

Brett, Agnes (Baldwin)  
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ELECTRUM COINAGE OF LAMPSAKOS

BY  
AGNES BALDWIN



THE AMERICAN NUMISMATIC SOCIETY  
BROADWAY AT 156TH STREET  
NEW YORK  
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## THE ELECTRUM COINAGE OF LAMPSAKOS

The total output of electrum coins from the mint of Lampsakos was insignificant in comparison with the prolific issues of Kyzikos, Phokaia and Mytilenai. The coinage appears to have been limited to the stater denomination, judging from the fact that no subdivisions of the stater have come down to us,<sup>1</sup> and that no mention of any other denomination occurs in literary references or inscriptions. Lampsakos differs in this respect from most of the other electrum-issuing cities of Asia Minor which, in the earliest period, issued halves and thirds of staters, as well as sixths and smaller fractions, and, at a later period, from the middle of the Sixth Century B. C. onwards, struck hektai, or sixths, in great numbers and also, though less frequently, various smaller denominations.<sup>2</sup> From the great rarity of the staters extant, and the entire lack

<sup>1</sup> The hekte with the forepart of a winged horse to the left (B. M. C. Ionia, pl. I. 10; Babelon, *Traité* II<sup>1</sup>, pl. II. 26) does not belong to Lampsakos, as is indicated both by its style and weight standard, taken in conjunction, and by the incuse. Babelon has suggested Lampsakos as the possible place of mintage of the electrum hemi-hektai with the owl type (*Traité* II<sup>1</sup>, p. 186, note 2, and pp. 137 ff. nos. 208-210, pl. V. 23), which, he thinks, may have been struck there by the descendants of Hippias, tyrant of Athens, whose family was allied by a marriage tie with that of Hippoklos, tyrant of Lampsakos. In spite of the Athenian type, and the fact that three of the six known specimens were found in Attika, Babelon inclines to seek an Asiatic origin for these coins, chiefly on account of their Phokaic weight. But the weights of these coins, which are Phokaic hemi-hektai of ca. 1.36 grams, giving a stater of ca. 16.32 gr., do not conform to the standard used for electrum at Lampsakos (i. e. coins of the regular issues, Pl. I) which was a lighter one, called by Babelon, "Phokaic reduced," with a stater of 15.36 gr. maximum.

<sup>2</sup> The ancient Ionian and Lydian electrum coinages of the Seventh and Sixth Centuries B. C. include, besides staters, also halves, thirds, hektai and smaller divisions down to one ninety-sixth of a stater. Kyzikos issued in the earliest period, ca. 600-550 B. C., staters, sixths, twelfths, twenty-fourths and forty-eighths, but the two latter divisions are rare, though the twelfth is common. During the long period of the abundant issues of staters ca. 550-330 B. C., the hekte was the principal divisional coin (see the table in H. von Fritze's *Die Elektronprägung von Kyzikos*, *Nomisma* VII. p. 34). It is remarkable to note that the hekte was less commonly struck during the periods 475-410 B. C. and 410-330 B. C. than in the two preceding periods. The explanation of this more restricted output of hektai may be that Kyzikos entered into a mutual undertaking with Phokaia and Mytilenai whereby the latter mints were to supply hektai, mainly, and Kyzikos, the large quantity of staters, needed for the commerce of Asia Minor. Staters of Phokaia, nevertheless, though known to us by only one extant type, dated ca. 600 B. C. (Babelon, *Traité* II<sup>1</sup>, pl. IV.



of a divisional coinage, the electrum issues of Lampsakos, like those of Chios, with which the former correspond in period, or rather periods, must have been of an occasional and restricted nature, whereas the coinages of Kyzikos, Phokaia and Mytilenai formed a sort of international currency. The pure gold staters of Lampsakos of the Fourth Century are reckoned as rare among Greek coins, but in view of the forty different obverse types,<sup>1</sup> and one hundred and thirty odd specimens which have survived, this coinage would appear to have been relatively common when contrasted with the fourteen varieties and forty or so examples of the electrum coins extant.

It is this scarcity of the coins coupled with their infrequent and scattered publication which has doubtless led to the wide divergence on the part of numismatic authorities regarding the exact date of the staters. Percy Gardner considered that the coins were all of a single period which he designated as the latter half of the Fifth Century B. C.<sup>2</sup> Babelon has placed all of the staters in the last quarter of the Sixth Century.<sup>3</sup> Head's view, with which Wroth concurred, is that the coins were issued during the period "Circ. B. C. 500-450, and later."<sup>4</sup> All of these writers have assumed that the coins belong to one period only, i. e. were either of a single issue, as Gardner expressly states, or formed a continuous series extending over a number of years. This view seems to me erroneous, and partly responsible for the great discrepancy between the dates assigned by the above-mentioned writers. The dating of Head and Wroth, which is rather elastic, in a way reconciles the two widely divergent dates, last quarter of the Sixth and latter half of the Fifth Centuries. In my opinion, it covers the whole period of the emission of electrum at Lampsakos, and is only misleading if under-

3, 5) can have been by no means uncommon, for they are mentioned in Attic inscriptions of the early Fourth Century (I. G. ii. 652, l. 42, *Φωκαϊκῶ στατῆρε*; II, also nos. 649, 660) and in literary sources, Demosth. XL. 36 (*τριακοσίους στατῆρας Φωκαίς*) and Thuk. IV. 52 (*δισχιλίους στατῆρας Φωκαίτας*). At Mytilenai, also, staters were issued, but are known to us by a single specimen, only, of the period 440-400 B. C. (B. M. C. Troas, etc., pl. XXXII. 1. Num. Chron., 1890, pl. XIX. 16, *Traité II*<sup>2</sup>, pl. CLIX. 1). Of Chios, whose electrum coinage, aside from the Fifth-Century issue represented by the unique example in the Berlin Museum (Rev. Num., 1864, pl. I. 4, *Traité II*<sup>1</sup>, pl. VIII. 9), is not later than ca. 500 B. C., only staters are known. The twelfth in the Paris cabinet (*Traité II*<sup>1</sup>, pl. VIII. 7), with the supposed type of Sphinx seated to right, in front of which is  $\times$ , has been "read upside down," for the type is in reality a griffin seated to the left, in front of which is  $\times$  or  $+$ , as on the twenty-fourth in the B. M. Cat. Ionia, pl. I. 15.

<sup>1</sup> Baldwin, An Unedited Gold Stater of Lampsakos, *Zeit. für Num.*, 1914, pp. 1-14.

<sup>2</sup> The Gold Coinage of Asia before Alexander the Great, *Proceedings of the British Academy*, vol. III. 1908, p. 20, and *Coinage of the Athenian Empire*, *Jour. Hell. Studies*, 1913, p. 155.

<sup>3</sup> *Traité II*<sup>1</sup>, pp. 184-186.

<sup>4</sup> *Hist. Num.*<sup>2</sup>, p. 529. Wroth, B. M. C. Mysia, p. xx, and p. 79.



stood as embracing half a century or more during which electrum was minted in an unbroken series.

As a matter of fact, there were two separate and distinct issues of electrum at Lampsakos between which a considerable number of years must have elapsed. For the earlier issue, Babelon's date "vers 513" accords well with the style of the most primitive staters of the first issue, while for the staters of more developed style belonging to the second issue, Gardner's date, ca. 434 B. C. is approximately correct, and it is, furthermore, precisely the one originally suggested by Head when he first published the staters of this type.<sup>1</sup>

The first issue (nos. 1-13, pl. I. 1-11, and figs. 1-2) includes coins of decidedly archaic style, which, as I hope to demonstrate, cannot be much later than 500 B. C., while the earliest of them may go back to 525 B. C. These coins hitherto have been imperfectly described, and are of extreme rarity. The type is always, on the obverse, a forepart of a winged horse to the left, enclosed in a vine wreath,<sup>2</sup> and, on the reverse, a square incuse quartered. These earlier coins of which some thirteen examples are known to me, form a continuous series in which may be traced a gradual development of style. The vine wreath is often sketchily introduced, and, at times, merely traces of it are discernible, portions of the branch from which hang bunches of grapes above, before and below the horse, which in some instances have been mistaken for obscure symbols.<sup>3</sup>

The second issue (Pl. I. 12a-12k) comprises coins of similar type, but of considerably more advanced style. The vine wreath is well elaborated, showing branch and tendrils, leaves and bunches of grapes. Below the half-horse is the letter  $\Xi$ . All of the known specimens emanate from a single pair of dies. This uniformity of type and the comparative commonness of the coin (there were in all about twenty specimens in the hoard when seen by Head, Num. Chron. *loc. cit.*), has made this  $\Xi$  stater a thoroughly familiar coin.

<sup>1</sup> On a Recent Find of Staters of Cyzikos, etc., Num. Chron., 1876, pp. 277 ff., and Additional Notes, etc., *op. cit.* 1877, pp. 169 ff. These are the staters of our Period II which have the letter  $\Xi$  beneath the horse, and are apparently the only staters that Gardner took into account when proposing his date. Head (II. N<sup>2</sup>, p. 529) does not distinguish between two separate issues, nor does he make any specific reference to the staters of this find. His description of the whole class of staters which he would definitely attribute to Lampsakos, ca. 500-450 B. C. and later, is "Forepart of winged horse; sometimes in vine-wreath. Quadripartite incuse square. . . . [Babelon, *Traité*, pl. VIII. 1-4.] El. Stater, 237 grains."

<sup>2</sup> An exception to this description is no. 1, Pl. I. 1, on which the vine is lacking.

<sup>3</sup> B. M. C. Mysia, p. 79, no. 7 "symbol obscure" = Pl. I. 2. Cat. Philipsen, no. 1785, pl. XXI "oben Lyra, unten undeutliches Zeichen" = no. 2, fig. 1. Regling. Samm. Warren, p. 240, no. 1590, pl. XXXVI, "oben und unten ein undeutliches Zeichen" = Pl. I. 9.



The coins of the first period, on the other hand, are so rare as to be but little known. Brandis (Münz-Mass-u. Gewichtswesen (1866) p. 389) was the first writer to mention an electrum stater of Lampsakos.<sup>1</sup> In 1867, the Dupré catalogue described another specimen. The former piece was the de Luynes coin (Pl. I. 10) which was also noted by Head (Num. Chron. 1876, p. 287), who raised the question as to whether it might not be identical with the staters of the  $\Xi$  type which he was then for the first time publishing. Six, in a letter to Head (*op. cit.* 1877, pp. 169ff.), replied that the de Luynes coin differed from the  $\Xi$  type and that he knew of but three examples of this earlier type, (1) the de Luynes coin, (2) the Dupré specimen just noted, and (3) a coin in his own collection weighing 15.19 gr. In 1882 the Bompais catalogue (nos. 1389 and 1390) contained descriptions of two staters of Lampsakos which have never before been illustrated. They were formerly in the de Hirsch collection and are now in the Brussels cabinet (Pl. I. 3, 4). The Whittall catalogue in 1884 described another stater which was acquired by the British Museum (B. M. C. Mysia, no. 6, pl. XVIII. 7 = Pl. I. 1). This coin was described and figured by Head (Num. Chron. 1887, pl. XI. 89), the first publication in which one of these rare coins was illustrated. A second stater of different style, also in the British Museum, was at the same time figured by Head (*op. cit.* pl. XI. 90 = Pl. I. 11). The B. M. C. Mysia (1892) illustrated the Whittall coin, but not this other specimen (Sava)<sup>2</sup>. A third example in the London cabinet (B. M. C. no. 7) is here published for the first time (Pl. I. 2). In 1895, a single specimen turned up in the Ashburnham catalogue (no. 149, pl. IV) which is now in the Yakountchikoff collection (Pl. I. 8). The Inv. Waddington (1897, no. 855) contained the coin, formerly Dupré, which was known to Six (Pl. I. 7). In 1906, Regling published the Greenwell-Warren specimen, now in Boston (Samm. Warren, no. 1590, pl. XXXVI = Pl. I. 9), and in 1907, Babelon published the de Luynes coin which, as we have seen, was the first example to become known, and also the Waddington coin (Traité II<sup>1</sup>, nos. 323, 325, pl. VIII. 1, 2 = Pl. I. 7, 10).

