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The Archaic Coinage of Emporion

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[PLATES 1-5]

## Introduction

The attribution to Emporion of coins minted in the second half of the 5th century and during the 4th century poses few problems, for they bear the legend EM or EMIIOP or appear quite frequently in hoards from the Iberian peninsula. However, little is known about the colony's earliest coinage, from the archaic period. This comprises some quite rare and often unpublished varieties, anepigraphic and with various types, based frequently on models also used by the mint of Massalia. Recent finds allow us to present here a picture of an unexpectedly rich variety of coinage in this period.

Until the publication of the Empordà hoard (Áureo 27/2/2002; Campo 2003; Villaronga 2003), the most complete conspectus of the ancient issues of Emporion, known as 'fraccionarias ampuritanas', was that established by Villaronga (1997) in a well-documented study devoted to coin production in the 5th and 4th centuries BC, which supplemented the listings in his *Corpus* of ancient coinages of the Iberian peninsula in 1994. Both books greatly add to the studies published by Heiss (1870) and Delgado (1876) and later by Vives (1926), Amorós (1934) and Guadán (1968-1970). In all these studies many issues were left out, either because they were not known to the authors or because, although known from hoards like Empúries 1926, they were not attributed to Emporion. The sale of the coins from the Empordà hoard markedly increased the number of types known for Emporion, since it contained many early issues, dated to the first half of the 5th century BC, some of them unique. The new coins were discussed by Campo (2003) and Villaronga (2003), but a study of the earlier Emporitan series remains to be done, since the corpus published by Villaronga (Villaronga and Benages 2011) has not been able to fulfil that aim.

One of the problems in the identification of the earlier issues of Emporion has always been how to distinguish them from those struck by Massalia or other Greek mints. In this the pattern of findspots has been helpful, especially hoards. Both older and more recent hoards have permitted attribution to Emporion of a large number of issues, for example, those with a forepart of a man-headed bull/incuse, two sphinxes/incuse, head of Satyr/ horse, and head of Athena/head of Gorgon (Villaronga and Benages 2011, pp. 1-2, 41-42 and 54). However, the hoards do not contain some of the earliest issues of Emporion, which are known from stray finds. These include coins which share types with coins of Massalia, but are stylistically different both in their obverse types and the reverse incuse squares.

Hitherto analyses of Emporitan coin production have assumed that the colony was subordinate to Massalia, and that its first coins were struck some time after the first issues of Massalia. This was doubtless because the earliest coinages of Emporion had not yet been identified and because of the poor artistic quality of the issues with a dotted head of a ram, which were regarded as the first coinage of the colony and the work of craftsmen from Massalia (Furtwängler 1978, p. 224). In this paper we argue that coinage began at Emporion at more or less the same time as at Massalia and was more independent than has hitherto been assumed.

### **The existence of an archaic period at Emporion**

The recent increase in finds of coins of archaic style in the Iberian peninsula and the south of France have encouraged the idea that there was an archaic period in the coinage of Emporion. All have an incuse square on the reverse unlike any incuse found on coins of Massalia or other Greek mints of the West. The look of these coinages suggested a date in the last decade of the 6th century BC or even a little earlier, and this was later confirmed by analysis of their weight standard, fabric and style. In addition, the Auriol hoard proved crucial, for Furtwängler (2002, p. 99) believed that some coins in the *group unique* in the hoard were Emporitan.

Chevillon (2002, pp. 30-4) proposed the existence of an archaic period after analysis of coin finds from Rosellon, Salses and Carcassonne. He thought that they could be contemporary with the hemidrachms with crude Pegasus to left on the obverse, which appeared in the Auriol hoard (Furtwängler 1978, unique d1 and d2). The crude style of these coins, like that of others from Arse-Saguntum (Valencia, Spain), with Pegasus to left on the obverse, which are related to hemidrachms e1 and e2 in the Auriol hoard, and the fact that they are not found in the territory of Massalia (Chevillon, Bertaud and Guernier 2008) were important pointers to the idea that these pieces should be assigned to the last fifteen years of the 6th century at Emporion, corresponding with phase A at Massalia, and preceding the very large issue with dotted head of ram (cat. XII). Further research has supported the idea.

