Cat. Merzbacher, Nov. 1909, Pl. 27, 3003: 12,07 g (186,3 grains).
346. (FH) Obv. Similar head of Hera with ΦΑΛΕΙΩΝ on stephanos, but two locks on cheek. No letters in field.  
(ιψ) Rev. Same die as no. 344.  
a (Pl. XII, [FH]ιψ). Milan (Brera Coll.): 12,10 g (186,7 grains). — Obverse double-struck.
347. (FH) Obv. Same die.  
(ω) Rev. Same die as no. 345.  
a (Pl. XII, FHω). Glasgow: 12,12 g (187,0 grains); Macdonald, Cat. Hunter, vol. II, p. 135, 6.
348. (FH) Obv. Same die.  
(χα) Rev. Similar. Shallow circular incuse.  
a (Pl. XII, [FH]χα). Rollin & Feuadent, Paris: 12,15 g (187,5 grains).
349. (FH) Obv. Same die.  
(κβ) Rev. Eagle similar. Wreath with nine pairs of leaves on each twig. Shallow circular incuse. Cf. no. 350.  
a. Berlin: 12,13 g (187,2 grains).  
b. Cambridge (McClellan Coll.): 12,19 g (188,2 grains).  
c. London: 12,30 g (189,8 grains).  
d (Pl. XII, [FH]κβ). London: 12,13 g (187,2 grains). — Flaw (under neck) in obverse die.
350. (FJ) Obv. Similar head of Hera as on no. 341. No letters in field.  
(κβ) Rev. Same die as no. 349.

- a. Chapman, Philadelphia: 12,18 g (188,0 grains); Cat. Hirsch XXXII (1912), Pl. XIX, 506 („17,20“ g is a misprint instead of 12,20).
- b. (Pl. XII, [FJ]  $\alpha\beta$ ). London: 12,19 g (188,2 grains); B. M. C. Pelop. 101, Pl. XIV, 5; Num. Chron. 1879, Pl. XV, [X] 5; Gardner, Types of Gr. Coins, Pl. XII, 26 (obv.).
- c. Picard, Paris: 12,15 g (187,5 grains); Cat. Hirsch XIII (Rhusopoulos), no. 2563; Cat. Sotheby, April 1909 (L. White-King), Pl. III, 184.
351. (FJ) Obv. Same die.  
 ( $\alpha\gamma$ ) Rev. Eagle similar. Wreath with nine pairs of leaves and an odd leaf on each (?) twig. Shallow circular incuse.  
 a (Pl. XII, [FJ]  $\alpha\gamma$ ). Anderson, Athens: 11,42 g (176,2 grains).
352. (FJ) Obv. Same die.  
 ( $\alpha\delta$ ) Rev. Eagle similar. Wreath with six pairs of bigger leaves on each twig. Shallow circular incuse.  
 a (Pl. XII, [FJ]  $\alpha\delta$ ). Berlin: 11,94 g (184,3 grains).  
 b. Rollin & Feuardent, Paris: 12,00 g (185,2 grains).
353. (FJ) Obv. Same die.  
 ( $\alpha\epsilon$ ) Rev. F in field I. Eagle similar. Wreath with nine pairs of leaves on r., nine pairs and an odd leaf on l. twig. Shallow circular incuse.  
 a. Baltatzes, Athens: 12,24 g (188,9 grains), formerly belonging to Mrs. Helena N. Mavrokordatos; Journ. Intern. XIV (1912), p. 27, no. 2003, Pl.  $\zeta$ , 29.  
 b. McEwen, Leith: 12,05 g (185,9 grains).  
 c (Pl. XII, [FJ]  $\alpha\epsilon$ ). Sir H. Weber, London: 12,04 g (185,8 grains).  
 d. Cat. Hirsch XXI (Consul Weber), Pl. XXIV, 1936: 12,14 g (187,3 grains).
354. (FJ) Obv. Same die.  
 ( $\alpha\zeta$ ) Rev. F in field I. Eagle similar. Wreath with seven pairs and three odd leaves on r., eight pairs and five odd leaves on l. twig. Shallow circular incuse.  
 a (Pl. XII, [FJ]  $\alpha\zeta$ ). Rollin & Feuardent, Paris: 12,20 g (188,3 grains). — Flaw (under F) in reverse die.  
 b. Cat. Photiadès Paeba (Paris 1890), Pl. V, 1048 = Cat. Hirsch XIV (1905), Pl. XII, 450: 12,33 g (190,3 grains). — Flaw (under F) in reverse die.
355. (FJ) Obv. Same die.  
 ( $\alpha\eta$ ) Rev.  $\eta$  in field I. Eagle similar. Wreath with five pairs of leaves on r., five pairs and an odd leaf (?) on l. twig. Shallow circular incuse.  
 a (Pl. XII, [FJ]  $\alpha\eta$ ). Seltman, Berkhamsted: 12,10 g (186,7 grains).
356. (FJ) Obv. Same die.  
 ( $\alpha\theta$ ) Rev. F in field I. Eagle similar. Wreath with nine pairs of leaves on r., seven pairs on l. twig. Shallow circular incuse. Cf. no. 359.  
 a. Athens: 11,90 g (183,6 grains).  
 b. Cambridge: 12,00 g (185,2 grains); Leake, Numismata Hell., Europ. Greece p. 49.  
 c (Pl. XII, [FJ]  $\alpha\theta$ ). Gotha: 12,25 g (189,0 grains).  
 d. Spink, London: 11,60 g (179,0 grains).  
 e. Cat. Hirsch XVI (1906), Pl. XVII, 585 = Cat. Ratto (Genoa), April 1909, Pl. XII, 2981: 12,10 g (186,7 grains).
357. (FJ) Obv. Same die.  
 ( $\alpha\iota$ ) Rev. F in field I. Eagle similar. Wreath with six pairs of leaves on r., seven pairs on l. twig. Shallow circular incuse. Cf. no. 360.  
 a (Pl. XII, [FJ]  $\alpha\iota$ ). Rollin & Feuardent, Paris: 12,30 g (189,8 grains).  
 b. Cat. Hirsch XXV (Philipsen), Pl. XVI, 1284: 12,15 g (187,5 grains).

358. (FJ) Obv. Same die.  
 (xx) Rev. F in field l. Eagle similar. Wreath with six pairs of leaves on each twig. Shallow circular incuse. Cf. no. 361.  
 a (Pl. XII, [FJ]xx). Berlin: 12,19 g (188,1 grains).
359. (FK) Obv. F/A Head of Hera r.; hair waved, the back portion turned up over the back of the stephanos, two locks in front of ear, three behind on neck; the stephanos a narrow band pointed in front, a lily on the front and on the side; single pendant earring; necklace of pearls.  
 (xθ) Rev. Same die as no. 356.  
 a (Pl. XII, [FK]xθ). London: 12,17 g (187,9 grains); B. M. C. Pelop. 102.  
 b. Cat. Rollin & Feuardent, May 1910, Pl. X, 442: 11,80 g (182,1 grains).
360. (FK) Obv. Same die.  
 (xι) Rev. Same die as no. 357.  
 a. Berlin: 11,12 g (171,6 grains).  
 b (Pl. XII, [FK]xι). Cambridge (McClellan Coll.): 11,81 g (182,2 grains).
361. (FK) Obv. Same die.  
 (xx) Rev. Same die as no. 358.  
 a. Copenhagen: 12,09 g (186,6 grains).  
 b (Pl. XII, [FK]xx). Seltman, Berkhamsted: 12,34 g (190,4 grains); Cat. Hirsch XXV (Philipsen), Pl. XVI, 1285.
362. (FK) Obv. Same die.  
 (xλ) Rev. Eagle similar; no letter in field. Wreath with five (?) pairs of leaves on each (?) twig. Shallow circular incuse.  
 a (Pl. XII, [FK]xλ). Newell, New York: 11,65 g (179,8 grains).
363. (FK) Obv. Same die.  
 (xμ) Rev. Eagle similar, but to r., head l.; nothing in its claws. Wreath with five (?) pairs of leaves on each twig. Shallow circular incuse.  
 a (Pl. XII, [FK]xμ). Oman, Oxford: 12,05 g (186,0 grains). — Obverse die worn.
364. (FK) Obv. Same die.  
 (xν) Rev. Eagle similar. Wreath with five pairs of leaves on r., six pairs on l. twig. Shallow circular incuse.  
 a (Pl. XII, FKxν). Paris: 11,55 g (178,2 grains). — Obverse die worn.