Finally, in 1909, the Philipsen catalogue contained a highly interesting stater (no. 1785, pl. XXI = no. 2, Fig. 1) which has just now reap-

<sup>1</sup> The electrum staters mentioned by Sestini (Stateri Antichi (1817) p. 62, no. 1, p. 62, no. 2, pl. VI. 1) in the Vienna and Munich cabinets are staters bearing the half-horse of Lampsakos, but of Milesian weight (B. M. C. Mysia p. 78, 1 and note and pp. XX, XXI), and will not be discussed in this paper until the coins of Periods I and II have been considered.

<sup>2</sup> The "Sava" coin which is no. 9 in the B. M. Cat. is there incorrectly classed as another example of the  $\Xi$  type.



peared in a sale catalogue (Cat. Prowe, no. 588, pl. XIII. Egger XLVI, Vienna, May, 1914). Six's coin is the only one noted in the earlier literature accessible to me which I have been unable to trace. Besides the above-mentioned ten staters (i. e. omitting the Six coin), the present catalogue contains a stater recently acquired by M. R. Jameson (Pl. I. 5), a similar coin (Pl. I. 6) formerly in the collection of M. G. Burel (Cat. Burel, no. 265, pl. V. Feuarent, Paris, June, 1913), and a stater in the collection of Sir Hermann Weber (no. 10, fig. 2). Of the thirteen coins illustrated on Pl. I. 1-11 and in figs. 1 and 2 of the text, nos. 3-6 (Pl. I. 2-5), and no. 10, fig. 2, have never before been illustrated. Nos. 3-6 are of unusual interest because they bear Greek letters on the design of the obverse type, or in a square of the reverse, or both, which are probably the initials of monetary magistrates, like the letter  $\Xi$  on the coins of Period II. If the date which is here assigned to the coins of Period I be correct, the appearance of magistrate's marks on a part of the type, or on the coin at all, at such an early epoch, would constitute a notable exception to the rule in Greek numismatics. The following is a description of the electrum staters of the regular issues of Lampsakos.

## PERIOD I.

End of the Sixth and Beginning of the Fifth Centuries B. C.

### GROUP I.

Reverse, with incuse square divided into four equally sunk compartments.

A. Obverse, with a pointed amphora above the half-horse; type not enclosed in a vine wreath.

1. Forepart of a winged horse l., round wings, feathered, l. raised, r. lowered; l. wing in three sections, the one joining the body granulated, the middle one narrow and barely differentiated from the last row of dots of the first section, the third section curving back convexly, towards the head; r. wing in *one* section; two rows of dots across the neck parallel to the left wing; no line at the termination of the body: above, a pointed amphora lying slantwise.

Incuse square divided by two raised lines into four square compartments, equally depressed.

EL. 19mm. 15.05 gr. London (Whittall).

Plate I. 1.

Cat. Whittall no. 780 (S. W. & H. London, 1884). Head, Num. Chron. 1887, p. 297, no. 89, pl. XI. B. M. C. Mysia, p. 79, no. 6, pl. XVIII. 7. Babelon, *Traité II*<sup>1</sup>, no. 324.



## B. Obverse, without symbol; type enclosed in vine wreath.

2. Similar; wings, rows of dots, etc., as before; enclosed in a vine wreath of which a part with a cluster of grapes above the horse, is plainly visible: no symbol.

Similar.

EL. 20mm. 15.10 gr. — (formerly Philipsen) fig. 1.

Cat. Philipsen, no. 1785, pl. XXI (Hirsch XXV, Munich, 1909). Cat. Prowe, no. 588, pl. XIII (Egger XLVI, Vienna, May, 1914).



Fig. 1.

## GROUP II.

Reverse, with incuse square consisting of alternately raised and sunk compartments.

Obverse, with type enclosed in vine wreath, and sometimes bearing magistrate's signs, in the form of initials or monograms, on the neck of the horse, or in one of the squares of the reverse, or both, (nos. 3-6); and in the form of a symbol above the horse (n. 8).

3. Similar; wings, etc., as before, middle section of l. wing well differentiated; of vine, only the bunch of grapes, above horse, is visible: on horse's neck ☉.

Incuse square divided by two raised lines into four compartments, two of which, diagonally opposed, are less deeply sunk than the other two.

EL. 21mm. 15.13 gr. London.

Plate I. 2.

B. M. C. Mysia, p. 79, no. 7. Babelon, *Traité II*<sup>1</sup>, no. 324.

4. Similar description and style; raised line at termination of horse's body; vine wreath visible above and before horse; bunch of grapes above horse, incompletely indicated ☞.

Similar; in upper right-hand compartment ☞.

EL. 20mm. 15.21 gr. Brussels (de Hirsch).

Plate I. 3.

Cat. Bompois, no. 1390 (Paris, 1882).

5. Similar description and identical style; above horse, bunch of grapes which in its form resembles a tri-lobed leaf, thus, ☞; on horse's neck ☐.

Similar, but no monogram.

EL. 20mm. 15.27 gr. Brussels (de Hirsch).

Plate I. 4.

Cat. Bompois, no. 1389 (Paris, 1882).

6. Similar description and style; vine with bunches of grapes above and before horse: on horse's neck ☐.

Similar; in lower left-hand compartment ☐.

EL. 20mm. 15.09 gr. Jameson, Paris.

Plate I. 5.



7. Similar description and style; vine wreath as before; a bit of the tendril is also visible below; at termination of body, a raised line and row of four dots: no monogram or letter.

Similar, but no monogram.

EL. 20mm. — gr. (formerly G. Burel).

Plate I. 6.

Cat. Burel, no. 265, pl. V (Feuardent, Paris, June, 1913).

8. Similar description and style; vine wreath more fully indicated; bunch of grapes visible before horse: above horse, vase (skyphos?).

Similar.

EL. 20mm. 14.99 gr. (worn). Paris (Waddington).

Plate I. 7.

Cat. Dupré, no. 263 (Paris, 1867). Babelon, Inv. Wadd, no. 855, and *Traité II*<sup>1</sup>, no. 323, pl. VIII. 1.

9. Similar description but less rude style; middle section of l. wing broader, and wider at the top than at bottom; raised line at termination of body, placed a little in from edge; bunch of grapes above horse faintly discernible; the two globules above l. wing accidental (?); horse bridled (?): no symbol.

Similar.

Plate I. 8.

EL. 20mm. 15.36 gr. Yakountchikoff, St. Petersburg (formerly Ashburnham).

Cat. Ashburnham, no. 149, pl. IV (S. W. & H., London, 1895).

10. Similar description and style; vine wreath visible above and before horse; very similar, though different, die; on this coin the "globules," albeit rather unintelligible, appear to belong to the representation of the vine.

Similar.

EL. 20mm. 15.35 gr. Sir H. Weber, London, fig. 2.



Fig. 2.

11. Similar description and style; r. wing in *two* sections; vine wreath barely visible; horse bridled (?).

Similar.

EL. 22mm. 15.05 gr. Boston (Greenwell-Warren).

Plate I. 9.

Regling, Samm. Warren, p. 240, no. 1590, pl. XXXVI.



12. Similar description, but finer, more careful style; line at termination of body (?); vine wreath visible above and below horse; bridle visible.

Similar.

EL. 20mm. 15.15 gr. Paris (de Luynes).

Plate I. 10.

Brandis, Münz- Mass- u. Gewichtswesen. p. 389. Babelon, *Traité II*<sup>1</sup>, no. 325, pl. VIII. 2.

13. Similar description and style; at termination of body, a row of four dots between two raised lines; vine wreath more fully given, before and below horse; above horse, bunch of grapes; horse is bridled.

Similar.

EL. 20mm. 15.35 gr. London (Sava).

Plate I. 11.

Head, Num. Chron. 1887, p. 297, no. 90, pl. XI. B. M. C. Mysia, p. 79, no. 9. Babelon, *Traité II*<sup>1</sup>, no. 328.<sup>1</sup>

<sup>1</sup> A stater of Per. I which, by reason of its weight, 15.19 gr., does not seem to be identical with any of the above coins, is the one formerly in the Six collection (Num. Chron. 1877, p. 171). Another stater, apparently also distinct from the  $\Xi$  type, is mentioned in the Cat. Montagu (First Series, no. 518, S. W. & H., London, March, 1896), as weighing 15.48 gr., a weight which, if correctly given, would be somewhat in excess of the norm.

## PERIOD II.

ca. 450 B. C.

1. Forepart of a winged horse l., round wings, feathered, l. raised, r. lowered; l. wing in three sections, the one joining the body granulated, the middle one of about even width, the third one curving back convexly, toward horse's head; r. wing in one section; two rows of small dots across neck, lower row disappearing under wing; two raised lines at termination of body; the whole enclosed in a vine wreath, from the branch of which depend leaves, above and before horse, bunches of grapes, right and left, and tendril, below: beneath horse, within the wreath,  $\Xi$ .

Incuse square divided by two raised lines into four compartments, two of which, diagonally opposed, are less deeply sunk than the other two.

EL. 18-20mm. 15.02-15.33 gr.

Plate II. 12a-12k.

a. 15.15 gr. Jameson, Paris.

Cat. Jameson, no. 1432, pl. LXXIII.

b. 15.31 gr. Boston (Greenwell-Warren).

Samm. Warren, no. 1592, pl. XXXVI.



- c. 15.30 gr. Paris.  
Num. Chron. 1876, pl. VIII. 31. Babelon, *Traité II*<sup>1</sup>, no. 327, pl. VIII. 4.
- d. 15.27 gr. London.  
Num. Chron. 1876, pl. VIII. 31. B. M. C. Mysia, p. 79, pl. XVIII. 8.
- e. 15.25 gr. Berlin.
- f. 15.21 gr. Brussels (du Chastel).
- g. 15.18 gr. Paris.  
Babelon, *Traité II*<sup>1</sup>, no. 326, pl. VIII. 3.
- h. 15.25 gr. Cambridge (McClean).  
ex Montagu Coll. Private Sale of Duplicates, 1894.
- i. 15.02 gr. Newell, New York (ex Philipson).  
Cat. Philipson, no. 1786, pl. XXI (Hirsch, Munich, 1909).
- j. 15.33 gr. Yakountchikoff, St. Petersburg.
- k. — gr. Munich.
- l. 15.33 gr. New York, Metropolitan Museum (Ward ex Greenwell).  
Cat. Ward, no. 610, pl. XV.
- m. — gr. The Hague. (Six).
- n. 15.25 gr. Sir H. Weber, London.
- o. 15.13 gr. — (formerly Warren).  
Samm. Warren, no. 1591, pl. XXXVI.
- p. 15.22 gr. —  
Cat. Late Collector, no. 324, pl. VII (S. W. & H., London, May, 1900).
- q. — gr. —  
Cat. Well-known Collector, no. 248, pl. II (S. W. & H., London, Dec., 1894).
- r. — gr. —  
Cat. Strozzi, no. 1582, pl. XI (Sangiorgi, Rome, April, 1907).
- s. 15.22 gr. —  
Cat. O'Hagan (ex Balmanno), no. 533, pl. IX (S. W. & H., London, May, 1908).
- t. 15.29 gr. —  
Cat. Bunbury (Sec. Port.), no. 85, pl. I (S. W. & H., London, Dec., 1896).
- u. 15.25 gr. —  
Cat. Weber, no. 2447, pl. XXXIV (Hirsch XXI, Munich, Nov., 1908).
- v. 14.96 gr. —  
Cat. Delbeke, no. 180, pl. VI (S. W. & H., London, April, 1907).
- w. 15.30 gr. —  
Cat. Gr. u. Röm. Münzen, no. 546, pl. XVII (Egger, Vienna, Nov., 1913).
- x. 15.15 gr. —  
Cat. Lambros, no. 666, pl. XI (Hirsch, Munich, Nov., 1910).
- y. — gr. —  
Cat. Duruflé, no. 506, pl. XI (ex Vente du Chastel, 1889, no. 79) (Feuardent, Paris, May, 1910).



z. — gr. —

Cat. Vicomte de Sartiges (1910), no. 343, pl. XIX.

aa.<sup>1</sup> 15.22 gr. —

Cat. Hazeldine, no. 6, pl. I (S. W. & H., London, April, 1914).