The early Emporitan coins identified hitherto were dated at most a few years before the burial of the Auriol hoard (Villaronga 1997, p. 75; Campo 2003, pp. 36, 39), which Furtwängler initially set at 470-460 BC (1978, p. 310) and later at c.475 BC (2000 and 2002). Furtwängler thought that some of the coins in the Auriol hoard were Emporitan, such as the coin with amphora / eye (1978, unique J), and his instinct that this piece could be Emporitan has been confirmed by several finds in the Iberian peninsula (Villaronga 1997, p. 109, n° 2-4). Its presence in the Auriol hoard confirms that by c.475 BC issues with double types had already begun in Emporion, which supports the hypothesis that the coins with Pegasus / incuse square, of which the Auriol hoard contained several very worn examples (Furtwängler 1978, unique d1-2 and e1-2) were struck in the archaic period at Emporion.

The Auriol hoard also contained many pieces with a ram head on the obverse, engraved with the dot technique, and an incuse square with a cross of dots on the reverse. Furtwängler (1978, p. 223) attributed them to Emporion. The numbers of such coins found in the Iberian peninsula, both in hoards and as stray finds, have increased remarkably, and show that he was right (Furtwängler 2002, pp. 98-9). The relative abundance of these pieces in the Auriol hoard demonstrates that by the time of its concealment a good part, if not all, of this large issue had already been struck; it would make sense to date them to *c.*490 BC.

The coins which we have recorded as stray finds in Spain and France over the past few years, and regarded as attributable to Emporion, had various features suggesting that they belonged to the archaic period. Two pieces with Pegasus to left on the obverse, found in the Camp de Morvedre (Valencia, Spain) (cat. III-6/2) and in the southwest of France (cat. III-6/4), share obverse and reverse dies with a specimen in the Auriol hoard not attributed to Massalia by Furtwängler (1978, unique d) (cat. III-6/1). In addition, their weight standard suggests the archaic period, for it is the Phocaean, like that used in Massalia during period A, when Emporion minted hemidrachms and heavier denominations. Table 1 shows that the issues we regard as Emporitan fit well with the Phocaean standard,

Die-links among the incuse squares on the reverses of many of the coins that have come to light recently have allowed us to group together issues with different types on the obverse. None of the incuse squares of these coins resembles those at Massalia. This too supports the idea that there were archaic issues at Emporion before those with a ram head on the obverse or an amphora on the obverse and an eye on the reverse.

### **Metrology**

The weight standard of the archaic coinages of Emporion was the Phocaean, with a drachm of 5.52 g, but the weight range within each denomination is usually wide (see, for example, the coins which we regard as tetrobols (cat. III-5, V-12, VII-16-17 and 21), perhaps indicating lack of skill on the part of the mint workers. This is not unusual, because precise adjustment to the theoretical weight cannot be expected. Thus, for example, the electrum coins of Phocaea between the first half of the 6th century and 522 BC (Le Rider 2001, p. 67) follow a theoretical stater weight of 16.45 g, but the unit that can be calculated from the weight of the hemidrachms (*e.g.* 2.598, 2.572, 2.578 g) and from the trihemiobols (1.31 and 1.169 g) would weigh about 15.58 g, lower than the stater (Bodenstedt 1981, p. 314); the same can be seen in some coinages of Massalia (Furtwängler 1978, p. 67). Lack of precision is all the more to be expected at a far western Greek colony, which is unlikely to have attracted skilled craftsmen. Nevertheless, the weights of hemidrachms and other denominations from Emporion are consistent with the Phocaean-Persian standard. Despite the limited number of coins that we have recorded some denominations can be recognized.