Series XXIX leads off with the head of the nymph Olympia even as does the contemporary issue from the mint of the temple of Zeus. The same political motive animated both mints in adopting this type. But at the mint of Hera a female head had been the standard obverse for many years. And so at this mint the new type is really no new type. It is instructive to compare the dies EV and EW (Pl. XI) with the dies CA and δλ of the mint of Zeus (Pl. VI). Both the latter are types new to the mint which issued them. There is a certain stiffness about them that is the natural outcome of unfamiliarity. On the other hand EV and EW are executed in the manner and style of the heads of Hera of series XXVII that have preceded them. These two dies share a reverse (θσ), while two other reverses (θτ, θυ) are also used by EW.

The type of the head of Hera on the next obverse die (EX) is clearly influenced by the heads of the nymph Olympia. The stephanos of Hera has taken the place of the sphendone of the nymph, but the treatment of the latter's back-hair

has suggested the idea that a pretty effect might be obtained by turning Hera's hair over the back of her stephanos. This obverse die EX must have lasted for a remarkably long time, since we still have records of twelve reverse dies that were used with it, and as many as thirty staters struck from it survive. It was used in its first condition (the letters F|A being very small) with five reverses ( $\vartheta\phi$ — $\alpha$ : nos. 309—311; 312, a; 313, b); but, while coupled with the two last ( $\vartheta\omega$ ,  $\alpha$ ), it had got clogged in the letters (as no. 313, b clearly shows) and so required recutting. In this, its second condition, the letters are much larger; and in this new form it continued in use with the reverses  $\vartheta\omega$  and  $\alpha$  (nos. 312, b. c and 313, a); after which seven other dies ( $\iota\beta$ — $\iota\theta$ : nos. 314—320) were employed in conjunction with it, before it was finally cast aside, owing to a hurt at the root of the nose, apparent on nos. 318—320. EY is very like EX, though in lower relief. They share two reverses ( $\vartheta\omega$ ,  $\alpha$ ) between them. Two ( $\vartheta\omega$ ,  $\iota\eta$ ) of the twelve reverses of EX also go with the next obverse die EZ which resembles EX closely. There seems to have been a small find of staters struck from the die EZ in recent years, since nine of the twelve specimens recorded (nos. 324, a. b and 325, b—h) have all turned up recently and are all in about the same condition. FA, though only known from one poorly preserved specimen, seems to have been a 'prentice's copy of EZ.

FB shares a reverse ( $\iota\eta$ ) with EZ. I have already referred to this die FB above at the end of Group E<sup>1</sup>. It bears a head that forms a fair parallel to the Argive staters and drachms<sup>1</sup>) that most writers have sought to place in the fifth century. The stephanos upon this somewhat unpleasing head of Hera (Pl. XI, FB) may well be compared with the stephanos the goddess wears on the Argive drachms. There is something strangely modern in the manner of the hair-dressing.

Were it not for die-combinations, which make any other arrangement than that which I have adopted impracticable, one would be inclined to place the die FC directly after the die ER of series XXVIII on stylistic grounds. As it is we must regard it, and its three reverses (Pl. XI,  $\alpha$ ,  $\mu$ ,  $\omega$ ), as deliberate copies of coins of series XXVIII. For, in addition to being used with the three eagles just mentioned, it also occurs with the dies  $\xi$  and  $\omega$ . The latter appears again paired with FD and FE, and again in a more worn state with FG, the first die of the latest series of staters of the mint of Hera.

The two dies FE and FF are the only two heads of the goddess turned to the left instead of to the right. Both heads wear a very narrow stephanos and in this they resemble FC (and its copy FD) which went before. FE has the letters F|A<sup>2</sup>) upon the stephanos, and is thus a fore-runner of the dies in series XXX upon which the full ethnic FAΛEION appears.

The first eagle of this group GH<sup>1</sup> on the die  $\vartheta\sigma$  is a very finely executed bird. The next die  $\vartheta\tau$  appears to have an artist's signature, for there seems to be a minute  $\Delta$  outside the wreath at the top. An engraver  $\Delta$  has signed the die  $\alpha$  which is paired with the obverses EX and EY, and also the die  $\omega$  which we find used with FF, the last head of this series. If  $\vartheta\tau$  bears this letter it may be an earlier

<sup>1</sup>) B. M. C. Pelop., Pl. XXVII, 9. 11—13.

<sup>2</sup>) Not PA, as has been suggested (Cat. Photiadès Pacha, Paris 1890, p. 81, no. 1047), with the

H imagined round on the other side of the head. The F is particularly clear on no. 335 (Pl. XI, [FE]  $\omega$ ).

somewhat clumsy work of the same  $\Delta$ . The eagle on this die is perched upon the capital of an Ionic column, an idea manifestly borrowed from the contemporary staters of the mint of Zeus (Group G: Pl. VI,  $\delta\mu$ .ff.). The caduceus which we find as symbol behind the eagle is repeated upon the drachm and hemidrachm mentioned below. This caduceus and the thunderbolt behind the eagle, on the dies  $\iota\eta$  and  $\iota\theta$  of this series, are the only instances of symbols occurring on staters of the mint of Hera. The twelve different eagles that have been used with the obverse die EX call for little comment, save  $\iota\epsilon$  (to which reference has already been made),  $\iota\eta$  and  $\iota\theta$ . From  $\iota\eta$  we learn that the die EX, after long usage, was discarded for a time — EY had been used along with it, both lying upon the anvil together<sup>1)</sup> — and EZ, FA and FB brought into service. When they had been abandoned, EX was taken up again and used with  $\iota\eta$ . For, where  $\iota\eta$  is paired with EZ and FB, there is no flaw on the eagle's neck; where it appears with EX, there is a flaw. We cannot regard EX as a latter die than EZ, for  $\theta\omega$  occurs with EX and EY in good condition (nos. 312, a; 321, b. c) and slightly worn (nos. 312, b. c; 321, a),  $\theta\omega$  worn and fractured occurs with EZ. On the die  $\iota\theta$ , which we find again paired with FE, the eagle is perched upon a ram's head, affording a further interesting parallel (cf. the Ionic capital on  $\theta\tau$ ) with the similar bird upon the contemporary staters nos. 194. 195 of the mint of Zeus (Pl. VI,  $\epsilon\gamma$ ).

Reference has already been made to the three dies  $\iota\lambda$ ,  $\iota\mu$ ,  $\iota\nu$ , which are copies of dies (like Pl. X,  $\theta\xi$ — $\theta\rho$ ) in series XXVIII. The type of the fourth reverse ( $\iota\xi$ ) which FC uses takes us back to the fifth century staters of the mint of Zeus, for on it the eagle stands upon the belly of a dead hare. An almost identical bird stands upon the head of a stag on the next die  $\iota\omicron$ . FD and FE also both used this reverse die which was used again in a somewhat worn state with FG, the first die of series XXX. The last five reverses of our series (Pl. XI,  $\iota\pi$ — $\iota\omega$ ) are all much alike. The thunderbolts on  $\iota\eta$  and  $\iota\theta$  afford another parallel to group G of the Zeus mint, where we also meet with this symbol on some dies (Pl. VI,  $\epsilon\delta$ — $\epsilon\theta$ ).