The attribution to Lampsakos of the coins of Periods I and II has never been questioned, the identification of the anepigraphic coins of this city being made, as so frequently, by means of the later coins which bear both civic device and the city name. It is on these grounds that the earlier numismatists, from Pembroke's time to that of Sestini and Mionnet, attributed to Lampsakos the gold staters of the Fourth Century which are likewise anepigraphic. Staters of Lampsakos ΧΡΥΣΟ ΣΤΑΤΗΡΕΣ ΛΑΜΦΣΑΚΕΝΟΙ. χρυσού στατήρες Λαμφακηνοί, are mentioned in the Accounts of the Athenian Epistatai of ca. 434 B. C.,<sup>2</sup> and were supposed by Mommsen (Monn. Rom. I. 10), and thereafter by Lenormant (Rev. Num. 1868, p. 423) to be the pure gold staters, at that time practically the only "gold" issues known. Head, however (Num. Chron. 1876, p. 290) identified the "gold" staters of these Public Accounts with the electrum staters, and pointed out the fact that word χρυσός was regularly employed in the Accounts for the mixed metal,<sup>3</sup> and that the staters of pure gold did not date as far back as these records. It is of course the latter coins to which reference is made in a Boiotian inscription dating 355-351 B. C., containing a list of the contributions to the cost of the Sacred War, see ll. 10, 11, Βυζάντιοι χρυσίῳ Λαμφακανῶ στ[ατεῖρας] ὀγδοεῖκοντα πέτταρας, ἀργυρίῳ Ἀτ[τικῶ] δρα[χμὰς] δεκαέξ. "Byzantion (contributed) eighty-four Lampsakene gold staters, sixteen Attic silver drachms," and ll. 20, 21, Βυζάντιοι [συνεβάλ]ονθο ἄλλως πεντακατίως στατεῖρα[ς χρυσ]ίῳ Λαμφακανῶς . . . , "Byzantion contributed further five hundred gold staters of Lampsakos."<sup>4</sup>

<sup>1</sup> The twenty-seven coins here enumerated are probably the actual specimens from the hoard described by Head (Num. Chron. 1876 and 1877) as containing twenty or more examples. Specimen h., Cambridge, would seem to be identical with q., Well-known Collector, but the records of the McClean collection give its provenance as from the Montagu sale, of same year as Cat. Well-known Collector. Specimen p., Late Collector, resembles the coin figured in the Delbeke Cat., but the weights given are different. When the present location of a given example is unknown, it is manifestly impossible, at times, to distinguish it with certainty as a different specimen.

<sup>2</sup> I. G. (= Inscriptiones Graecae) i. 301-311.

<sup>3</sup> In I. G. i. 301 (cf. Hill, Sources for Greek History (ed. 1907), p. 192, IV. 84) seventy "gold" staters of Lampsakos are mentioned in company with twenty-seven "gold" staters and one hekte of Kyzikos. The statements in *Traité I*<sup>1</sup>, p. 490, 491, and *II*<sup>2</sup> pp. 1377ff. follow the old view of Lenormant, but see note 1 to *Traité II*<sup>2</sup> p. 1379.

<sup>4</sup> Hicks and Hill, *Historical Greek Inscriptions*, p. 261, no. 135 = Dittenberger, *Sylloge*<sup>2</sup>, 120, Mus. Thebes, no. 100. I. G. vii. 2418. Compare also I. G. vii. 2425.

From these Attic and Boiotian inscriptions, which are the only ancient sources in which Lampsakene staters are mentioned,<sup>1</sup> and from the coins which have come down to us, we learn first, that electrum staters of Lampsakos were current in Athens along with Kyzikenes in the second half of the Fifth Century, second, that the gold staters of the Fourth Century circulated as an inter-state currency of considerable dimensions, a sum of five hundred of these staters being paid by Byzantion, then an ally of Thebai, towards the cost of the Sacred War. In contrast to the case of Kyzikos, whose extensive electrum coinage is frequently mentioned by ancient writers,<sup>2</sup> and whose silver tetradrachms of the type shown in B. M. C. Mysia, pl. IX. 8, 9 are actually described by Suidas, v. *Κυζικηνοὶ στατήρες*, no literary text has yet been cited which contains a reference to the staters of Lampsakos.

But, even if the inscriptional records above cited, were not in existence, the testimony of the coins themselves would be a sufficient basis for attribution. The continuity of style of the heraldic device, the forepart of a winged horse, which appears first, as an obverse type, directed towards the left, on the electrum coins, and then as a reverse type, turned at first to the left, and later to the right, on the gold series, and subsequently on the reverses of silver and bronze issues, is too striking to admit of question. On unpublished bronze coins with the head of Niké on the obverse (type of B. M. C. Mysia, pl. XIX. 14, but earlier style) which are in the Leake and McClean collections in Cambridge, the horse of the reverse might have been struck with a reverse die used for one of the gold staters with the Aktaion head, so similar is the style. It is true that several other cities, Adramyteion, Iolla and Thebe, all in Mysia, employed the forepart of a winged horse, also to the right as a civic badge, but not one of these towns is of sufficient prominence, historically, to rival the attribution to Lampsakos of these important issues in electrum and gold, nor would the style warrant it.<sup>3</sup>

The weight standard, a local one peculiar to Lampsakos, is regarded by Babelon as derived from the Phokaïc standard of which the stater with a maximum weight of ca. 16.50 gr. was reduced at Lampsakos to a stater of normal weight of ca. 15.36 gr. This "reduced Phokaïc"

<sup>1</sup> The references to Herod. VI. 37, 38, and Xenophon, Anab. vii. 8. 3-6, given by Babelon, *Traité I*<sup>1</sup>, p. 491, note 1, concern Lampsakos, but not Lampsakene staters.

<sup>2</sup> *Traité I*<sup>1</sup>, pp. 487ff. and the references there given to Eupolis, Xenophon and Lysias. Compare also Demosthenes, c. Phormionem, 34. 23.

<sup>3</sup> Cf. *Die Antiken Münzen Mysiens*, p. 5, where v. Fritze suggests that the occurrence of an identical reverse type on the coins of these four cities of Mysia, all contemporaneous, may indicate a league.



standard is appropriate to a city in northern Asia Minor, and especially to one which was originally colonized from Phokaia.

Another reason for the attribution may be found in the symbolism of the type of the electrum staters. The half-horse, winged, which is probably a sea-horse rather than a Pegasus,<sup>1</sup> is suitable for a seaboard town, indicating doubtless commercial prosperity, and the vine wreath around the type expresses most directly the richness in vineyards for which Lampsakos was especially famed.<sup>2</sup>



Fig. 3.

In addition to all of the above evidence, there exists a proxeny decree of Epidauros belonging to the Fourth Century<sup>3</sup> in which a certain Theognetos (or Theopphantos) of Lampsakos is mentioned, and at the head of the inscription is carved the winged half-horse (Fig. 3), the "arms" of the town whose citizen was honored by the decree. Similar honorific inscriptions headed by the parasêmata of the towns to which the persons concerned in the decree, belonged, are by no means uncommon.<sup>4</sup> With this final reinforcement of our evidence, the attribution has now become critically unassailable.

<sup>1</sup> There is no decisive reason for this conclusion, for I cannot agree with Regling that the prominent forelock is the distinctive mark of the sea-horse (Samm. Warren, p. 158, no. 1001, note, apropos of the Herakles and snakes type in the gold-stater series). Besides, with the exception of the two earliest coins of the gold series, this accentuated forelock is not elsewhere found. Sestini called the horse "equus marinus alatus," just as he called the half winged boar "aper marinus alatus," but in both cases he misunderstood the far wing for a tail. Whatever the original significance may have been, the type seems to have been finally interpreted as a sea-horse on coins of the Imperial age (Æ of Commodus, Julia Domna, and Geta, Cambridge). This is doubtless due to the progressive degeneration in the portrayal of the far wing, which, instead of being represented as beyond the body, is carelessly joined on to the termination until it resembles generally, the tail of a fish. The next step of elongating the body and adding fishes' scales, produces the full-fledged "hippocamp" of the Imperial coins cited.

<sup>2</sup> Strabo, XIII. 12. Diodorus, XI. 57. Thuk. I. 138. Plutarch, Them. 29.

<sup>3</sup> Perdrizet, Bull. Corr. Hell. XX (1896), p. 553. Cavvadias, Fouilles d'Epidaure I, p. 111, no. 274.

<sup>4</sup> Jour. Hell. Stud. 1904, p. 38. Ath. Mitt. XVIII, p. 357. Macdonald, Coin Types, pp. 60-72.

In the evolution of the reverse type of the electrum coinage, the incuse with equally sunk squares (Per. I, nos. 1 and 2) was modified to one with alternately raised and depressed squares (Per. I, 3-13), an evolution paralleled by that of the reverses of other series (compare the coins of Abdera, *Die Antiken Münzen von Nord-Griechenland*, II, I<sup>1</sup>, Thrakien, p. 20, and of Kyzikos, *Nomisma VII*, p. 2, et passim). On the coins of Per. II the incuse shows greater regularity than in the former Period, the cross-lines appearing more distinctly, and more regular, and the sunk squares being more deeply depressed, a tendency which has already become manifest towards the end of Period I.

Despite the general air of relationship between the coins of Periods I and II there is nothing genuinely archaic in the style of the  $\Xi$  staters. The rounded-end wing of the horse curving back towards the head,<sup>1</sup> is an intentionally preserved archaic characteristic, modified somewhat in treatment on the latter coins, but still retaining, in general, the old aspect. This form of the wing persists even on the Fourth-Century gold staters though subject there also to an insensible modification during the course of half a century or longer. The horse's head on the  $\Xi$  staters is well-proportioned to the body, and the modelling of the head and neck, the fine execution of the mane are done in sufficiently free style. Only in the still bulging eye, the fierce expression of the mouth and in the structure of the legs may be noticed evidences of the strong style. If we compare these horses with those of the Parthenon frieze, it will be conceded, I think, that, barring the slight traces of archaic feeling just set down, the style is about the same, allowing of course for differences in medium.<sup>2</sup> On grounds of style alone then the  $\Xi$  staters may confidently be dated towards the middle of the Fifth Century, or later.