Pentobol	Figure not identified (cat. I-1)	France, priv. coll.	4,42 g	
	Goat head, r. (cat. VIII-23)	France, priv. coll.	4,24 g	
	Satyr mask (cat. II-2)	Figueres, priv. coll.	4,20 g	
Tetrobol (1/3 stater)	Pegasus, l. (cat. III-5)	France, priv. coll.	3,44 g	
	Uncertain object (cat. VII-16)	Spain, F.C. coll.	3,2 g	
	Uncertain object (cat. VII-17)	Paris, Auriol unique g	3,185 g	
	Lion walking, l. (cat. V-12)	Spain, Cores coll. 10	3,17 g	
Hemidrachm (1/4 stater)	Horse head, r.? (cat. VII-21)	Spain, Cores coll. 8	3,57 g	
	Satyr mask (cat. II-3)	France, Carcassonne	2,86 g	
	Pegasus, r.? (cat. VII-15)	Spain, Cores coll. 14	2,22 g	
	Pegasus, r. (cat. III-9)	Paris, Auriol unique e1	2,52 g	
		Paris, Auriol unique e2	2,88 g	
		France, priv. coll.	2,52	
		France, priv. coll.	2,81	
		France, priv. coll.	2,18	
		France, Chevillon coll.	2,40 g	
		Pegasus, l. (cat. III-6, 8)	France, Roussillon (Larozas)	2,04 g
			France, Salses	2,42 g
			Paris, Auriol unique d2	2,93 g
			Paris, Auriol unique d1	2,73 g
		Spain, F.C. coll.	2,6 g	
		France, priv. coll.	2,15 g	
		France, priv. coll.	2,41 g	
	Ram head, r. (cat. VIII-24, 26)	Paris, Auriol unique b	2,255 g	
		France, priv. coll.	2,92 g	
	Ram head, r. (dotted) (cat. XII-30)	Paris, Auriol unique c	2,85 g	
		France, Durban- Corbières.	2,20 g	
		France, priv. coll.	1,55 g	
	Lion head, r. (cat. IX-27)	Spain, Xilxes, coll. F.C. coll.	2,46 g	
		France, priv. coll.	3,05 g	
	Horse head, r.? (cat. VII-22)	Spain, Cores coll. 5	2,37	
	Uncertain figure (cat. VII-19, 21)	France, priv. coll.	2,59 g	
		France, Chevillon coll.	2,70 g	

	Herakles head (cat. VI-13)	France, Chevillon coll.	2,28
	Heracles head? (cat. VI-14)	Spain, Cores coll. 13	2,63 g
	Uncertain figure (schematic lines) (incomplete) (cat. VII-18)	Spain, Cores coll. 3	2,02
Diobol (1/6 stater)	Pegasus, r. (cat. III-10)	Spain, Cores coll. 6	1,99 g
		Spain, M.M. coll.	1,77 g
	Pegasus, l. (cat. III-4, 7)	France, priv. coll.	1,74 g
		Spain, S.V. coll.	2 g
	Uncertain figure (cat. VII-20)	France, priv. coll.	1,79
	Ram head, r. (cat. VIII-25)	Priv. coll.	1,8
Trihemiobol (1/8 stater)	Ram head, r. (cat. XII-31)	Paris, Auriol unique a	1,25 g
		Spain, Cores coll. 18	1,11 g
		France, priv. coll.	1,30 g
Tritartemorion (1/16 stater)	Ram head, r. or l. (cat. XII-32, 35-36)		ca. 0,70 g
Hemiobol (1/24 stater)	Eagle head (cat. IV-11)	France, priv. coll.	0,52 g
1/32 stater	Lion head, front (cat. X-28)	France, priv. coll.	a.w.: 0,34
	Ram head, r. or l. (cat. XII-32, 34, 36-37)		ca. 0,35 g
1/64 stater	Female? head, r. (cat. XI-29)	France, priv. coll.	0,19 g
	Ram head, r. or l. (cat. XII-32, 34, 36-37)		ca. 0,14 g

*Table 1.* Emporion. Metrology of the archaic issues.

The heaviest weights which we have recorded are 4.42, 4.24 and 4.20 g. These may be pentobols rather than drachms. The pentobol may seem a strange denomination, but at the end of the 4th century Emporion and Rhode struck drachms weighing 4.74g (Villaronga 2000, pp. 43-7 and 105-17), which equates to the theoretical value of five obols of the Phocaeen drachm (García-Bellido 1994, p. 137). More importantly, the weights of these coins are very close to those of the heaviest denomination minted by Massalia in its archaic period and they are heavier than the drachms it struck later. We also have identified tetrobol denominations, with an average weight of 3.31 g, which is a little below its theoretical weight (3.68 g), but not far short of 3.41 g, which would be the weight of a tetrobol deduced from the average weight of the hemidrachms.

The average weights of the hemidrachm or quarter stater denomination accords more closely to the Phocaeen standard. The number of coins known is quite large and provides an average weight of 2.48 g, an insignificant 0.03 g below the theoretical weight. Some pieces are a little below the average weight because of wear, and the wide fluctuations in weight among pieces struck from the same obverse and reverse dies (e.g. Pegasus, r., cat. III-6: 2,73, 2,6, 2,15 g) show that the adjustment

of the weight of blanks was careless. The closeness of the average weight of the hemidrachms to the theoretical weight in the most relevant issues (with Pegasus obverse, bearded head, ram or lion head) is what supports the idea of the use of the Phocaeen weight standard, although in other denominations, represented by far fewer specimens, the gap between the real and the theoretical weight is wider.