Fractions: Hemidrachm. Obv. and rev. similar to no. 305 (EV  $\theta\sigma$ ). London; B. M. C. Pelop. 77, Pl. XIII, 5; weight: 2,78 g (43,0 grains). — Pl. XII, 11.

Obol. Similar, but rev. with F|A, and without wreath. London; B. M. C. Pelop. 78 = Num. Chron. 1879, Pl. XIV, [V] 5; weight: 0,86 g (13,3 grains).

Hemiobol. Obv. similar; rev. F|A thunderbolt with volutes curling outwards above and below. London; B. M. C. Pelop. 79; weight: 0,43 g (6,7 grains), cut. — Pl. XII, 12.

Drachm. Obv. facing head of nymph turned slightly to l., hair loose; wearing necklace and collar<sup>2)</sup>; border of dots; rev. similar to no. 307 ( $\theta\tau$ ), but no letters. Paris; Num. Chron. 1879, Pl. XIV, [VI or VII] 7 = Lambros, Peloponnesos, Pl. Z, 7; weight: 5,58 g (86,1 grains). — Pl. XII, 13.

Hemidrachm. Similar, but with FA downwards on rev. Num. Chron. 1879, Pl. XIV, [VI or VII] 8 (not Paris as there stated); pierced.

Obol. Obv. similar to no. 327 (FB), but the stephanos more pointed at each end, FA upon it, no letters in field; rev. similar to no. 336 ( $\tau\pi$ ), but no wreath; in front  $\xi$ . London; B. M. C. Pelop. 111, Pl. XIV, 11 = Num. Chron. 1879, Pl. XV, [IX] 5; weight: 0,87 g (13,5 grains). — Pl. XII, 14.

<sup>1)</sup> Cf. the remarks on such a method of working, above under Group E, Series XVI.

<sup>2)</sup> The head is, of course, copied from Kimon's famous Syracusan tetradrachm.

- Obol. Obv. head of Hera r.; rev. F|A eagle standing l., head r.; in field l. fig-leaf upwards. Berlin; weight: 0,69 g (10,6 grains). — Pl. XII, 15.
- Obol. Obv. similar; rev. eagle similar, behind it FA over fig-leaf upwards. London; B. M. C. Pelop. 109, Pl. XIV, 10; weight: 0,86 g (13,3 grains).
- Tetartemorion. Obv. similar, but with necklace and pendant earring; rev. eagle's head and neck r., in field r. A. Cat. Hirsch XIII (Rhosopoulos), Pl. XXIX, 2552 = Cat. Hirsch XX (Hoskier), Pl. XII, 339; weight: 0,27 g (4,2 grains). — Pl. XII, 16.
- Obol. Obv. head of Hera l.; rev. FA in field l., eagle standing r. Berlin; weight: 0,91 g (14,0 grains). — Pl. XII, 17.
- Obol. Obv. similar, but somewhat coarser; rev. F|A eagle standing l.; in field l. long narrow leaf, point downwards. Berlin; weight: 0,86 g (13,3 grains). — Pl. XII, 18.
- Hemdrachm. Obv. similar to nos. 334 ff. (FE); rev. F|A eagle r., head l.; in field r. cut pomegranate. Berlin; weight: 2,74 g (42,3 grains). — Pl. XII, 19 (obv.).
- Hemdrachm. Obv. head of Hera r. with pendant earring; rev. same die as before. Count Dessewffy, Budapest; weight: 2,90 g (44,8 grains). — Pl. XII, 20.
- Hemdrachm. Obv. same die; rev.  $\nabla$  in field l., eagle with open wings standing l., head r. Berlin; weight: 2,80 g (43,2 grains).

Series XXX contains four obverse dies only (FG—FK). FG, FH and FJ are all very similar. They stand apart because of the stephanos of the goddess, which, on all three of them, bears the full ethnic  $\text{FAAEI}\Omega\text{N}$  in place of ornamentation. Engravers of heads of Hera had formed the habit of placing the letters FA in the field of the coin, and on the first die FG (Pl. XI) they continued to do so although it was superfluous, since the full name stands upon the stephanos. On FH and FJ (Pl. XII) the letters in the field have been omitted. FG shares two reverses with FH, FH one with FJ, and FJ three with FK. The die FK, which, as far as the material we at present possess shows, seems to have struck the last staters of the mint of Hera, abandons the full ethnic  $\text{FAAEI}\Omega\text{N}$  on the stephanos and returns to the type of earlier staters, which have a stephanos with ornamentation. It is clearly a copy of the die EX, and it is interesting to note how FK proclaims itself, in the modelling of the features and especially in the treatment of the hair, to belong to a later period than its prototype of an earlier generation.

The first eagle-die ( $\omega$ ) in series XXX really belongs to the preceding series, as has already been pointed out above. The next,  $\varphi$ , is signed by the engraver  $\Lambda$ , who has placed his initial upwards in front of the bird's right claw. The design of this eagle is really based upon the magnificent creature of the dies  $\vartheta\eta$ ,  $\vartheta\iota$  (Pl. X) engraved near the beginning of the 4th century. But though it is only a poor reproduction of this prototype, it is just about as much superior to the last three eagles of the series as that prototype is superior to it. Indeed, these eagles from Pl. XI,  $\varphi$  down to Pl. XII,  $\kappa\nu$  tell a tale of steady decline. The dies  $\kappa\epsilon$ — $\kappa\chi$  have a F in the field beside the eagle; one of them (Pl. XII,  $\kappa\eta$ ) has it retrograde. It is somewhat uncertain what the object grasped by the eagle's claws actually is. Most probably it is simply a rock, for if the die  $\varphi$  is compared with the decadrachm of Agrigentum and some of the tetradrachms (Hill, Coins of Ancient Sicily, Pl. VII, 15. 16. 18), it will be seen that the treatment of the rocks on these coins and on the Olympian stater is very similar.

One stater issued from the mint of Zeus (Pl. VII, CU $\epsilon\omega$ ) supplies a good parallel with the staters of the series XXX. The eagle of the Zeus mint is a much finer bird, the work of a better engraver, than the eagles we are dealing with.

But it stands in the same attitude. And, as far as a male and female head can be compared, we may compare the obverse (CU) with the die FH. We see the same big pupil, the same nose and short upper-lip. But this comparison must not be forced, for, after all, it only points to an approximate contemporaneity. It seems pretty clear that Pl. VII, εϑ, although a finer bird than those of series XXX, is suggested by them, not they by it, for the mint of Hera seems to have been closed, or on the point of closing, when the die εϑ was in service at the other mint.

Fractions: Hemidrachm. Obv. like nos. 341 ff. (FG), but no ethnic on stephanos; rev. FA in field r., eagle standing l.; in field r. vine-branch with bunch of grapes. Cat. Hirsch XIV (1905), Pl. XII, 453; weight: 2,96 g (45,7 grains). — Pl. XII, 21.

Hemidrachm. Obv. head of Hera l. with pendant earring; rev. eagle standing l., behind it FA over fig-leaf and vine-branch with leaf and bunch of grapes. London; B. M. C. Pelop. 107, Pl. XIV, 8; weight: 2,65 g (40,9 grains). — Pl. XII, 22.

Hemidrachm. Obv. similar; rev. F|A eagle standing r., in field l. bunch of grapes. Cat. Hirsch XXI (Consul Weber), Pl. XXIV, 1940; weight: 2,95 g (45,5 grains). — Pl. XII, 23.

Obol. Obv. head of Hera r. with long hair and pendant earring; rev. FA in field l. downwards, eagle standing r. Berlin; weight: 0,97 g (15,0 grains). — Pl. XII, 24.