The analysis of the hoard in which these staters were found supports the view of their date here put forward. The hoard was composed chiefly of Kyzikene staters ranging in date from 475 to 410 B. C., and of about twenty of the  $\Xi$  staters which were in a better state of preservation than the bulk of the Kyzikenes, at the probable date of the deposit of the hoard ca. 410 B. C. The lower limit assignable to the Kyzikene coins represented in the find is merely approximate, and even though we are told that the Lampsakenes were better preserved than the majority of the Kyzikenes, I should not be inclined to bring

<sup>1</sup> This characteristic treatment of the wing in archaic Greek art was derived, according to M. Georges Perrot, from Phoenician models, (*Perrot et Chipiez, Histoire de l'Art*, IX, p. 10).

<sup>2</sup> The horses on the coins of Per. I should be compared for style with the fragmentary Equestrian Statues found on the Acropolis at Athens, which belong to the period ca. 520-509 B. C. (G. Dickins, *Catalogue of the Acropolis Museum*, nos. 606, 697 and 700).



the date of the Lampsakene staters close to the *terminus post quem* of the hoard on account of the considerations of style above noted, and because it would seem that these Ξ staters must be the χρυσοῦ στατήρες Λαμψακηνοί referred to in the Accounts of the Epistatai of ca. 434 B. C. These Accounts begin with the phrases παρὰ τῶν προτέρων ἐπιστατῶν and περιγεγόμενον μὲν ἐκ τοῦ προτέρου ἐνιαυτοῦ, that is to say, they were accounts rendered of funds accumulated, and we are therefore bound to allow a margin of ten years or more previous to the archonship of Krates 434/433 B. C., in which the second stone is dated, for the commencement of the issue.<sup>1</sup> Now it can scarcely be the staters of Per. I to which the Accounts refer, for, as we have said, there was a decided break between the two issues, and the staters of Per. I. do not, in my opinion, extend down very much later than 500 B. C. As the first issue of electrum was a rather limited one, these earlier staters were probably out of circulation entirely by the middle of the Fifth Century. That a considerable number of years elapsed between the coins of Per. I and those of Per. II will become convincing after a study of Plate I. The size of the horse's head in proportion to the body, the position of the fore-legs, treatment of the wing, etc., on the coins of these two groups, and, moreover, the developed character of the decorative, stylized wreath of the Ξ staters, point to a rather wide gap between the two. Even between the later coins of Per. I, nos. 9-13 (Pl. I. 8-11 and fig. 2) and the coins of Per. II (Pl. I. 12a-12k), although the horse's head is not so disproportionately large and the vine wreath gradually becomes more definite, still the break between the really archaic style of Per. I and the advanced transitional style of Per. II is most sensibly felt. In fact the affinity of style between the half-horses of the Ξ staters and those of the earliest coins in the gold stater series is greater than that existing between those of the Ξ staters and the archaic coins.

Another proof that all of the electrum coins of Lampsakos do not belong to a single period is the difference in the composition of the metal, the coins of Per. I being less pale in color and containing consequently more pure gold proportionally than the Ξ staters.<sup>2</sup> The

<sup>1</sup> Roberts and Gardner, *Introduction to Greek Epigraphy*, p. 315, no. 115. The Record of the Epistatai of the year 434-433 B. C. is the fourteenth in the financial series. We cannot, of course, know whether Lampsakene staters formed part of the balance of the previous Accounts now lost, but a decade is a fair time to allow, as a minimum, for the arrival of these staters in course of circulation in the hands of the Epistatai, or Overseers, of the Parthenon building fund.

<sup>2</sup> The staters of Periods I and II are not included in Head's tabulated statements of the specific gravity of electrum coins (*Num. Chron.* 1887, pp. 277-308). The percentage of gold indicated by the color test would be about 60 and 40 per cent. respectively, while the staters illustrated on our Pl. II. contain only about 30 per cent., as is deduced from the specific gravity of specimens weighed by Head.

latter coins, while of a less dark color than those of Per. I, are not of that very pale electrum composition which at first glance looks like silver, characteristic of the electrum coins with Lampsakene types but of Milesian weight which will be discussed below (Pl. II. 1-3f).

The  $\Xi$  type of stater has been compared by Head and Babelon with the interesting electrum stater of Chios in the Berlin collection (*Traité*, II<sup>1</sup>, no. 336, pl. VIII. 9), which is the sole representative of any electrum issues from the Chian mint later than ca. 500 B. C. (Fig. 4). The obverse



Fig. 4.

of this Chian stater bears the usual type of the Sphinx and amphora with the addition of a vine wreath enclosing the whole, from which depends above the amphora a bunch of grapes which the Sphinx touches with uplifted right fore-paw. The wreath is rather like that on the Lampsakene stater, but need not necessarily be considered as derived therefrom, for, while not a constant feature of the type at Chios as at Lampsakos (not occurring on the archaic electrum coins of the former city), it is found occasionally at Chios, to wit, on archaic silver didrachms, of which there are examples in the Jameson collection (*Rev. Num.* 1912, pl. III. 7) and in the Paris cabinet (*Traité* II<sup>1</sup>, pl. XII. 1), and again on a didrachm in the London cabinet (*B. M. C. Ionia*, pl. XXXII. 4) which was issued towards the close of the Transitional period, ca. 460-440 B. C. The electrum stater in question is not struck on the Kyzikene standard, of which the stater has a normal weight of 16.00 gr., as has so often been stated,<sup>1</sup> but, as Babelon has pointed out,<sup>2</sup> on the Lampsakene, or "reduced Phokaïc" standard, its weight being 15.34 gr. Head placed the stater at the close of the Fifth Century, and observed that it was probably contemporary with the  $\Xi$  staters.<sup>3</sup> Babelon has put the coin much earlier since he assigned the  $\Xi$  staters, after the weight and type of which the Chian coin seems to have been patterned, and indeed all of the electrum coinage of Lampsakos, to the last quarter of the Sixth Century. Von Sallet regarded the coin as belonging to the Fourth Century.<sup>4</sup>

In order to settle definitely at least the century to which the coin belongs, let us turn to the chronology of the silver coins of Chios which

<sup>1</sup> Head, II. N<sup>2</sup>, pp. 599-600, and *B. M. C. Ionia*, p. XXX.

<sup>2</sup> *Traité* II<sup>1</sup>, p. 193.

<sup>3</sup> *Num. Chron.* 1876, p. 287, note 3.

<sup>4</sup> *Kgl. Münzkabinet*, no. 82.



are extant in a long, continuous series extending from ca. 600-350 B. C. The style of the Sphinx on our electrum piece most closely resembles that of the earliest tetradrachms (B. M. C. Ionia, pl. XXXII. 2) type without magistrate's name, and the tetradrachms with the magistrate's names Theodoros, Thêron, Poseidippos (*Traité* II<sup>2</sup>, n. 1964, pl. CLIV. 20) and Leochos (Vienna collection), and contemporary early drachms, of which examples are found in the Cambridge and Vienna collections (unpublished), and also in the New York, Metropolitan Museum collection (Ward Collection, no. 680, pl. XVI), all of which were struck at some time during the period 478-412 B. C. The short locks of the Sphinx's hair, the shape of the amphora, and the plump, rounded form of the body of the Sphinx which is no longer of lean and bony structure as on the archaic and transitional coins, point this parallelism perfectly. It is impossible to place the Berlin stater as late as the Fourth Century for the wing of the Sphinx is slightly earlier in form than that of the tetradrachm series, being of the more naturalistic, feathered type found on the coins of the archaic and transitional epochs, and never again recurring once the fashion of conventionalizing the wing had set in with the commencement of the tetradrachm issues. At what date then did the latter coins begin to be struck? In the B. M. C. Ionia, the coins given to the period 478-412 B. C. are the tetradrachm issue without magistrate's name (pl. XXXII. 2) of the strong, beautiful style of the finest coins struck at Chios, after which are placed certain didrachms (pl. XXXII. 3, 4) and tetrobols (pl. XXXII. 5) which are, however, of transitional style, and obviously antedate the tetradrachm issue. These didrachms and tetrobols are but the continuation of the archaic didrachm series with only a momentary break, if any, in continuity. Following these coins in the catalogue, come the drachms and hemi-drachms on which magistrate's marks begin to appear which are noted as being of later style than the foregoing, whose precise chronological relation to the tetradrachm issue of this period and the succeeding one, we are not concerned here to determine. In this catalogue, all of the tetradrachms and drachms bearing magistrate's names are placed together, without distinction as to style, but merely grouped according to denomination, in the period 412-350 B. C. From this chronological scheme and from Head's classification in the *H. N.*<sup>2</sup> p. 600, one would conclude that the tetradrachm issue without magistrate's name was separated by half a century or more from those with the names. In Babelon's *Traité*, the didrachms and tetrobols (pl. XII. 8, 9) which we have distinguished as Transitional coins, are grouped with the

archaic didrachm series, and dated before 494 B. C., while the tetradrachm issue without magistrate's name is placed at the head of a group of issues dating, in this treatise, from 478-394 B. C. In a succeeding group are placed the coins with magistrate's names, tetradrachms and drachms, and they are included within the period 394-350 B. C. This classification widens still further the gap between the tetradrachm issue without and those with the magistrate's names.

The first correction to be made to the above chronological schemes is to place the transitional didrachms and tetrobols, which exist in a considerable variety of types, mostly unpublished, showing a gradual progress in style, in their proper place, that is, not following the unsigned tetradrachm issue but preceding it, and not grouped with the archaic didrachms, but following them. They should be given to the period 478-450 B. C. The next alteration to the schemes cited consists in bringing together the tetradrachm (and drachm) issues without names and the coins of the same denominations with names. It is manifestly an error to separate coins of such closely similar style as the tetradrachm issue without name and those bearing the names, Theodoros, Thêron, Poseidippos and Leochos. There exist also, as stated above, drachms which are undoubtedly contemporary with these earlier tetradrachm issues, notwithstanding the fact that they do not bear magistrate's names or marks. This tetradrachm and drachm (and hemidrachm) series<sup>1</sup> follows the didrachm and tetrobol series, and continues uninterruptedly until the sudden cessation of Chian issues which occurred about 350 B. C. How closely the tetradrachm and drachm series succeeded the transitional coins is the debatable point. If the identification of the coins called "Chian Fortieths" by Thukydides (VIII. 101) and mentioned as in existence ca. 411 B. C., and of the πεντεδραχμία of Xenophon (Hell. I. 6. 12), stated to be current ca. 406 B. C., with these tetradrachms be correct,<sup>2</sup> then we have conclusive ancient testimony confirming our subjective evidence derived from style to prove that the tetradrachm series began in the Fifth Century. With this literary evidence at hand, one is very naturally tempted to look to the history of Chios at this period to find an event which might reasonably have occasioned the issue of the important new denomination. But to assume that the occasion of the issue of these tetradrachms was

<sup>1</sup> The didrachms of barbarous style (Traité II<sup>2</sup>, pl. CLIV. 13) and flat obverse flan do not appear to belong to Chios at all. If they are not a barbarous imitation, they must be classed chronologically just on the borderland between the archaic and transitional series. They certainly do not follow the tetradrachm (ibid. pl. CLIV. 12).