A small group of three coins, with Pegasus left or right on obverse, have weights between 1.74 and 2 g, with an average of 1.83g (cat. III-4, 7, 10). We regard them as diobols or 1/6 staters, since 1.83 g is precisely the theoretical weight of this denomination. Their reverses are of two kinds: either an irregular quartered incuse (cat. III-4, 10), or an incuse square with a large cross separating the quarters (cat. III-7) similar to that of the hemidrachm group. It is of course possible that these three pieces are very underweight hemidrachms, but as we shall see with the ram head coinages, there is evidence that the same types were used on different denominations.

The trihemibol (average weight 1.22 g) is also represented by three coins with a ram head on the obverse (cat. XII-31). One came from the Auriol hoard (Furtwängler 1978, unique a), another is in the Cores collection. and the third in a French private collection. The style of the ram, which is different from the rest, and the weights, support the view that these coins are trihemibols.

In the period 520-490 BC we have included a hemibol (cat. IV-11), types eagle head I. / incuse square, with a weight of 0.52 g, the smallest denomination so far identified in the earliest phase of Emporitian coinage. Larger denominations with the same types could of course come to light.

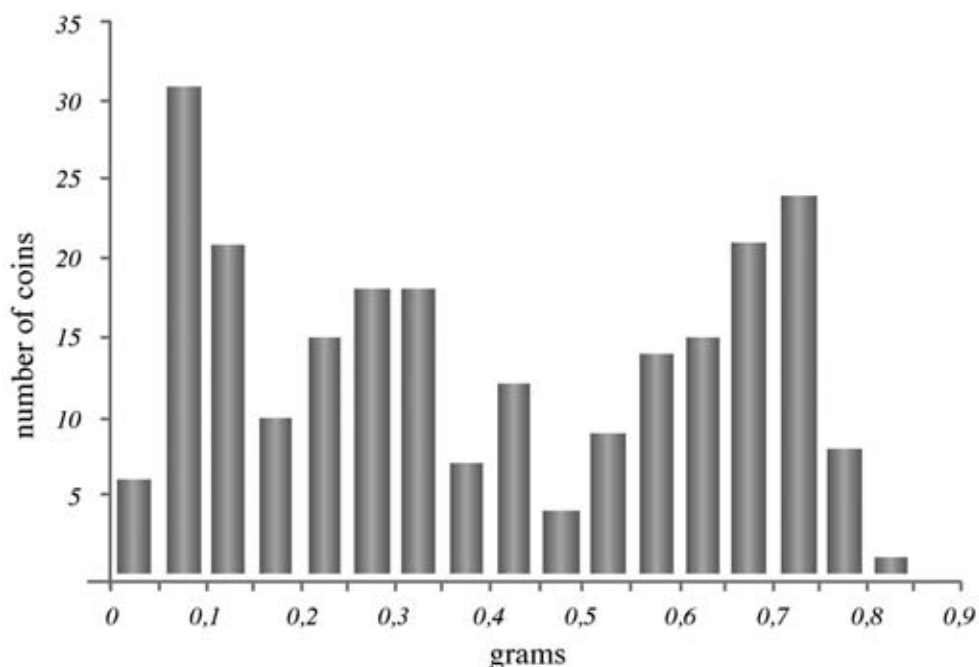


Fig. 1. Weight histogram of the dotted ram head obverse issue (cat. XII, 32-36).



The largest group among the archaic issues of Emporion is that with dotted ram head obverse (Furtwängler 1978, Qe-f; Villaronga 1997, n° 5-84), which we place in the latter part of the archaic coinage (our phase B). The great variety of weights among these pieces has already attracted attention (Furtwängler 1978, p. 74; Villaronga 1997, p. 46). The reason is presumably that there are several denominations, although they have the same obverse and reverse types (Furtwängler 1978, pp. 219-220, 223). The heaviest would be a 1/16 stater, i.e. a tritetartemorion (theoretical weight 0.69 g); another large group weighs around 0.34 g, corresponding to a 1/32 stater, and a third group weighs around 0.14 g, which represents a 1/64 stater. There are also pieces of intermediate weights with diameters that do not always correspond with their weight, which leads us to suggest that they were exchanged by weight.