Obol. Obv. similar; rev. A 7 in field r. downwards, eagle standing r., head l.; in field l. upper half of plain thunderbolt. London; B. M. C. Pelop. 108, Pl. XIV, 9 = Num. Chron. 1879, Pl. XV, 11; weight: 0,93 g (14,3 grains).

Hemidrachm. Obv. head of Hera r. with long neck; rev. FA in field l., eagle standing on rock to r., head l.; in field r. thunderbolt. Berlin; weight: 2,97 g (45,8 grains). — Pl. XII, 25.

Hemidrachm. Obv. similar; rev. FA in field l. upwards, eagle with open wings standing on rock to l., head r. Berlin; weight: 2,58 g (39,8 grains).

Hemidrachm. Obv. F|A head of Hera r. with stephanos and pendant earring; rev. similar, but no letters. London; B. M. C. Pelop. 104, Pl. XIV, 7 = Num. Chron. 1879, Pl. XV, 8; weight: 2,56 g (39,5 grains). — Pl. XII, 26.

Hemidrachm. Obv. head of Hera r. with stephanos (?); rev. F in field l., eagle with open wings standing l., head r. London; B. M. C. Pelop. 114, Pl. XIV, 14; weight: 2,73 g (42,2 grains).

Later<sup>1)</sup>:

Hemidrachm. Obv. coarse head of Hera r. with stephanos and pendant earring; rev. A in field l., eagle with open wings standing l., head r. Cat. Hirsch XIII (Rhoussopoulos), Pl. XXIX, 2566; weight: 2,84 g (43,8 grains). — Pl. XII, 27.

Hemidrachm. Obv. similar, but no earring; rev. similar. Berlin; weight: 2,35 g (36,3 grains).

Hemidrachm. Obv. same die; rev. eagle with open wings standing r., head l.; no letter. Berlin; weight: 2,41 g (37,2 grains). — Pl. XII, 28.

Hemidrachm. Obv. head of Hera r. with stephanos, on which ΑΛΕΙΩΝ between two palmettes, and pendant earring; rev. eagle similar. Berlin; Zeitschr. f. Num. VII (1880), p. 117; weight: 2,46 g (38,0 grains). — Pl. XII, 29.

The coinage of this group GH<sup>1</sup> belongs mainly to the period of the decline of free Hellas. The upper date I have named (B. C. 363) can be assigned with comparative certainty, because the sudden appearance of the head of the nymph Olympia, taken in conjunction with her appearance in the mint of Zeus, can point only

<sup>1)</sup> The following fractions give one the impression of being somewhat later in style than the coins of series XXX. It is therefore possible that

the mint of Hera, after ceasing to strike staters, continued the issue of fractions for a few years longer, perhaps till shortly before B. C. 300.

to one date. The lower date B. C. 323 is not, of course, so certain. We have been able to record 15 obverse dies in this group, and some of them of such long durability, that these 15 may well have lasted for a period of 40 years. It is not likely that they lasted very much longer than that. At any rate it seems pretty clear that the mint of Hera was closed down well before the end of the 4th century B. C., while the old original mint of Zeus went on striking coins for nearly a century and a half longer. And seeing that the mint of Hera did cease working before the end of the 4th century, it is most probable that this stoppage took place when so many mints in Hellas were closed, just after the death of Alexander the Great. As was pointed out above (under Group J), the Macedonians would hardly venture to forbid the issue of coin from the sacred temple of Zeus Panhellenios, whose protection Alexander had sought even to the extent of making him one of his principal coin-types. But with the mint of Hera it was different, and the issues from it seem to have come quietly to an end; perhaps because it was actually closed, perhaps because the increasing popularity of the Alexandrine tetradrachms placed the staters of Olympic weight at a discount, and the old mint of Zeus could easily turn out sufficient money for local and festival purposes. So the mint of Hera came to an end, having lasted for about a century, in which time we have recorded the use of 35 obverse dies and 85 reverse dies, from which at least 123 different staters were struck. And since I have examined 349 different pieces, staters all struck within a century from one small temple mint, we may gather some slight impression therefrom of the commercial energy of ancient Hellas.

Two ancient forgeries of Hera types, evidently not emanating from the official temple-mint, are figured on Plate XII, 1. 2. The first (Colonel Cockerell, London) weighs 10,54 g (162,7 grains), the second (Berlin; Friedlaender and von Sallet, *Das Königl. Münzkabinet*<sup>2</sup>, Pl. II, 143) weighs 12,13 g (187,2 grains); both are plated.

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### The Thunderbolt on the Temple Coins of Olympia.

It has been pointed out by Jacobsthal<sup>1</sup>) that the Elean coins are particularly instructive in the matter of gradual development in the design of the conventional thunderbolt, both on account of their exact and beautiful workmanship, and by reason of their established chronological development. Jacobsthal has treated the subject very ably in his monograph, but since, in the foregoing pages, I have been able to establish a more exact chronological sequence of dies and types than any to which Jacobsthal had access, it seemed to me that perhaps something more might be learnt about thunderbolts. It was for this reason that I decided to deal with the subject as a whole, separately, at the end of the other part of my work.

The thunderbolt originated in the East where it was of two forms, bifurcate and trifurcate. The Greeks adopted the latter only<sup>2</sup>). We may say that the Greeks embodied three separate ideas in the thunderbolt: I. the weapon of Zeus, II. the flash of lightning, III. the fire.

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<sup>1</sup>) P. Jacobsthal, *Der Blitz in der orientalischen und griechischen Kunst* (Berlin 1906), p. 24.

<sup>2</sup>) The bifurcate thunderbolt became among the Greeks the bident of Hades.

Jacobsthal (op. cit., pp. 10 ff.) has pointed out how fire was constantly typified by a flower (πυρὸς ἀνθος). And this „fire-flower“ became in early time a regular component of the thunderbolt. The lotus was symbolical of the sun, and so of fire, in Egypt. But the lotus did not grow in Hellas, the nearest thing to it being the lily. Hence we find the lily being used decoratively instead of the lotus<sup>1)</sup>. The lily, too, when drawn conventionally, naturally appeared trifurcate.

Now the first aim of the engravers of the thunderbolts on the coins of Olympia was to produce a decorative design; any thing, therefore, that was symbolical of Zeus might be worked into them. Nevertheless the three essential separate ideas, which the Greeks, as I have pointed out, embodied in the thunderbolt, are always present; as follows:

- I. there is always a dart at one, or both ends (the weapon of Zeus),
- II. there are always flame-lines present (the flash of lightning),
- III. it is always trifurcate (i. e. suggesting the fire-flower).

Next let us analyze these three component parts of the thunderbolts on the coins of Olympia.

- I. The dart appears either (a) plain, or (b) twisted.
- II. The flame-lines are either (a) straight, (b) waved, (c) twisted, or (d) represented in a mass.
- III. The trifurcate design takes six different forms:
  - (a) an open lily in the form of 1) conventional volutes, 2) wings, 3) two serpents, 4) twisted volutes,
  - (b) an opening lily-bud in the form of 1) a conventional bud, 2) curved wings, 3) unfolding wings,
  - (c) a palmette,
  - (d) the wings of Nike,
  - (e) a flying bird,
  - (f) a fly.

It will be manifest that the third component part of the thunderbolt, the trifurcate design, is the most important and the one from which most can be learnt. Of course the three parts are really inseparable; thus on most coins the first part, the dart, forms the central prong of the trifurcate lily; on a coin like Pl. V, δε the dart in the centre below, together with the twisted flame-lines at either side of it, make up a trifurcate design together.

The thunderbolts of Group A (Pl. I) are all of one pattern, each half consisting of an open lily. The petals of the one lily (the lower one on all examples save Pl. I, ε) are represented by conventional volutes, those of the other lily by curved wings which retain the outline of petals. The volutes have frequently one or two tendrils springing from them.