<sup>2</sup> Babelon, Traité II<sup>2</sup>, pp. 1131 ff. Head, H. N<sup>2</sup>, p. 600.



the revolt of Chios against the Athenian Hegemony in 412 B. C., and to suppose further that Chios would not have commenced an important new issue like the tetradrachm during the Athenian Supremacy, in view of the well-known coinage-monopoly which Athens exercised at the expense of her "Allies,"<sup>1</sup> would be contrary to the dictates of style. Our chief authorities, as we have seen, have been agreed in placing the first tetradrachm issue, the one without magistrate's name, at the beginning of the period 478-412 B. C., even though it involved the rather violent separation of this one issue from the whole series of tetradrachms. These must all belong together, and follow the transitional coins. The style of the earliest tetradrachms in their grand simplicity and dignified severity would suggest the date ca. 440-420 B. C. This date would bring the earliest tetradrachms in close sequence to the electrum stater whose date it is the object of this long discussion to settle. The electrum stater shows just one trace of the transitional manner, namely, in the execution of the wing, and this detail justifies us in placing the stater in precisely that decade ca. 450-440 B. C. to which on *a priori* grounds the style and comparison of this stater and  $\Xi$  staters would incline us.

As the  $\Xi$  staters are the only coins to which Gardner directly alludes, in proposing the date 434 B. C. for all of the electrum issues of Lampsakos (*op. cit.* pp. 20, 25, 32ff.), it may fairly be inferred that he did not take cognizance of the rarer archaic staters at all.<sup>2</sup> Babelon, on the other hand, recognized the archaic character of the early staters, but he classed the  $\Xi$  staters with them. Let us examine for a moment his reasons. Contemporaneously with the early electrum coinage, there were issued at Lampsakos, archaic silver coins bearing, on the obverse, a Janiform female head, and, on the reverse, a head of Athena helmeted. On the reverses of some of these silver coins, occur symbols, letters and monograms among which the letter  $\Xi$  (Traité II<sup>1</sup>, no. 649). "La présence de la lettre  $\Xi$  sur cette drachme est importante de constater, car nous avons relevé la même lettre sur un statère d'électrum contemporain" (Traité II<sup>1</sup>, pp. 383, 384).

Before proceeding directly to the rest of the argument as developed in the Traité, let us consider the chronological order of the archaic sil-

<sup>1</sup> Chios, as we know, as well as Lesbos, and Samos until 439 B. C., occupied a more favorable position than the other "Allies," not continuously paying tribute to Athens (Thuk. VII. 57. 4), and her coinage may, therefore, not have been restricted at all.

<sup>2</sup> On p. 7 of Gold Coinage of Asia, however, a stater of Lampsakos, not of the  $\Xi$  type, is described (*op. cit.* pl. I. 7 = Pl. I. 1), and is dated among the early Ionian electrum coins of ca. 550 B. C.!

ver coins of Lampsakos. There are first, the silver coins bearing the winged half-horse (and incuse square) represented by the specimens in the B. M. C. Mysia, pl. XVIII. 4-6 and *Traité* II<sup>1</sup>, pl. XVI. 13-16. The coins with these types which can be definitely attributed to Lampsakos are the following, B. M. C. nos. 2-5, pl. XVIII. 4-6, *Traité* II<sup>1</sup>, nos. 635, 637-639, pl. XVI. 13-16, and a coin in the Paris cabinet, weighing 2.30 gr., not catalogued in the *Traité*, no. 540 of the *Inventaire*. These coins appear to be, respectively, didrachms B. M. C. 2-3, 6.81 gr., and 6.71 gr.; tetrobols, *Traité* II<sup>1</sup>, 635, 637, 2.44 gr. and 2.35 gr., and no. 540 of the *Inventaire*, 2.30 gr.; diobols, B. M. C. 4-5, pl. XVIII. 5, 6, 1.26 and 1.29 gr., and *Traité* II<sup>1</sup>, 638, 1.25 gr.; and a hemi-obol, *Traité* II.<sup>1</sup> 639, 0.35 gr., struck on the Milesian standard.<sup>1</sup>

Then there are the coins with the new head types, above noted, which may be divided into three groups according to style. To the first group belong the drachms, B. M. C. 10-14, pl. XVIII. 9; tetrobol, B. M. C. 15, pl. XVIII. 10 = *Traité*, 645; trihemiobol, *Traité*, 2527, pl. CLXX. 26; and obols, *Traité*, 2528, pl. CLXX. 27, and 646, pl. XVI. 20 = B. M. C. 21. On all of these coins, the hair of the Janiform head is rendered by dotted lines on the united heads, and by dotted strands hanging straight over the forehead. The second group is composed of drachms, *Traité*, 2526, pl. CLXX. 25 and B. M. C. 16, pl. XVIII. 11, and obols, B. M. C. 20, pl. XVIII. 12 and Cambridge (Leake) collection, without symbol. The hair, in this group, is rendered by dotted lines on the joined heads, and by wavy bands over the forehead. The third group, in which an earlier and later style may be distinguished, shows a similar treatment of the hair, but is marked off from the preceding groups by the appearance of symbols on the reverse, and the olive wreath around the helmet, and olive spray in the reverse field. On drachms there occur the symbols, a kerykeion, B. M. C. 17 = *Traité*, 643, an eye, Cat. Benson, 652, pl. XXII, an amphora, *Traité*, 642, and the letter  $\Xi$ , *Traité*,

<sup>1</sup> *Traité* II<sup>1</sup>, p. 378. Gardner, *Coinage of the Ionian Revolt*, J. H. S. 1911, p. 157. The coin no. 633 of the *Traité*, pl. XVI. 12, wt. 2.16 gr. seems scarcely to belong to this system. The style and size of the obverse type as compared with the tetrobols and diobols are against its attribution to Lampsakos, which is noted in the *Traité* as uncertain. The coin no. 510, pl. XII. in the Cat. Duruflé (Monn. gr. ant., Feuardent, May, 1910), and certain small coins, obols (?), in the McClean collection in Cambridge, weighing 0.648 and 0.67 gr., are doubtless rude imitations made in the Phokaic colonies in Gaul, probably at Massalia, since they are similar in style and fabric to the coins of the Trésor d'Auriol, *Traité* II<sup>1</sup>, pl. LXXXI. nos. 11-24. Probably also the silver coins bearing the winged half-horse r., beneath which is an ear of wheat (Six, Num. Chron. 1894, pl. XIII. 8) should not be included. They may belong to Adramyteion (Antiken Münzen Mysiens, p. 10, note 1 \* \* \* \*), or to Iolla, although no other coins of these cities are known, earlier than the middle of the Fourth Century, B. C.



649=Imh.-Bl., Monn. grecq. p. 248, no. 97, the monogram  $\chi$ , *Traité*, 648, pl. XVI. 19, and Cat. Jameson, 1433, pl. LXXIII and the olive spray, *Traité*, 641, pl. XVI. 18. On an obol is found  $\text{⌚}$ , *Traité*, pl. XVI. 21, and around the helmet of the Athena head is an olive wreath, which is found also on the drachms with  $\text{⌚}$  and  $\chi$ .

Now the silver coins with the horse type, struck on the Milesian standard,<sup>1</sup> must have been issued concurrently with the electrum staters of Milesian weight (Pl. II. 1-3f) which as we shall later develop, were struck ca. 500 B. C. Their style which indicates that they are all of about one period, is very close to that of the staters of Per. I, and of those of Milesian weight, but their weight standard makes it practically certain that they were issued as divisional pieces of the latter.

The silver coinage with the head types struck on the Persic standard could not have been issued concurrently with the silver coinage with the horse type struck on the Milesian standard. The former must therefore either have preceded or followed the latter. Their style is not sufficiently archaic to permit our placing them *en bloc* before ca. 500 B. C., and they must consequently all belong to the early Fifth Century. For, even though the Milesian electrum staters, and the subsidiary silver coins with horse type of this standard, were extraneous issues apart from the regular series, as will later be demonstrated, still they were all undoubtedly struck at the mint of Lampsakos, and it is impossible to conceive of the two silver coinages struck on different standards circulating side by side. The silver coins with the head types must consequently have been begun after ca. 500 B. C., and with this conclusion, their style is in perfect accord. The coins which we have placed in the first group are of exactly that degree of archaism which we know from other coin series, compare that of Syracuse, for example, to have prevailed during the decade ca. 500-490 B. C., and the coins of the second and third groups extend down probably not much later than ca. 470 B. C., i. e. to the threshold of what we term the Transitional epoch. In this connection, note the date independently assigned by Jameson to the drachm with  $\chi$ , "vers 470" (Cat. Jameson, 1433), which we have placed in the third group of coins with the head types.

Now, to return to the main argument, the letter  $\text{⌚}$  on the electrum staters of our Per. II is held by Babelon to be the initial of the same magistrate who signed the silver drachm with the letter  $\text{⌚}$ , and since a

<sup>1</sup> Babelon (*Traité* II<sup>1</sup>, p. 378) says "l'étalon milésiaque réduit," but the weights of the various denominations when taken together, not that of the didrachms alone, which are a trifle below norm, correspond to the theoretical system given on p. 267 of the *Traité*.

second coincidence of an identical moneyer's mark, the amphora, is found to occur on the electrum staters of Per. I and likewise in the silver drachm series, it is argued that all of these issues, silver and electrum, should be dated at the same period . . . . "l'amphore et la lettre  $\Xi$  qui doivent être l'emblème et l'initiale de noms de magistrats monétaires, se retrouvent sur des monnaies d'argent dont l'attribution à Lampsaque n'est pas douteuse et qui sont contemporaines de nos statères d'électrum. Ce sont les mêmes magistrats qui ont signé ces statères d'électrum et ces pièces d'argent. . . ." (Traité II<sup>1</sup>, p. 185).

The amphora, however, as our catalogue of types shows, only occurs with perfect certainty on one stater, namely, on the very earliest issue from the Lampsakene mint, no. 1, Pl. I. 1, but the divergence in style between this really primitive looking stater and the drachm with the amphora symbol is so pronounced that there could be no question of these coins being simultaneous issues, and from the foregoing it has been made perfectly evident that drachms of this type were struck ca. 480-470 B. C. Furthermore I strongly doubt whether the amphora on the electrum stater in question ought to be regarded as a private mark. It probably belongs to that class of symbols which constitute an amplification of the chief type, like the amphora, and later, the amphora and bunch of grapes, on the coins of Chios which, added one after another to the main type of the Sphinx, became an integral part of the type expressing the fertility and renown of the vineyards of this island. The amphora at Lampsakos, employed to express an identical idea, was speedily replaced by the vine wreath, a form of symbolism more perfectly adapted to the type.

But there is more to the argument in favor of a Sixth-Century date for the  $\Xi$  staters. Thus far it has been pointed out that the electrum stater with the amphora symbol is separated by four or five decades from the drachm with the same symbol, and also that the symbols have a different significance in the two cases. There is not however the same wide difference in date discernible in the style of the electrum staters bearing the letter  $\Xi$  and the drachms with the same initial. The former coins have been dated on grounds of style, on the evidence of the find in which they occurred, and on the basis of the resemblance between these coins and the Chian Fifth-Century electrum issue, at about 450 B. C. The silver drachm may be as late as 470 B. C. And there is nothing in the evidence available to conflict with the assumption of a slightly earlier date for the electrum coinage, or a somewhat later date for the silver drachm, so as to bring both issues under the same magistrate.