After the burial date of the Auriol hoard, a new phase in the coinage of Emporion began, characterized by obverse types which copied those of Magna Graecia and Sicily, and by incuse reverses of smaller size, which could fit on the flans of the smallest fractions. A large group has an average weight of 0.95 g, which perhaps indicates the appearance of a new denomination and the adoption of a new weight standard or the reform of the old. This group includes issues with forepart of man-headed bull, two sphinxes, forepart of a lion / owl, a head covered with an eagle headdress, and Satyr head / horse (Villaronga and Benages 2011, n° 1-2, 45, 54, 55). We can also identify halves (theoretical weight 0.53 g), with amphora / eye (Villaronga and Benages 2011, n° 3-4), and quarters, with an average weight around 0.24 g, such as coins with amphora / facing head (Áureo 27/2/2002, lot 177), ram / two birds (Áureo 16-17/12/2003, lot 221; Villaronga 1997, n° 439-440), and facing head / head right (Áureo 27/2/2002, lot 175). Most of the issues on this weight standard have types on both sides; they belong to the post-archaic period, and are thus outside the scope of the present article. It is however worth noting that coinage at Emporion again evolved in parallel with that of Massalia. From 474 BC and throughout the 5th century, Massalia struck coins with an average weight of 0.9 g, according to Furtwängler (2000, p. 179). In his view, they were designed to be easily interchangeable with foreign currency circulating in the city, since *c.*0.9 g was very close to the Phocaean obol (0.92 g), the Milesian tritetartemorion (0.91 g) and the obol of Aeginetic standard used in Velia (0.93/0.96 g).

It thus seems clear that from *c.*474 BC both colonies struck a denomination of reduced weight. Although the first Emporitan issues of this new phase weighed on average about the same as the Massaliot coinages, the later ones seem, at 0.97 g, to be a little heavier on average than the contemporary Massaliot issues. Since the weights of Emporitan coinages have always tended to be a little below the theoretical weight of the denomination, it would not seem sensible to seek a weight standard below the average weight of the coins.

Several explanations for this apparent new standard are possible. Firstly, these issues may have followed the weight of the Milesian obol, 1.10-1.20 g, although their weights (as with the earlier issues on the Phocaean standard) fell short of the ideal. Similar weights occur in the Massaliot coinages of phase B and in the last Greek-Provençal issues of the *hippalektryon* type (Furtwängler 1993, p. 442, n° 16-

22; Cristofani Martelli 1975). Furtwängler (1978, p. 50) thought that the weight of the Massiliot coins corresponded to a sixth of a drachm weighing 7g, which in turn corresponded to the stater used in the electrum issues of Asia Minor.

Another possibility would be to identify the heavier denomination as a Phocaeen obol (theoretical weight 0.92 g). Certainly, the poor adjustment attested between the real weight and the theoretical could favour considering it as a Phocaean obol. At any rate, it is certain that these issues coincide with the development at Massalia, which from c.490/485 BC began to strike coins with a weight that could easily be exchanged against foreign fractions whose average weight ranged from 0.9 to 1g.

To sum up, a Phocaean standard based on a theoretical stater of 11 g can be deduced for the first Emporitan issues, among which pentobols, tetrobols, hemidrachms, diobols, trihemioobols, tritetartemoria, 1/32 and 1/64 stater have been identified. Later on, towards 480 BC, Emporion adopted another standard, which may or may not have been Phocaean, but was well adapted for exchange against other fractional coinage found in the western Mediterranean from c.480 BC.

### Technique and style

The style of the archaic coinages of Emporion is generally crude, schematic and careless, and rarely respected the proportions of the prototypes. The impression that the colony did not attract skilled engravers in this phase is reinforced by the wide variations in weights, the use of the dotted engraving technique and the large number of poorly centred specimens.

The first Emporitan issues include two types used at Massalia, the forepart of Pegasus and the lion head. Nevertheless, the images adopted by the Emporitan mint for its heavy coins were more varied than at Massalia, since to them we can add a facing Satyr head, a ram forepart, and other unidentified figures (cat. VII). Thus Emporion seems to follow the practice of its mother city Phocaea, whose issues were struck with multiple designs.