Group B (Pl. II) introduces a new pattern, one half of the thunderbolt having the form of an opening lily-bud (Pl. II, αλ, αμ, αρ, αχ). This opening bud — the lower half — takes the form of curved wings. The upper half is an open flower represented by spiral volutes. The other thunderbolts in this group (Pl. II, αν, αε, αο, αω, αψ, αω) more or less retain the form of those in group A. One of them,

<sup>1)</sup> The garment of the Chryselephantine Zeus of Pheidias at Olympia was decorated with lilies.

Pausanias V, 11, 1: τῷ δὲ ἱματίῳ ζῳδιαί τε καὶ τῶν ἀνθῶν τὰ κρῖνα ἔστιν ἐμπεποιημένα.

however, calls for special comment (Pl. II,  $\alpha\nu$ ). Here the volutes have taken on the form of the heads and necks of a pair of serpents<sup>1</sup>). These serpents perhaps symbolize the serpentine lines of the flashing lightning, the fiery „serpent“ which shoots from the thunder-cloud.

The original design of an open lily for each half of the thunderbolt is still frequent in Group C (Pl. III,  $\beta\varepsilon$ ,  $\beta\zeta$ ,  $\beta\xi$ ,  $\beta\theta$ ,  $\beta\upsilon$ ), but in addition several other modifications appear. Two dies (Pl. III,  $\beta\pi$  and Pl. IV,  $\beta\phi$ ) show a development of the opening bud device which first appeared in group B. The wings, which are above, retain little semblance to the opening petals of a lily. Note how on  $\beta\phi$  the dart below is twisted, as it also is on the contemporary fraction Pl. VIII, 11. Pl. III,  $\beta\varphi$  has in its upper half departed, more even than the two last mentioned dies, from the flower device. Instead of the petal-like wings on either side of the central dart we have the wings of Nike attached to it, wings exactly like those which Nike has on the coins of this group (cf. especially the standing figure Pl. IV,  $\gamma\alpha$ ). Lastly there are the remarkable thunderbolts on  $\beta\lambda$  (Pls. III. IV) and  $\beta\chi$  (Pl. IV). Here we have below, the usual open lily in the form of volutes, above, the lily-bud with twisted central dart turning into flames. But below the handle, to the volutes are attached two great open wings, which stretch upwards to the top corners of the design. Whether there are the wings of the eagle or of Nike it is difficult to say. Extant works of sculpture might incline one to the latter<sup>2</sup>). One other thunderbolt in this group calls for a word, the one which the seated Zeus on Pl. III, AZ holds in his hand. Unfortunately the only extant examples from this die are so worn that it is not clear; as far as we can see, however, it resembles the weapon on  $\beta\pi$ . The god holds it by the lily-bud end, not by the handle<sup>3</sup>).

Group D (Pl. IV) owns five reverses which have thunderbolts with the simple open-lily device of volutes and wings at either end ( $\gamma\gamma$ ,  $\gamma\eta$ — $\gamma\kappa$ ). The wings on the upper half of  $\gamma\gamma$  are particularly petal-like. On top of each volute of the lower half are placed three little petals. Pl. IV,  $\gamma\delta$  and  $\gamma\zeta$  are two very remarkable thunderbolts, the upper half of each having been influenced by  $\gamma\gamma$  in that it too has a petal-design. Indeed, on  $\gamma\zeta$  — perhaps the most graceful of all the thunderbolts — the volutes take a subordinate place, the main design of the upper tripartite device being a palmette. The lower device of both these thunderbolts consists of a pair of small wings, unlike an eagle's<sup>4</sup>), that give a fine sense of lightness and swiftness to the whole bolt.

The most remarkable reverse in Group E (Pl. V) is the one already referred to above (under Series XV:  $\gamma\nu$ ) on which the lower half of the thunderbolt is shaped like a fly. This, as already stated, is a reference to Zeus Apomyios, the fly-god, to whom the yearly sacrifice of a bull was offered at Olympia<sup>5</sup>). The dies  $\gamma\lambda$ ,  $\gamma\mu$ ,

<sup>1</sup>) By an omission this was not mentioned in the description of the coin no. 42.

<sup>2</sup>) Cf. F. Studniczka, *Die Siegesgöttin* (Leipzig 1898), Pl. IV, 26. 27 and Pl. V.

<sup>3</sup>) Cf. Jacobsthal, *op. cit.*, p. 25: a bronze fragment from a statue of Zeus found at Olympia.

<sup>4</sup>) Jacobsthal, *op. cit.*, p. 25 calls them swallow's wings. The swallow was for the Greeks, as

for ourselves, a sign of rain, and therefore was conceivably appropriate to a thunderstorm; cf. Thompson, *A Glossary of Greek Birds* (Oxford 1895), p. 192.

<sup>5</sup>) A. B. Cook, *Zeus* (Cambridge), vol. II, § 3 (c), IV ( $\beta$ ). I am indebted to Mr. Cook for drawing my attention to the passages in Pausanias and Pliny cited above (under Series XV).

γξ—γυ, γχ and γψ are all of the conventional type: an open lily at either end, the one made of volutes, the other of wings. γφ has wings above which belong to the opening bud design, and may well be compared with such early types as Pl. II, αλ, αμ, αρ, αγ. Pl. V, γω and δα have both wings with a twist about them, and the volutes of γω are also twisted, so that the thunderbolt may be thought of as spinning while it hurtles through the air. δβ has an opening lily-bud below in the form of unfolding wings, δθ has a similar device above.

While the old designs were being continued at the old mint of Zeus, a new way of representing the thunderbolt had come into being at the new mint of Hera. This new bolt was still really trifurcate at either end, but each end was more strictly a „fire-flower“, and each end was the same. It consisted of a dart flanked by flame-lines, and lacked variety (Pls. IX. X: Group E<sup>1</sup>). This new design had its effect upon the later coins of group E of the mint of Zeus, for the lower halves of Pl. V, δγ, δδ and the upper half of δη are all influenced by the thunderbolts as they appear on the reverses of the coins of the newer mint. Pl. V, δε, δζ have a simple dart below flanked by twisted flame-lines.

The most lotus-like of all the conventional lilies are those which appear on the small gold coins struck in the name of the Pisatans in B. C. 364 (Pl. V, δι, δκ). The former, being equivalent to one-and-a-half silver staters, has three half thunderbolts, consisting of three lilies, upon it.

The thunderbolts now take a subordinate place upon the Olympian staters. Zeus had become to the Greek mind less and less the impetuous thunderer and more and more the dignified ruler, the sceptre instead of the bolt becomes his chief attribute. At the end of group G we find five reverses which have a small thunderbolt as a symbol in the field (Pl. VI, εδ—εθ); at the same time we find two in group GH<sup>1</sup> of the Hera mint (Pl. XI, ιρ, ισ). On the former lot the bolts consist of darts flanked by volutes at either end; on the later the one end consists of wings.