There remains now the third point in the argument to be considered. In the archaic series of Athens there are some remarkable small coins bearing on the obverse a Janiform female head similar to the Lampsakene type, and on the reverse the head of Athena helmeted, with the ethnic, in the usual style of the period. Babelon sees in the strange appearance of this obverse type, which is an intrusion, as it were, upon the fixed types of Athena and the owl, and in the appearance of the Athenian symbol, the olive, on the silver coins of Lampsakos, a reflex of the intimate relations created between Athens and Lampsakos through the alliance formed by Hippias, tyrant of Athens and Hippoklos, tyrant of Lampsakos, ca. 513 B. C.<sup>1</sup> The circumstances are narrated by Thukydides (VI. 59) who traced his ancestry back to the Peisistratids. After the death of Hipparchos, Hippias seeing his power at home weakening, sought a foreign alliance with a tyrant supported by Persia, and gave his daughter Archedikê in marriage to Aiantides, son of Hippoklos of Lampsakos who enjoyed great favor under Dareios. "C'est à l'occasion de ce mariage et de l'alliance qu'il consacrait, que furent frappées les pièces ci-dessus décrites,<sup>2</sup> ainsi que celles d'Athènes qui portent, les unes et les autres, d'un côté l'effigie d'Athèna, et de l'autre, la tête janiforme de Lampsaque." (Traité II<sup>1</sup>, p. 386). And again "Ces pièces d'argent<sup>3</sup> . . . sont rigoureusement datées; elles ont été frappées à l'occasion du mariage d'Archédicé, la fille d'Hippias, avec Aiantidès, fils d'Hippolochos (*sic*); elles consacrent l'alliance que conclurent dans cette circonstance, Hippias et Hippolochos (*sic*), vers 513. Et ainsi, nous pouvons affirmer que les monnaies d'électrum ci-dessus décrites, ont été frappées à Lampsaque vers 513." (Traité II<sup>1</sup>, p. 186).

This theory of the origin of the Janiform head type at Athens is extremely ingenious and very plausible at first view. But the style of the double head on the Athenian coins is certainly rather more archaic than that of even the earliest of the Lampsakene silver coins with the Janiform head. If the Athenian coins were struck by Hippias to commemorate the marriage of his daughter with the son of the Lampsakene tyrant, it would have been between the years ca. 513-511 B. C., i. e. after the death of Hipparchos in 514, when Hippias was impelled to seek a protecting alliance abroad, and before the time of his expulsion from Athens. And this is exactly the date which the style of these Athenian pieces would indicate. On the other hand, in the Lampsakene series,

<sup>1</sup> Traité II<sup>1</sup>, pp. 751ff, pp. 185, 186, and pp. 385, 386. Six, Num. Chron. 1895, pp. 172, 173.

<sup>2</sup> Namely, the silver coins of Lampsakos with the head types, Traité II<sup>1</sup>, 641-650.

<sup>3</sup> That is, the coins of Lampsakos, Traité, 641-650.

one does not find the reciprocal adoption of an Athenian type, for the head of Athena to the left, wearing a Corinthian helmet can hardly be claimed as a distinctly Athenian type. And what is particularly claimed as exhibiting the "reflex" of the alliance, the essentially Athenian symbol, the olive (around the helmet of Athena, as a wreath, and, in the field, as a spray) does not appear at once on the earliest coins, but only in the latter part of the series, namely on coins, which, if our dating be correct, belong rather well along towards 490-480 B. C., and later. Persuasive therefore as the hypothesis is, as regards the origin of the double-headed type in the Athenian series,<sup>1</sup> I do not feel disposed to admit it in its entirety, for the date ca. 513 B. C. is far too early for the Lampsakene coins on which the olive appears. The following modification of the theory might be allowed. It might be assumed, though it involves considerable difficulty with regard to the silver coinage with the horse type at Lampsakos, that the series with the head types of this city began ca. 513 B. C. when the supposed Hippias coins of Athens were issued. For we may suppose either that the art of Athens lagged behind that of Lampsakos, whence the incongruity of style between the Athenian pieces and our earliest known Lampsakene coins with head types, or that it is a mere chance that no specimens of the latter coins, more archaic in style, have come down to us. The appearance then of the Athenian symbol, the olive, on the later issues of the head types at Lampsakos may be said to be due to the continuance of the tradition of the alliance, that is, to the influence

<sup>1</sup> If we abandon the hypothesis entirely, how do we account for the Janiform type at Athens? It could not be borrowed from Lampsakos, for this type was not commenced at the date required by the theory, ca. 513 B. C. The origin of the Janiform types, both heads female, or male or female, is very obscure. At Tenedos and at Gaza, where it is best known outside of Lampsakos, it would appear to have had an independent origin, for there is no proof of borrowing. One's fancy is kindled by the apparent connection of the double head with the double axe at Tenedos. Greek legend could not account for these types (*Traité II*<sup>1</sup>, 366-374) and as their origin was evidently lost to the Greeks themselves, it is eminently reasonable to suppose that they go back to the prehistoric age. Such survivals, like the Carian cult of Zeus Labrandeus, or Zeus of the labrys, the bipennis or double axe, would be appropriate in countries or places, which had come under the sphere of influence of Aegean civilization. Every one of the cities, where the double head (and sometimes the double axe) occurs, fulfills this postulate. Lampsakos and Tenedos were ancient settlements, probably originally Phoenician trading-posts, as the derivation of the name of the former from "Lapsak" "at the ford" in Phoenician, like Thapsakos from Thiphsach (*Busolt, Gr. Gesch. I. p. 271*) and the traditions regarding Tenedos (one of its early names was *Phoenikê*) prove, while Gaza is said to have been settled by Cretan "Philistines" (*Mosso, Dawn of Mediterranean Civilization, p. 36*). It would be a complex matter to evolve any further an hypothesis regarding a cult of a dual or dimorphous deity, and I leave it to competent students of prehistoric and Greek cults to decide whether the aniconic image of the sacred double axe may have developed into a Janiform divinity during the anthropomorphic stage of Greek religion.



of Hippias's son-in-law, Aiantides, or his descendants. The original "reflex" of the alliance as seen in the Lampsakene series would then have been, merely, the adoption of the type, a helmeted Athena head. The whole theory is of course weakened to the point of invalidation by the establishment of the date ca. 490-480 B. C. for the appearance of the olive in the Lampsakene series.

In other passages in the *Traité*, Babelon himself seems to date the coins showing the olive all in the Fifth Century. "On sait, d'ailleurs, qu' Hippias chassé d'Athènes en 511, et retiré à Sigéion, allait fréquemment à Lampsaque chez son gendre et sa fille. Ses petits-fils succédèrent à leur père Aiantidès et la branche d'olivier qui est un symbole essentiellement athénien, se voit *encore* sur les monnaies de Lampsaque du commencement du V<sup>e</sup> siècle, soit autour du casque d'Athéna, soit dans le champ de la pièce" (*Traité* II<sup>1</sup>, p. 386, and also II<sup>1</sup>, p. 755). At all events, the silver drachm bearing the letter  $\Xi$  which must be contemporaneous with the coins bearing the olive, cannot be pushed back into the Sixth Century, and therefore the electrum staters, with this same letter, need not be, and this it has been the point of the whole argument to prove.

Finally, in conclusion, we may observe that, if the  $\Xi$  staters were placed as early as ca. 513 B. C., in view of the undeniable break in the continuity of style between these issues and those of Per. I, we should be obliged to assume an extraordinarily early date for the latter coins, which would not be at all consonant with the occurrence of moneyers' letters of such well-formed style as are found on the coins (Pl. I. 2-5). To resume this protracted discussion, the  $\Xi$  staters do not represent the "premier archaïsme" of the Lampsakene issues, the evidence of the hoard in which they were found, and the affinity of style between them and the Chian Fifth-Century electrum stater tending conclusively to establish their date as ca. 450 B. C.

Besides the staters of Periods I and II there is another class of electrum staters bearing the same obverse type, to which we have already referred in this paper, as staters of Milesian weight, which had been doubtfully attributed to Lampsakos. This uncertain class of coins has usually been dated ca. 500 B. C., or earlier, and by Head and Wroth they were placed before the coins of our Per. I. Six supposed these Lampsakene staters to belong towards the end of the Fifth Century, and Babelon is rather inclined to carry them well down into the Fifth Century. The obverse type is not enclosed within a vine wreath as on the regular series, and the incuse square departs from the regular form

characteristic of the Lampsakene staters, namely, with two squares raised and two sunk. The coins may for convenience be designated the palmette type, from the stylized ornament usually found above the horse, ✱. The reverse is an incuse square divided by two raised lines, finer than on the coins of Per. I, into four equally, and rather deeply, sunk compartments. The coins are of globular fabric, and of very pale, almost silvery color. The following is a detailed description of the varieties of the type, and a list of the known specimens.

1. Forepart of a winged horse l., round wings, feathered, l. raised, r. lowered; l. wing in three sections, the one joining the body granulated, the middle one shaped like that on coins nos. 9-13 of Per. I., the third section curving back convexly towards the head of the horse; r. wing in *two* sections; two dotted lines across the neck parallel to l. wing; line at termination of body (?); horse is bridled.

EL. 19mm. 14.15 gr. Vienna.

Sestini, Stat. Ant. p. 62, no. 1.

Incuse square divided by two raised lines into four square compartments, equally, and rather deeply, sunk.<sup>1</sup>

Plate II. 1.

2. Similar description and style; above the horse ✱

EL. 20mm. 13.86 gr. Munich.

Sestini, Stat. Ant. p. 62, no. 2, pl. VI. 1. Mionnet, Sup. V. no. 541. Brandis, Münz-Mass-u Gewichtswesen, p. 388. Head, Num. Chron. 1875, pl. VII. 8.

Similar, but larger incuse and heavier cross-lines.

Plate II. 2.

3. Similar description, but somewhat broader style; at termination of horse's body, a row of four dots between two raised lines; above ✱

EL. ca. 19mm.

Similar, but smaller incuse and finer cross-lines.

Plate II. 3a-3f.

a. 14.01 gr. Berlin.

b. 13.92 gr. Berlin.

Cat. de Moltheim, no. 1883, pl. XIV (Paris, 1895).

c. 14.07 gr. Boston (Greenwell-Warren).

Six, Num. Chron. 1890, p. 216, no. 7. Regling, Samm. Warren, no. 1734, pl. XXXVII.

d. 13.98 gr. London (Whittall).

Cat. Whittall, no. 779 (S. W. & H., London, 1884). Head, Num. Chron. 1887, p. 287, pl. X. 8. B. M. C. Mysia, p. 78, no. 1, p. XVIII. 3. B. M. C. Ionia, p. 7, no. 32, pl. I. 22.

e. 13.98 gr. Cambridge (McClean).

Cat. Benson, no. 651, pl. XXII. (S. W. & H., London, 1909).

<sup>1</sup> Through breakage of the die, the squares which should be incuse are almost "filled up" with the metal, but the cross-lines are easily distinguishable.



f. 14.02 gr. Paris (Wadd.).

Babelon, *Inv. Wadd.*, no. 854, and *Traité II*<sup>1</sup>, no. 329, pl. VIII. 5.

g. 13.85 gr. — (formerly Imhoof-Blumer). Doubletten des kgl. Münzkabinetts zu Berlin, no. 115, pl. I (Hess, Frankfurt a/M., 1907).

a-e and g. Same obverse and reverse dies. f. From similar, but not identical dies.