It is also worth noting that, from the beginning and almost to the exclusion of any other variant, Emporion adopted a reverse type markedly similar to that found on coinages of Asia Minor: an incuse square with a thick cross inside (*e.g.* cat. III, 5-7), sometimes with elements peculiar to it, such as an additional crosspiece (cat. VIII-23). It is also important to note that the outer ends of the cross arms often have a tendency to spread.

The incuse reverse with a heavy cross did not last long, since during the lion head issue, it was replaced by a reverse type which was unique in the archaic world, an incuse square containing a dotted cross. This was used on a large issue of fractions with a dotted ram head. This reverse was abandoned towards 480 BC, when the double-figure coinages began, sometimes bearing a legend. During the first years of the second quarter of the 5th century BC, this new coinage alternated with post-archaic series still using small and shallow incuse squares.

As at Massalia, it is possible to distinguish at Emporion a phase A comprising issues with various types and diameters, and relatively heavy in weight (dated to the end of the 6th century BC). This was followed by a phase B, characterized by the use

of small flans with a ram head on the obverse (beginning of the 5th century BC). The large number of dies noted among phase A coins (see fig. 2) suggests that output may have been great. During phase B the die-links are fewer, and the volume of coinage was probably higher than in phase A. Among the sixty coins with dotted ram head studied by Furtwängler (1978, pl. 24-27), only eight die links were identified, of which six were reverse links.

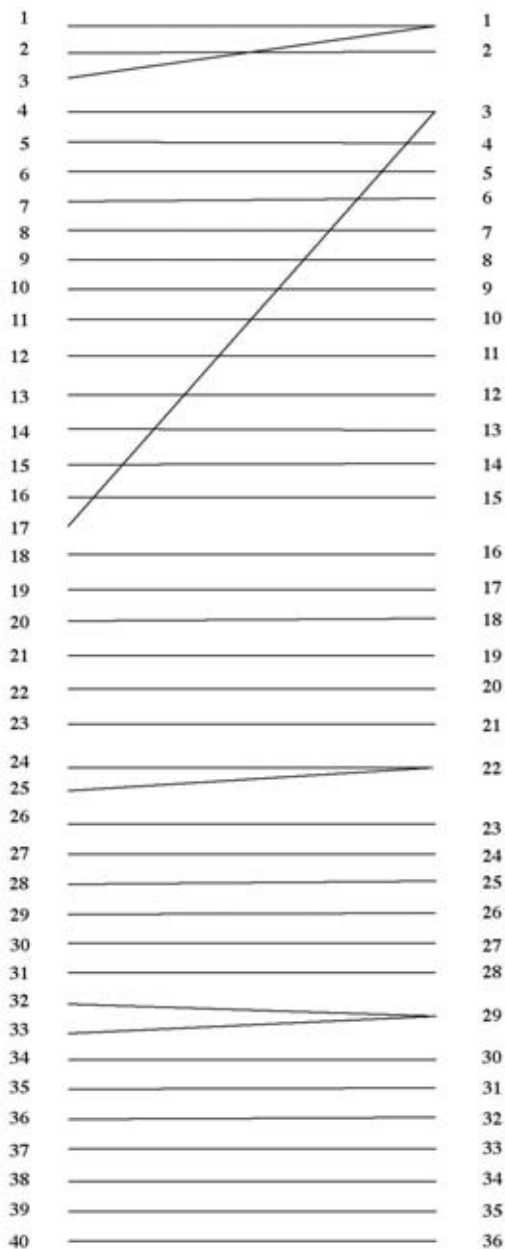
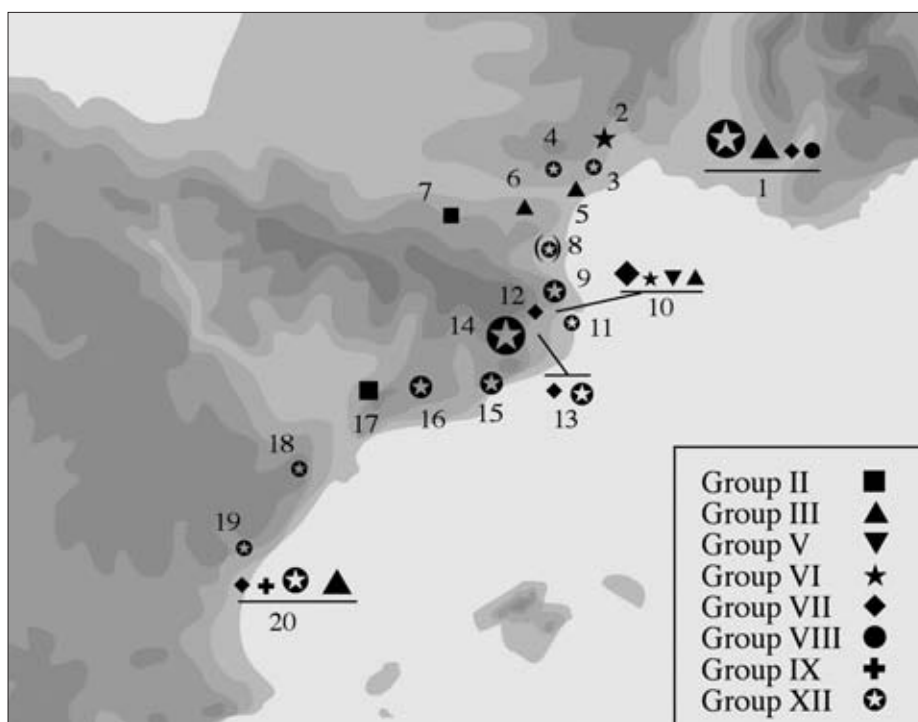