A comparatively plain thunderbolt with both ends of the same design, and varying slightly from those of group G, occurs in the field of all the reverses of group H (save εθ) and of group J (Pl. VII). In group K it appears on some dies (Pl. VII, κλ; Pl. VIII, κν, κξ, κο, κσ) and on both the known reverses of the latest group, L (Pl. VIII, λφ, λχ). The half-staters of light weight in this same group are „restitutions“ of the types of the sixth and fifth centuries B. C. But the thunderbolts on their reverses (besides their light weight) betray a late date. Pl. VIII, 34 is the one likeliest to the early types. It has two pairs of big volutes above and eagle's wings attached to the big dart below. Pl. VIII, 33 has a thunderbolt like many of those which appear in the field of the reverses of the later coins from the mint of Zeus (cf. especially Pl. VII, εσ), but with an addition in the form of a pair of wings attached to the handle. Such a form of thunderbolt<sup>1</sup>) can only

<sup>1</sup>) It should be compared with the late tetradrachm of Ptolemy Epiphanes (B. C. 205/4—180): Svoronos, *Τὰ νομίσματα τοῦ κράτους τῶν Πτολεμαίων*, vol. III (1904), Pl. XLI, 4 = Jacobsthal, *op. cit.*, Münztafel, no. 14, also with the small gold piece of Locri Brutt.: Jacobsthal, *l. cit.*, no. 15,

which seems to be a perfectly genuine coin. Jacobsthal suspects its authenticity arguing that, while the reverse is Hellenistic, the obv. is in the style of about 400 B. C. This latter conception must be wrong. The coin should rather be dated ca. B. C. 280—268 or later.

occur at a late date, as Jacobsthal (*Der Blitz*, p. 27, and p. 42 footnote 1) has pointed out. The third reverse, no. 35 on our Pl. VIII, is also quite different from all others. The upper half has a heartshaped pomegranate resting upon a pair of floral petals, not wings. The volutes of the lower half support a pine-cone. The pomegranate, as symbol of fruitfulness, is associated with Hera rather than with Zeus<sup>1)</sup>. Both it and the pine-cone are, however, probably only late Hellenistic decorations added for the sake of ornament and devoid of any particular significance.

From the foregoing remarks it will be seen that the Olympian coins, extending as they do over a period of close on three and a half centuries, form the most valuable of all commentaries on the development of the thunderbolt of Zeus.

### The Olympian Standard.

The science of Metrology, always „the least satisfactory department of ancient Numismatics“<sup>2)</sup>, presents especial difficulties if the student is endeavouring to ascertain the weight-standard of some mint which issued only silver coins<sup>3)</sup>. In such a case some have tried to arrive at the standard by deriving it from one of the Oriental systems (allowing for certain modifications), some by taking an average of the weights of a certain number of pieces of the mint, others by regarding „the weight of the heaviest specimens of any series . . . . as the true index of the normal weight“<sup>4)</sup>. The first method is speculative, the second, of course, pernicious<sup>5)</sup>; the third seems to be comparatively sure provided that a considerable number of coins are available. Of course, the weight of the heaviest specimens must be taken, not only of the heaviest specimen. Sir W. Ridgeway says (p. 218): „the ancient mint-master was no more inclined than his modern representative to put into coins of gold or silver a single grain more than the legal amount“. This undoubtedly holds good of gold. With silver, of less value and struck in great quantities, an occasional coin above the legal weight might slip through. Therefore, with silver, if we take the average weight of a few of the heaviest coins of any period we may expect to arrive at something near an estimate of the legal standard. All this applies to a mint that issued silver only. Fortunately, in Olympia at one period — a period at which we know the exact ratio of gold to silver — gold was issued. The two gold pieces struck in the name of the Pisatans in B. C. 364 (when silver : gold was as 12 : 1) point to a silver stater of 12,44 g (192 grains). If the method, just mentioned, of taking the average weight of a few of the heaviest silver coins be adopted, we attain about the same result, as the following table shows. In this is tabulated: 1) the heaviest weight recorded in each group,

<sup>1)</sup> The Argive Hera of Polyclethus held a pomegranate in her right hand. Pausanias II, 17, 4.

<sup>2)</sup> Hill, *A Handbook of Greek and Roman Coins* (London 1899), p. 26.

<sup>3)</sup> Aegina is an example. We have nothing but silver to go by (the Electrum stater in Paris: Babelon, *Traité* II, 1 (1907), no. 78, Pl. III, 2 is probably an Asiatic coin, not Aeginetan), and what exactly is the Aeginetic weight?

Hill, *op. cit.*, p. 35 speaks of an earlier Aeginetic stater of ca. 13,08 g (201,8 grains) and a later one of 12,60 g (194,4 grains); Head, *Hist. Num.*<sup>2</sup>, *Introd.* p. XLV of a stater of 12,57 g (194 grains).

<sup>4)</sup> Ridgeway, *The Origin of Metallic Currency and Weight Standards* (Cambridge 1892), pp. 217 f.

<sup>5)</sup> Ridgeway, *op. cit.*, p. 218; cf. also McClean, *Num. Chron.* 1910, pp. 220 f.

both (a) above, and (b) within the norm of 12,44 g (192 grains) derived, as we saw, from the gold of group F; 2) the average weight of the heaviest coins, calculated (a) by taking the heaviest of each group on a basis of ten per cent, (b) by taking the ten heaviest coins of each group irrespective of the number of specimens extant in the group.

Group	ca. B. C.	Specimens recorded	Heaviest weight				Average weight of				
			(a) above the norm		(b) within the norm		(a) the heaviest 10%			(b) the 10 heaviest	
			g	grains	g	grains	specimens	g	grains	g	grains
Mint of the temple of Zeus:											
A	510—471	45	—	—	12,38	191,0	4	12,20	188,3	12,11	186,9
B	471—452	64	—	—	12,35	190,6	6	12,28	189,5	12,23	188,7
C	452—432	118	—	—	12,35	190,6	12	12,18	188,0	12,20	188,3
D	432—421	42	—	—	12,30	189,8	4	12,20	188,3	12,11	186,9
E	421—365	133	—	—	12,42	191,7	13	12,33	190,2	12,35	190,6
G	363—343	55	—	—	12,44	192,0	5	12,38	191,0	12,33	190,2
H	343—323	22	—	—	12,31	190,0	2	12,31	190,0	12,15	187,6
J	323—271	21	—	—	12,20	188,3	2	12,16	187,6	12,08	186,4
K	271—191	23	12,70	196,0	—	—	2	12,50	192,9	12,18	188,0
					12,30	189,8	2 <sup>1)</sup>	12,23	188,8	12,11	186,9
Mint of the temple of Hera:											
E <sup>1</sup>	421—385	154	12,51	193,0	—	—	15	12,26	189,2	12,31	189,9
					12,35	190,6	15 <sup>2)</sup>	12,21	188,5	12,24	188,9
E <sup>2</sup>	385—365	44	12,70	196,0	—	—	4	12,44	192,0	12,32	190,1
					12,41	191,5	4 <sup>1)</sup>	12,33	190,3	12,27	189,3
GH <sup>1</sup>	363—323	151	12,57	194,0	—	—	15	12,31	190,0	12,34	190,5
					12,38	191,0	15 <sup>1)</sup>	12,29	189,7	12,31	190,0

The fact that we find the highest average weights in groups E and G of the mint of Zeus is doubtless explained by the circumstances that, on the one hand, far fewer coins in fine preservation of groups A to D have survived, while, on the other hand, of groups H to K, which extend over a century and a half, comparatively few coins are extant at all. Among the parallel issues from the mint of Hera (E<sup>1</sup>, E<sup>2</sup>, GH<sup>1</sup>), which agree perfectly in their average weights with the averages in the corresponding groups E and G, there are several pieces (nos. 263, a and 284, b in group E<sup>1</sup>; 301, e in E<sup>2</sup>; 329, d in GH<sup>1</sup>) conspicuous for excessive weight<sup>3)</sup>. Presumably this irregularity must be due to the somewhat hasty methods of work in vogue at this mint (cf. above under Series XXVI, and Series XXIX).

The silver thus confirms the gold in fixing the standard at 12,44 g (192 grains). It is, therefore, the Olympian standard, and not the Aeginetan as has been generally supposed, upon which the Elean coins were struck. As the table above clearly

<sup>1)</sup> Exclusive of the one specimen above the norm, cited in the fourth and fifth columns.