These palmette staters used to be assigned unquestionably to Lampsakos.<sup>1</sup> Six, at one time, regarded them as the earliest issue, and thought that the coins of our Per. I (the only specimens then known being the coins, nos. 8 and 12, and the coin cited, p. 8, note 1) formed the transition between the ✱ and the Ξ types.<sup>2</sup> Wroth and Head also regarded the palmette type as the earliest issue.<sup>3</sup> Since these coins weigh less than the staters of Per. I, it would, on this hypothesis, be necessary to assume a change in the weight standard at the time of the issue of the latter coins, that is to say, the stater of ca. 14.02 grams (217 grains) would have been increased to a stater of ca. 15.36 grams (237 grains). But if we examine minutely the style of the coins of Pl. II. 1, 2 and 3a-3f, we shall see that while one might conceivably place nos. 1 and 2 of this plate before the coins nos. 7-11 of Pl. I, it will hardly be claimed by anyone that these two coins could antedate such archaic, rudely executed coins as those of Pl. I. 1-6. And, again, since the coins of this "uncertain" group must stand together, no one, I presume, would care to maintain that the coins nos. 3a-3f of Pl. II are earlier than the coins nos. 1-6 of Pl. I.

The coins in Per. I which this doubtful group most resemble are those at the very end of the series, namely, nos. 10 and 11 of Pl. I, and more particularly, no. 11. Chronologically then the palmette staters would fit on very well to the end of Per. I. But such a proceeding as a change of weight, fabric, composition of the metal, type, and style of incuse for the short period of these issues, and a subsequent reversion to the established types, weights, etc., of the Ξ issue would be a very strange thing. The palmette staters must therefore be an extraneous issue due to some unusual circumstances, and they should be classed apart from the regular issues of Periods I and II. Our modern numismatic authorities have therefore been very generally agreed in detaching these coins from the regular series, but the real significance of the coins has only lately become manifest. It has for some time been recognized that these Lampsakene staters belonged to a whole group of

<sup>1</sup> Sestini, *Stat. Ant.* p. 62. Brandis, *op. cit.* p. 388.

<sup>2</sup> Six, *Num. Chron.* 1877, p. 171.

<sup>3</sup> Head, *Num. Chron.* 1887, p. 282. Wroth, *B. M. C. Mysia*, pp. 78, 79.

staters (Pl. II. 1-11) of homogeneous fabric, composition of metal and style, with similar reverse, but varying obverse types which were struck on the Milesian standard. Head had suggested that these staters might all have been struck at one mint, and that the obverses might really be changing magistrate's symbols usurping the place of types as on the Kyzikene electrum and Lampsakene gold coinages.<sup>1</sup> Six went further, and proposed to assign them all to Chios because of the form of the incuse which is of the local type developed at Chios, and because they follow the Milesian standard of weight which was also employed at Chios for electrum.<sup>2</sup> No special historical event was turned to account to explain the issues, but the theory of a monetary alliance had been put forward by Babelon.<sup>3</sup> From the obverse types, the mints represented by this alliance coinage are the following: Lampsakos (forepart of a winged horse), Pl. II. 1-3f, Abydos (eagle), Pl. II. 4, 4a, Dardanos (cock), Pl. II. 5, Chios (Sphinx), Pl. II. 6, Kumai (?) (free horse), Pl. II. 7, Klazomenai (forepart of a winged boar), Pl. II. 8, Samos (forepart of a bull), Pl. II. 9, Methymna (?) (sow) Pl. II. 10, and Priene (?) (Athena head), Pl. II. 11. Quite recently considerable light has been thrown upon this perplexing group of coins by the suggestion made first by Gardner (Gold Coinage of Asia, 1908, and again in Coinage of the Ionian Revolt, Journ. Hell. Stud., 1911, pp. 151ff and 1913, p. 105), and later, but quite independently by Jameson (Rev. Num., 1911, pp. 60ff, and also 1913, p. 403), that in this set of coins was to be recognized the coinage issued by the cities of Ionia (and their Hellenistic allies) which took part in the Ionian Revolt against Persia, ca. 500-494 B. C. The narrative of Herodotos dealing with the history of this period has been amply commented upon in the three papers cited, and it will be sufficient here to emphasize the fact that the cities represented by the coins which survive are all mentioned by Herodotos as playing an active part in the uprising.

The theory that these staters are Revolt issues is an attractive hypothesis by which to explain an otherwise puzzling group of coins. It is of the utmost importance for our series, because, as we have seen, the Lampsakene staters of this class resemble very closely the latest issues of Per. I, and if the palmette staters can thus be definitely dated, we should obtain an exact terminus *post quem* for the last issues of the regular series of archaic staters of Lampsakos (Pl. I. 1-11).

<sup>1</sup> B. M. C. Ionia, p. 7, 8, pp. XXIV, XXV, and Num. Chron. 1887, p. 281.

<sup>2</sup> Num. Chron. 1890, p. 281.

<sup>3</sup> *Traité II*<sup>1</sup>, p. 198.



Let us consider the style of these staters which have been so variously dated. The style of the "Revolt" stater of Klazomenai fits admirably the proposed date, ca. 500 B. C., as one may judge from a comparison of this coin with silver didrachms of Klazomenai of the period ca. 545-494 B. C. (Babelon, *Traité II*<sup>1</sup>, pl. XII. 13, 14). The style of the electrum stater is more advanced and more refined than on certain of these didrachms which were probably struck before 500 B. C., and appears to be at just the same stage of development as the didrachm figured in B. M. C. Ionia, pl. VI. 1. Compare also the didrachms of the Vourla (Klazomenai) find which was composed of didrachms of this city, of several examples of the "Revolt" coinage, together with a number of electrum hektai of Samos which are doubtless fractions of the Samian "Revolt" stater (Rev. Num. 1911, pls. I and II). One may also compare the forepart of a winged boar on an electrum stater of Kyzikos dating ca. 550-475 (von Fritze, Kyzikos, *Nomisma VII*, pl. II. 12). The style of the free horse on the stater of Kumai (?) is not too late for this period as one might at first glance be inclined to think, for, if we regard the way in which the fore-legs of the animal are raised, we shall see that the position is managed quite in the archaic manner of the early silver coins of Klazomenai (Babelon, *Traité II*<sup>1</sup>, pl. XII. 13, 14), and of those of Erythrai (ib. pl. XII, 10-12) and of the Lampsakene stater (Pl. I. 1) which surely antedates the Fifth Century. For a free horse of the Fifth-Century style, compare the electrum stater of Kyzikos (*op. cit.*, pl. V. 24), and for one of the Fourth Century, compare another stater (*op. cit.* pl. VI. 30), and note particularly the pose of rear- and fore-legs on all these coins. The unique stater with the head of Athena helmeted, Priene (?), with its curious "archaizing" treatment of the hair (Jameson, Rev. Num. 1911, p. 68), and delicate, refined style may perhaps seem too advanced for the date, ca. 500 B. C., but the wing of the helmet is of the early form found on the Sphinx of the silver coins of Chios prior to 490 B. C. and common to other winged animal figures of Lampsakos, Klazomenai, etc., of the archaic period. The finesse in the execution of this head is quite in keeping with the careful style of the whole group of staters. One might object that the forepart of a bull with reverted head on the Samian stater is of too "affected" style for the period in question, but it is easy to reply that this motive was a common one in archaic Ionian electrum, and elsewhere at an early date.

The style of the Chian member of the group ought to prove decisive for the problem of the date. Since Chios did not strike her "Re-

volt " coins as a special issue, but, being the leading spirit in the Ionian Koinon, furnished from her already existing electrum coinage the model for the fabric, weight and composition of the metal of these alliance issues, the contemporary Chian coin must be that stater whose reverse most nearly accords with the style of the other Revolt coins, and whose obverse is in keeping with the general style of the group. Six selected, as the Chian member of the group, the stater in the British Museum (B. M. C. Ionia, pl. I. 19). Gardner in his first paper associated this same stater with the Revolt issues (*op. cit.* pl. I. 8), but in his second, more comprehensive paper, he rejected this coin as of too early style, and published as the contemporary piece, a stater in the St. Petersburg collection (*op. cit.* pl. VII. 1) which, he noted, was of "somewhat unusual archaic style" (*op. cit.* p. 154, note 11). This coin, I learn on good authority, is considered to be of doubtful authenticity, and judging from a cast of the coin, I should say it was decidedly "suspect." In the Vourla hoard there was found a coin of Chios (Rev. Num. 1911, pl. I. 1) which, being discovered in company with other "Revolt" staters, might perhaps be considered as the missing member. Jameson however has pointed out that the style of this stater is appreciably earlier (note especially the small, deep incuse of the reverse) than that of the other Revolt staters, and he has identified as the contemporary piece wanted, a stater in his own collection (Cat. Jameson, 1520A, pl. XCV=Pl. II. 6) which is a type known by four examples, the one cited, and examples in Munich (Sestini, Stat. Ant. pl. IX. 7), Boston (Samm. Warren pl. XXXVII. 1736) and Copenhagen. The reverse is identical with those of the group coinage, and the style of the Sphinx exactly suited to the date ca. 500 B. C., note the attention paid to the bony structure of the body, the elaborate refinement of detail, seen in the adornment with earring, stephane and vine tendril, and the "tassel" of the tail. Sphinxes of the same style are found on the silver didrachms of Chios which belong to the period 500-490 B. C. (B. M. C. Ionia, pl. XXXII. 1, Cat. Jameson, no. 1521, pl. LXXVI and Trouvaille de Tarente, Rev. Num. 1912, pl. III. 7).

There are extant some thirty specimens in all of the nine types of the Revolt coins<sup>1</sup> (the coin of Priene is the only unique type), and in

<sup>1</sup> There is another electrum stater (B. M. C. Ionia, pl. II. 3, *Traité* II<sup>1</sup>, pl. V. 17) whose fabric, type of incuse and style of obverse type, a Centaur carrying off a Maenad, recall the "Revolt" class. The weight however which is Phokaïc (16.32 gr.), and the darker color of the gold (its gold contents are about 64 per cent., B. M. C. Ionia, p. xxvi), as well as the type, which suggests Thasos or Thrakia, are against the association of the coin with the Revolt issues. It has been suggested that the coin may have been struck at Myrkinos in Thrakia by Histiaios, tyrant of



some cases differences of die are found, but only in the cases of Abydos and Lampsakos do the variations in the dies appear to indicate any great interval between the issues. In the former case, the earlier type (Pl. II. 4) is an eagle on a dotted ground-line, in front of which is a dolphin, downwards. The reverse has a much smaller incuse than is usual on the Alliance issues, the cross-lines being barely discernible, and the fabric is decidedly globular. The second type (Pl. II. 4a) which the larger incuse and the style of the obverse prove to be later, is an eagle standing on a hare, enclosed in a circle of dots (cf. B. M. C. Ionia, Pl. I. 23). A third variety of slightly more advanced style, has an eagle standing on a dotted ground-line (Samm. Warren, pl. XXXVII. 1737). This latter coin seems later than the other two (note the pose of the legs, twist of the neck and more conventionalized wing) although, artistically, it is inferior to the fine type of the eagle on the hare (see the Brit. Mus. example). The question that now arises is, do these differences of style, indicative of a certain lapse of time, offer any difficulty to the theory that the coins are all "Revolt" issues, i. e., struck between the period ca. 500-494 B. C.? I should think, probably not. The reverses of the second and third types of Abydos are entirely similar to those of the group coinage, and as for the reverse of the first type, we have only to turn to the Vourla find which was made up of coins closely contemporaneous one with another, to find a Chian stater of similar fabric and small, deep incuse associated with "Revolt" staters (Rev. Num., 1911, pl. I. 1.). The same thing holds good for the Lampsakene varieties. The first type (Pl. II. 1), without the palmette, has an earlier style of obverse than the third type (Pl. II. 3a-3f), and its reverse is smaller than on both the second and third dies. But the intermediate die (Pl. II. 2) shows in what close succession the three dies must have been made for its obverse is closely allied to the earliest type, and its reverse, while from a different die, is a large incuse like that of the third die.