Fig. 2. Die links of the Emporitan coinages struck during phase A.

Thus, given its volume of coinage, we suggest that phase A ended around 500 BC. The heavy wear on the Emporitan coins in the Auriol hoard shows that they were struck towards the end of the 6th century BC. As at Massalia, the Emporitan mint only struck coins of small diameter during phase B. Furtwängler explains the choice of a lighter standard at Massalia as a means of facilitating small-scale transactions with natives outside the city by merchants (*kapeloi*: Furtwängler 2000, p. 175), although the facilitation of small-scale transactions within the colony probably also played a role.

### The find spots



*Fig. 3.* Findspots of archaic Emporitan coinage.

1. Auriol hoard; 2. Narbone; 3. Sigean; 4. Durban-Corbières; 5. Salses; 6. Perpignan; 7. Carcassonne; 8. Rosellon area; 9. Pont de Molins hoard; 10. Puig de les Sorres (Viladamat, Girona); 11. Emporion hoard; 12. Crespià (Girona); 13. La Creueta (Quart, Girona); 14. Empordà hoard; 15. Castell de Burriac (Cabrera de Mar, Barcelona); 16. Penedès hoard; 17. Southern Catalonia; 18. Morella hoard; 19. Torres Torres (Valencia); 20. Sagunto (Valencia).

One of most important methods for attributing coins to mints is the study of find spots. Silver coins could of course travel remarkable distances through one or more intermediaries, but find spots remain important evidence for identifying the location of a mint. In our case (fig. 3) we assume that the sample can be biased towards areas over which we can document the find spots. They are almost always chance

finds or the result of unofficial activity rather than controlled excavations, which is why so few coins are recorded, still less published. This explains the gaps which we see in the distribution pattern of recorded specimens, although the Spanish find spots are all within the natural area of trade among the Emporitans and Iberians. In France Emporitans coins are known from the Auriol Hoard and also from sporadic finds in Provence and the Rosellon. In Spain the greatest concentrations of finds are in Catalonia, especially towards the north, and the Saguntine area, where the Iberian city of Arse and its territory clearly maintained contacts with dealers who traded in the western Mediterranean. Nevertheless, we would have expected to find more of our coins in archaeological sites in the provinces of Girona and Valencia; in particular no finds have been recorded from excavations at Emporion itself, not even of the large dotted ram head issue. We are obliged to conclude that this is simply a matter of chance.

### Chronology

The evidence for dating the Emporitans coinages of the archaic period derives from the Auriol hoard, whose burial date has recently been revised by Furtwängler to *c.*475 BC (1993, 2000 and 2002; see also Chevillon, Bertaud and Guernier 2008). Coin wear, as well as some formal similarities of the designs, also suggest a possible internal arrangement and their absolute chronology.

Almost all the Emporitans types a-e, g and j of the unique group from the Auriol hoard (Furtwängler 1978, lám. 40), especially those with a Pegasus, show a high degree of wear, much greater than that shown by the Massaliot hemidrachms of phase A with the same type. They are hemidrachms struck on the Phocaeian standard, like the Massaliot coinages of phase A (525/520-490 BC). The Emporitans hemidrachms with Pegasus on the obverse are somewhat more worn than the Emporitans tritetartemoria with dotted ram head on the obverse, which suggests that the hemidrachms are earlier, although that does not mean that all ram head coins were issued at the same time, since there are different styles and denominations that suggest they were minted at different times.