<sup>2)</sup> Exclusive of two specimens above the norm, nos. 263, a (12,51 g = 193,0 grains) and 284, b (12,50 g = 192,9 grains).

<sup>3)</sup> The single apparent instance in group K of a coin above weight (no. 234, b) should perhaps be discounted, as its recorded weight may be due either to a misprint, or to an oversight in the weighing.

demonstrates, this standard remains unaltered up to the year 191 B. C. Its reduction after B. C. 191 has already been discussed under Group L.

Whatever the Aeginetan standard really was — 12,70 g (196 grains)<sup>1)</sup> or 12,60 g (194,4 grains)<sup>2)</sup> — the Olympian standard was rather lighter and presumably derived from it. The Olympian moneyers seem to have taken the Aeginetan standard and made a reduction of about 2 per cent for the cost of working and also as a protective measure, since „by keeping the intrinsic worth of a coin a little below its nominal value, the authorities made it more profitable to retain it as a coin than to put it into the crucible“<sup>3)</sup>. Presumably, therefore, in Olympia the staters were forced to circulate as equivalent to Aeginetans; and, since the Aeginetan standard stood in a direct relationship to the Euboic-Attic-Corinthian standard<sup>4)</sup>, the priestly moneyers, by enforcing the use of their own coin in Olympia, could make a considerable profit on the exchange of Elean staters against the money of most of the cities of Hellas.

### A hoard containing coins of Olympia.

The last portion of this monograph was in the press when information, which cannot be ignored, came to me concerning a hoard of 133 coins discovered in Greece in 1920. They were found at Boeotian Orchomenos, whence they passed into the possession of a dealer in Livadia near by; and from him their present owner obtained them. I am exceedingly grateful to M. Vlasto of Marseilles for collecting the information personally while in Greece, and to Dr. A. Petsalis of Athens, the fortunate possessor of the hoard, for allowing M. Vlasto to take impressions of the principal pieces.

The ten Olympian coins in the find, eight staters and two fractions, are all of the Hera mint, which in the fourth century was far more active than the mint of Zeus. They were in company with fifteen Sicyonian obols, as well as fractional currency of various Boeotian cities and of Phocis; all the coins being based on standards approximating to the Aeginetic. Two staters (one worn, one in good preservation) belong to group E<sup>1</sup> (ca. B. C. 421—385); one stater<sup>5)</sup> and one hemidrachm (both in good preservation) to group E<sup>2</sup> (ca. B. C. 385—365); five staters (two very fine, three about as fresh as when struck) and one obol (very fine) belong to the last group GH<sup>1</sup> (ca. B. C. 363—323). Thus the state of preservation of the Elean coins in this hoard is in conformity with the chronology established by die-sequence in the Hera mint.

Among the coins of the remaining cities only the obols of Sicyon are à fleur de coin. These last may therefore be regarded as exactly contemporary with the

<sup>1)</sup> Ridgeway, *op. cit.*, p. 217.

<sup>2)</sup> Hill, *A Handbook of Greek and Roman coins*, p. 35.

<sup>3)</sup> Hill, *op. cit.*, p. 31 quoting C. F. Lehmann in *Hermes XXVII* (1892), p. 535, footnote 2.

<sup>4)</sup> Two Corinthian drachms probably passed for

ordinary trade purposes as equivalent to one Aeginetan.

<sup>5)</sup> This is the second specimen now known from the dies of the beautiful coin signed ΠΟ in the Berlin Collection cf. above no. 290, Pl. X, EP 37.

three latest uncirculated Olympian staters in the find. Now, another hoard, discovered at Kyparissia only a few months before this Orchomenos hoard, has been published recently by Mr. E. T. Newell<sup>1)</sup>; and by a fortunate coincidence both finds contained contemporary Sicyonian silver coins. From the evidence of early Alexander tetradrachms in the Kyparissia hoard Mr. Newell has proved that it was buried about B. C. 325, thus providing a confirmation of the late Dr. Head's dating<sup>2)</sup> of the triobols and obols of Sicyon, which he believed were not issued after B. C. 323. From the evidence of the uncirculated Sicyonian obols, supported by the evidence of the Kyparissia hoard, we may therefore conclude that the Orchomenos find was buried about, or shortly before, B. C. 323, which is the approximate date already assigned to the three latest and best preserved Olympian staters in the hoard:

OLYMPIA, Hera mint staters	Preservation	Specimens	Date previously assigned	
Group E <sup>1</sup> { no. 251: EC ηη no. 280: EL ϑα <sup>3)</sup>	worn	1	}	ca. B. C. 421—385
	good	1		
Group E <sup>2</sup> , no. 290: EP ϑη	good	1		ca. B. C. 385
Group GH <sup>1</sup> { no. 324: EZ τη no. 327: FB τη no. 356: FJ ζθ no. 357: FJ ζι no. 361: FK ζζ	very fine	1	}	ca. B. C. 363—323
	very fine	1		
	about fl. d. c.	1		
	about fl. d. c.	1		
	about fl. d. c.	1		
Hera mint fractions				
Group E <sup>2</sup> , Pl. XII, 9: hemidrachm	good	1		ca. B. C. 385—365
Group GH <sup>1</sup> , Pl. XII, 14: obol	very fine	1		ca. B. C. 363—323
PHOCIS <sup>4)</sup>			Head's dates	Babelon's dates
Traité, Pl. CCV, 2: obol	not stated	?	ca. 421—371	ca. 480—421
BOEOTIA, Thebes				
Traité, Pl. CXCIX, 15: hemidrachm	"	?	}	ca. 446—426
Traité, Pl. CXCIX, 16: obol	"	?		
Orchomenos				
Traité, Pl. CCIII, 18: hemidrachm	"	?	}	ca. 387—374
Pl. CCIII, 19—22: $\frac{1}{2}$ -, $\frac{1}{4}$ -, $\frac{3}{4}$ -obol	"	?		
Plataea	"	?		
Traité, Pl. CCIII, 29: hemidrachm	"	?	ca. 387—374	ca. 387—374
Uncertain obol (Coroneia?)	"			
Boeotian shield, rev. head of Athena	"	1	—	—
SICYONIA, Sicyon				Newell's date <sup>5)</sup>
Traité, Pl. CCXXII, 1—6: obol	fl. d. c.	15	before 323	ca. 325

Conceivably the owner of the money was present at an Olympic festival<sup>6)</sup>, where he accumulated worn coins of about 400 B. C. and new coins of the current year. On his way back to Orchomenos he acquired small change, fresh from the

<sup>1)</sup> Numismatic Notes and Monographs (published by the American Numismatic Society) 3 (New York 1921), pp. 4 ff.

<sup>2)</sup> Hist. Num.<sup>2</sup>, pp. 409 f.

<sup>3)</sup> An impression of the obverse of this Hera mint stater was unfortunately not available, but the reverse, being ϑα, is probably paired with either

EL (no. 280) or EM (no. 282).

<sup>4)</sup> The references to „Traité“ are those supplied by M. Vlasto who examined the hoard.

<sup>5)</sup> A date proved by the triobols of the same issue in the Kyparissia hoard buried about B. C. 325. Newell, l. cit., pp. 14 and 18.

<sup>6)</sup> Perhaps the 114th Olympiad (B. C. 324).

mint, at Sicyon, and buried them<sup>1)</sup> together with his native Boeotian currency and some small Phocian pieces. The coins of these two last districts are tabulated above, and the dates assigned to them by Dr. Head and M. Babelon are added in the two last columns. The former<sup>2)</sup> has perhaps formed a more accurate estimate of the period to which these coins should be assigned.