If it should nevertheless seem improbable to any one that Lampsakos and Abydos which were only drawn into the Revolt by the Ionians after it had started (ca. 500-498 B. C.), and were reduced by Daurises before the battle of Ladê, 494 B. C., should have struck coins which show such a distinct progress in style, during the short period of per-

Miletos, just before the Ionian Revolt (cf. Grote's History of Greece, chap. iv). Mr. E. S. G. Robinson of the British Museum kindly showed me an unpublished note which he had written on this stater, whose style he has very carefully analyzed, proposing the above attribution. Compare also, Svoronos, Jour. Inter. de Num., 1913, pp. 276-280.

haps four years at the most, we might find a way to evade this difficulty. We might assume, namely, that the coinage continued, for a while, even after Ladê. After the Revolt was quelled by this decisive battle, things were not so bad for the conquered cities (Gardner, *Jour. Hell. Stud.* 1901, pp. 152, 158-9), but of course it does seem extremely doubtful if the coins continued to be struck when there was no longer any immediate need for them. On the one hand, if the tyrants were banished from all these cities,<sup>1</sup> there would have been no lieutenant of the Persian King to look with disfavor upon the continuance of the issue, but on the other hand it seems difficult to find a plausible motive for the continuance of the Revolt coinage. The group coinage, as we have it, has every appearance of being a short-lived issue. The differences in style which have been noted, while worthy of comment, do not seem to raise any very acute difficulties. If then these staters can be thus dated within such narrow limits, we may use them as an invaluable term of comparison in the study of the chronology of other anepigraphic coins.

Whether the "Revolt" issues were all struck at Chios, or each in its respective mint, is a question of some interest. On no example have I remarked an identity of reverse die with a Chian reverse which would prove the former to have been the case. As regards Lampsakos, we have demonstrated above that a divisional coinage in silver was issued,<sup>2</sup> and this was probably a local issue struck to meet the requirements of small transactions. The staters too were therefore probably struck in the various mints of the Koinon rather than at Chios, as seems also to be indicated by the absence of a common mint-mark. Also, the analogous details in the treatment of the horse of the palmette staters and

<sup>1</sup> Herodotos does not give us any precise information as to the reorganization of Ionian affairs after the Revolt. Mardonios, before setting out for the conquest of Greece, deposed the despots throughout the various Greek cities of Ionia (Herod. VI. 43), and he may have followed the same course among the cities of the Hellespont.

<sup>2</sup> Gardner's identifications of other fractions of Revolt staters are very weak (*J. H. S.* 1901, p. 157-8). Of Erythrai and Miletos we lack the Revolt staters. Klazomenai had already begun her silver coinage in the Sixth Century, struck on the Milesian standard as was commonly the case in southern Ionia. Some of the silver coins of the latter city must be issues which in a general way are contemporaneous with the electrum Revolt staters, but it would require a careful study of the whole archaic, silver series to distinguish with nicety which are the coins belonging exclusively to the Revolt period. Chios, while maintaining the Milesian standard for her electrum, never used it for her silver coinage which was struck on a local, so-called "Chian" standard, heavier than the Milesian. Furthermore, the tetrobols quoted in support of the theory, are Transitional not Archaic coins, as shown above. As to electrum subdivisions of the Revolt staters, none which have been put forward seem to me to belong to the period (the supposed Chian twelfth was excluded in note 2 to p. 1), except the hektai of Samos found at Vourla (Klazomenai) (*Rev. Num.* 1911, pl. I. 6-26).



the latest coins of the regular issue of Per. I point to the same conclusion.

The Lampsakene staters of Per. I, consequently must all be earlier than the date ca. 500-494 B. C. to which the palmette staters have been given, for the latest stater of the former group just precedes in date the latter coins, note particularly the details of the types, the bridle, mane, the right wing in *two* sections and the row of dots between two lines at the termination of the horse's body. The magistrate's letters and monograms which occur on these coins,  $\odot$ ,  $\mathfrak{M}$  ( $\Delta E$ ),  $\mathfrak{A}$  and  $\Gamma$  are very well-formed letters indeed, and it might be objected that they are not archaic enough in formation to belong to the Sixth Century. The type of the earliest coin in the series is nevertheless rude and archaic, and the coins bearing the letters which follow this stater are executed in the same heavy, coarse style. In the Thrako-Makedonian region, at Aegai (Traité II<sup>1</sup>, pl. XLIX. 2, Cat. Jameson, pl. XCVII. 1836) and in Bisaltia (Traité II<sup>1</sup>, pl. XLVII. 4), the monogram  $\mathfrak{A}$  is found in well-formed letters (on the former coins, in the field above the kneeling goat, and, on the latter, on a part of the type, viz. on the the haunch of the horse) on coins which are dated between the years 500 and 480 B. C. In general, however, magistrate's initials and monograms are rarely found much earlier than 480 B. C.

The reason why the regular electrum issues of Lampsakos came to an end ca. 500 B. C. (only to be revived in the later issue of  $\mathfrak{E}$  staters) is doubtless to be found in the circumstances of the Revolt against Persia. During these disturbances, we may suppose Lampsakos to have turned aside for the moment in order to strike the special issues in concert with the Ionian Koinon. After her punishment by Persia for her part in the insurrection, and her subsequent recovery, a cessation of coinage in the precious metal would have been likely. The archaic electrum coinage of Chios came to an end at the same time. Those who believe in the theory that the Persian King exercised a monopoly of the coinage of gold (and electrum<sup>1</sup>) and regard the issue of the "Revolt" staters as, in itself, an act of rebellion of the Greek states against royal authority, may try to find in this cessation a proof of their theory. We must call attention again however to the fact that Gardner, who has most recently championed this theory, ignored entirely the existence of any electrum coinage of Lampsakos prior to the  $\mathfrak{E}$  issues of ca. 450 B. C., and also that his date for the beginning of the Kyzikene electrum series as after the Ionic Revolt was absolutely wrong. The hypothesis that

<sup>1</sup> Gardner, Gold Coinage of Asia.

the Persian monarchs guarded jealously as a sovereign prerogative only to be delegated by special authority, the right to strike gold coins was first promulgated by Lenormant (*La monnaie dans l'antiquité*, II. p. 3), and since then has been rather commonly accepted (Hill, *Greek and Roman Coins*, p. 84). It is however built upon insufficient foundation. The electrum issues of Lampsakos, and of Chios and Kyzikos, during the period of Persian suzerainty in the Sixth Century, ca. 546-498 B. C., and the gold coinage of Lampsakos after the Peace of Antalkidas in 387 B. C., are in direct contradiction with this pretended right of the Persian Kings, and cannot be explained away on the theory of exceptions. The gold staters of Lampsakos (ca. 390-330 B. C.) which are of the same weight as the Persian daric, ca. 8.42 gr. (and not of "Attic" weight, ca. 8.60 gr., as sometimes stated), constitute an insurmountable argument against the monopoly theory, for how would the Persian King have permitted a State which had but lately been given over to his absolute authority to continue the issue of a coin which would be a serious rival to the daric?<sup>1</sup> The Lydian and Persian rulers of the Greek cities of Asia Minor never interfered in the slightest degree with the absolute liberty in matters of coinage, choice of metal, types or legends, of the autonomous cities or tributary dynasts under their control (Babelon, *Traité* II<sup>2</sup>, *Introd. Gén.*).

The occasion of the second issue of electrum staters at Lampsakos, the Ξ staters, is not easy to determine. These coins like the contemporary stater with the vine wreath of Chios, look like a special issue such as might be occasioned by a sudden outbreak of hostilities, and if their style permitted, we should have suggested that the revolt of Chios and Lampsakos against the Athenian Hegemony, ca. 412 B. C., furnished a plausible explanation of the issues. The style however not permitting such a late date, we may surmise that the Ξ staters were specially struck to supply the need for a coin which would be convenient at the time when Lampsakos ceased to contribute her tax to the Athenian Confederacy, in ships and men, and substituted money payments.<sup>2</sup> If Chios and Lampsakos combined together (and the coincidence of the same weight standard at both cities would favor this supposition) to enjoy some of the commercial benefits obtained by Kyzikos through her coin-

<sup>1</sup> Babelon, *Perses Achém.* p. LXXIII., "L'or des Grecs, sur le terrain commercial et économique, vient déclarer la guerre à l'or des Perses; la lampsacène est créée pour lutter contre le darique."

<sup>2</sup> Lampsakos paid 12 Talents annually, and her quota of tribute is preserved in the *Phorostis* beginning with the year 451 B. C. The Ξ staters may have been struck as early as 460 B. C., when we may assume that the payments began to be commuted in specie.



age,<sup>1</sup> they must soon have found it futile to attempt to rival the Kyzikene mint in its pre-eminence as a mint issuing a world currency under the special patronage of Athens (see Babelon, *Traité* II<sup>2</sup>, p. 25, "Cyziqne surtout devient, en quelque sorte, la seconde ville monétaire de l'empire athénien").

AGNES BALDWIN.

New York, 1914.

## ADDENDA

M. Svoronos in his most interesting and revolutionary paper, *Numismatique de la Péonie*, etc., *J. I. N.* 1913, p. 276, remarks *en passant* that *eight* of the *ten* known specimens of the electrum hemi-hektai of the owl type (cf. p. 1, note 1, of the present paper) have come from Athens and Euboia, and the argument based on provenance as to the origin of these coins is thus materially strengthened. If these coins do belong to Athens, their weight system presents a problem. Svoronos, quite naturally, casts a doubt upon Babelon's claim that the coins are of Phokaïc weight, and yet the suggestion that they are hektai of a Euboïc stater of 8.73 gr. (Hill, *Historical Greek Coins*) must be rejected. Since the important discovery of electrum coins in 1894 on the island of Samos, where the Euboïc system for electrum finds its chief application, the supposed *stater* of Samos (B. M. C., *Ionian*, pl. III. 20) has become known as a *hemi-stater*; the staters in the find, characterized by two oblong incuses, weighing 17.46 gr., and thus corresponding, as they should, to the weight of the tetradrachms of Chalkis, the chief mint of Euboia, where the Euboïc system was employed for silver. But, even as hemi-hektai of the Euboïc system, as it is now known, the owl coins, of which the heaviest specimen recorded reaches 1.36 gr., fall short of the norm, i. e. 1.45 to 1.40 gr.

In the same article, pp. 276-280, Svoronos makes the suggestion that two of the electrum staters which in this paper are assumed to represent the coinage of the Ionian Revolt, to wit, the staters bearing as types the sow and the free horse, nos. 7 and 10 of Pl. II, may belong to Paionia. But, seeing that staters of this class have been found in Asia Minor in the hoard unearthed at Vourla (Klazomenai), and that specimens of these very types occurred in the find, this conjecture is rather improbable.

<sup>1</sup> The reverse of the Chian stater in Berlin, p. 15 fig. 4, is of that type of incuse known as mill-sail, peculiar to the Kyzikene electrum coinage. The adoption of a foreign form of incuse by Chios is certainly an anomaly. Chios may have considered it worth while for commercial reasons to plagiarize a reverse so well-known without intending her own staters to be fraudulently accepted as equivalent to the Kyzikene, which of course they were not.



ELECTRUM COINAGE OF LAMPSAKOS







I                      2                      3a                      3b                      3c                      3d



3e                      3f                      4                      4a                      5



6                      7                      8                      9                      10                      11























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