In this hoard the Theban and Phocian pieces seem about contemporary with the Olympians of group E<sup>1</sup>; the Orchomenian and Plataean coins with those of group E<sup>2</sup>; and the Sicyonian obols with the latest staters of group GH<sup>1</sup>. The importance of the find lies in the fact that it seems to be the first available record of a hoard containing Elean staters accompanied by other coins which serve as an aid to fixing the date of any Olympian issues; and it is not without interest to find that the chronology, based on die-sequence, should, at this eleventh hour, receive confirmation.

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<sup>1)</sup> The burial might have been occasioned by the advance of Antipater through Boeotia against Athens in 322 B. C.; cf. Grote, *History of Greece*<sup>2</sup>, vol. XII (1870), p. 144.

<sup>2)</sup> Dr. Head's dates for the issues of Phocis, Orchomenos, Plataea and Thebes are taken from *B. M. C. Central Greece*, pp. 18. 54. 58. 70; M. Babelon's dates from his „*Traité*“.

## ADDENDA ET CORRIGENDA.

### I. ADDENDA.

- p. 54, footnote 3: compare also a bronze coin of Chalcis, B. M. C. Central Greece, p. 116, 105, Pl. XXI, 7.
- p. 64, after no. 202 add no. 202<sup>bis</sup>:  
(CP<sup>bis</sup>) Obv. Head of Zeus r., bearded, hair wavy and short, wreath of small laurel around head.  
(ετ<sup>bis</sup>) Rev. 

F	A
H	P

 Similar, but five rows of feathers; serpent bearded. In field l. below F small thunderbolt, both ends flame-darts, beside it to l. a laurel-leaf upwards. Shallow circular incuse.  
a. Colonel Cockerell, London: 12,32 g (190,2 grains).
- p. 76, after no. 246 add no. 246<sup>bis</sup>:  
(EA<sup>bis</sup>) Obv. Similar to nos. 247—250 (EB).  
(γα) Rev. Same die as no. 242.  
a. Cat. Hirsch XXXIV (1914), Pl. XIV, 446: 11,81 g (182,3 grains).
- p. 82, after no. 284 add no. 284<sup>bis</sup>:  
(EN) Obv. Same die as nos. 285—287.  
(ϑγ<sup>bis</sup>) Rev. Similar to no. 284 (ϑγ), but wreath with six (?) pairs of leaves on each twig. Shallow circular incuse.  
a. Cat. Ratto (Genoa), Nov. 1908, Pl. II, 441: 11,95 g (184,4 grains).

### II. CORRIGENDA.

- p. 4, table of dates: after G for 364—343 read 363—343.  
after GH<sup>1</sup> for 364—323 read 363—323.  
after E<sup>2</sup> for 17 read 15 in last column.
- p. 5, table of countermarks: after „Bunch of grapes (Corone)“ add 25S, a.  
after „E (Epidaurus)“ add 242, f.  
omit „Star with six rays 148, h.“  
substitute „Head of trident 243, e.“
- p. 6, table of countermark dies: after „Bunch of grapes (Corone)“ for 1 (4) read 1 (5).  
after „E (Epidaurus)“ for 1 (1) read 1 (2).  
omit „Star with six rays 1 (1)“.  
substitute „Head of trident 1 (1)“.
- p. 11, no. 31, a: for „10,38 g (160,2 grains)“ read „11,39 g (175,8 grains)“.
- p. 23, no. 79, a: for „10,90 g (168,2 grains)“ read „11,90 g (183,6 grains)“.
- p. 39: delete no. 129 and its description — cf. Preface p. VII.
- p. 41, no. 140, Rev.: before „Incuse circle.“ insert „Circle of dots as before.“
- p. 42: delete line 9 to line 15 inclusive — cf. Preface p. VII.
- p. 57, line 20: for „beaten of“ read „beaten off“.

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The Temple Coins of Olympia.  
Group A.



The Temple Coins of Olympia.  
Group B.

S. IX:



AO



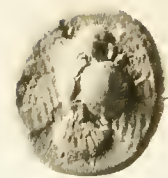
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AP



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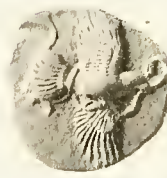


AR



βδ

S. X:



AS



βε



βε



βη



βη



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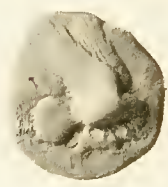
βη



βη



βη



AT



βθ



βθ



βθ



βθ



AU



βι



βι



βι



AV



βι



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βι



βκ



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AX



βι



AY



βι

S. XI:



AZ



βι



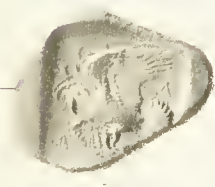
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S. XII:



BE



βι



βι



βκ

The Temple Coins of Olympia. Group C.



The Temple Coins of Olympia  
Group C (end). — Group D.



The Temple Coins of Olympia.  
Group E. — Group F.

S. XII:



CA

CB



CA

CA

CA

CA



CA

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CA

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CA

S. XXI:



CA

CA

CA

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CA



CA

CA

CA

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CA

CA



CA

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CA

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CA

The Temple Coins of Olympia.

Group G

Group H.  
S.  
XXII:



CP

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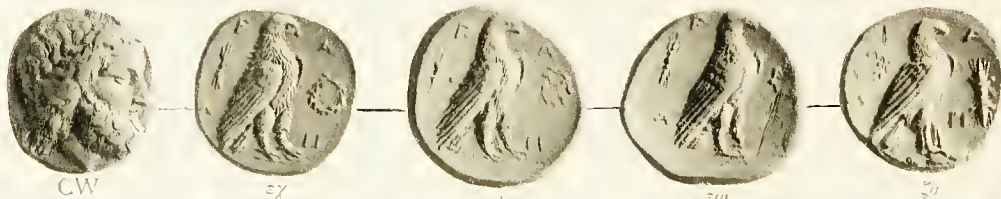
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Group K.  
S.  
XXIV:



DA

DA

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The Temple Coins of Olympia.

Group H — Group J. — Group K.



The Temple Coins of Olympia.  
Group K (end). — Group L. — Fractions, etc.

S. XXVII:



EA

ηα

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S. XXVII:



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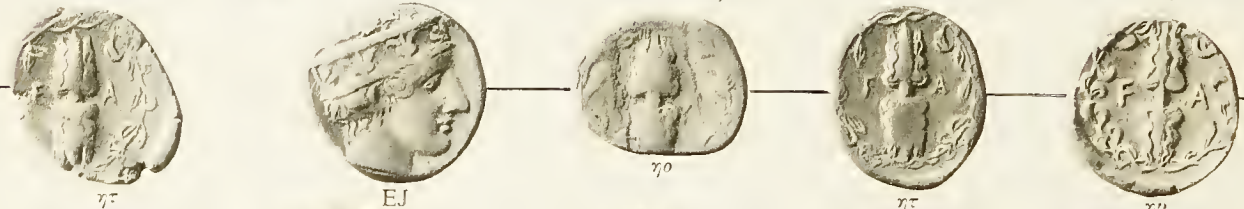
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The Temple Coins of Olympia.  
Group E<sup>1</sup>.



Group E<sup>2</sup>.  
S. XXI<sup>III</sup>:



Group  
GH<sup>1</sup>.  
S. XXXV:



The Temple Coins of Olympia.  
Group E<sup>1</sup> (end). — Group E<sup>2</sup>. — Group GH<sup>1</sup>.



EX



ϛφ



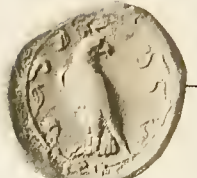
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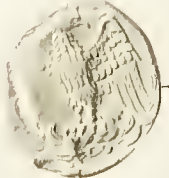
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S. J.J.V.

The Temple Coins of Olympia.  
Group GH<sup>1</sup> (continuation).



The Temple Coins of Olympia.  
Group GH<sup>1</sup> (end). — Ancient forgeries. — Fractions.

CJ

435

S46+