The tritetartemoria with dotted ram head occur in large numbers and low state of wear in the Auriol hoard (Furtwängler 1978, grup Qe-f) suggesting that this issue had not been long in circulation before being buried. Hence, as Furtwängler (1978, p. 74) noted, they were probably struck in the first quarter of the 5th century BC; he believed that they belonged towards the end of phase B, which means that, on his revised burial date for the hoard (*c.*475 BC), the tritetartemoria would belong to the 480s BC.

As for the Emporitans issues with double types, the Auriol hoard contained an example with amphora / eye (Furtwängler 1978, unique j), showing that the idea of placing a second type inside the incuse square (sometimes circle) had been introduced by *c.*475, and marked the transition to the post-archaic phase. At Massalia, this change is also attested in the coinages of group FF (Furtwängler 1978, pp. 279-82). However, in Emporion this change was not abrupt, because for a short period the issues with incuse and figured reverses seem to have alternated, as is demonstrated

by an overstrike of a coin with two sphinxes on the obverse (Villaronga and Benages 2011, n° 1) on a coin with Satyr head / horse (Villaronga and Benages 2011, n° 54 and *Áureo* 27/2/2002, lot 158) : see Fig. 4.



*Fig. 4.* Obol from Emporion (1) with two sphinxes on the obverse and incuse square on the reverse overstruck on a coin with a horse on the reverse (2).  
(1: Chevillon coll.; 2: *Áureo* 27/2/2002, lot 158. Both enlarged).

With this group of coinages, which would have begun a little before 475 BC, Emporion introduced a new denomination (perhaps a new weight standard), obols with weights grouped around 0.89-0.98 g, together with hemiobols and tetartemoria. A similar standard, although a little lighter at *c.*0.9 g, is used at Massalia for issues not found in the Auriol hoard, i.e. issues of *c.*475 BC (Chevillon 2011); the new denominations at Emporion and Massalia may have been introduced for the same purpose. In both cases, the coinages had a similar appearance, since, designs apart, the pieces were struck on blanks measuring 9-11 mm and weighing between 0.9 and 1 g; this is why they could be inserted into an orbit of common circulation, as the Iberian peninsula hoards show.

Consequently, the obols with incuse square on the reverse and a forepart of a man-headed bull, Dionysos head or two sphinxes on the obverse began to be minted from 475 BC (Villaronga and Benages 2011, n° 1-2; Chevillon 2011, 185-7), and also issues with double types, for example the Janiform head / Heracles head, the Athena head / Gorgon head or the lion head / amphora issues (Villaronga and Benages 2011, n° 39-42, 53); to them should be added a series of hemiobols with a theoretical weight of about 0.4-0.5 g, such as the issues with a lion head / three birds, bearded head / crab and cockerel / six radial lines (Villaronga and Benages 2011, n° 23, 92, 94). In this group we must also include some tetartemoria, with weights that cluster around 0.20-0.30 g (e.g. Villaronga and Benages 2011, n° 114-117).

## Conclusions

Firstly, we should abandon the idea that Emporion began its coinage with fractions of small diameter and weight (1 g or less), since the production of the archaic period has revealed a large series of denominations, including heavy coins, that in some cases matched the heaviest ones struck in Massalia. This wide variety of denominations suggests the possibility that some of them were used in trade transactions referred to in the Pech Maho inscribed lead (Lejeune and Pouilloux 1988; Chadwick 1990; Rodríguez Somolinos 1996), although if the latter is correctly dated to *c.*450 BC, the event which it records would be a little late for this hypothesis to be plausible; in that

case the amounts recorded would not be more than quantities that could be satisfied with other denominations.

Secondly, the picture provided by archaic coinages somewhat undermines the concept of Emporion's subordination to Massalia. Massalia may have had some influence, but Emporion certainly developed its own initiatives, namely the wide range of denominations and types, and its characteristic incuse squares. At the beginning, it is evident that Emporion was unable or unwilling to attract qualified craftsmen like those working at Massalia during phases A and B.

Thirdly, it has been demonstrated that Emporion began minting a little later [earlier?] than Massalia (the Emporitan hemidrachms with Pegasus on the obverse coming from the Auriol hoard were more worn than those of Massalia), which pushes back by almost half a century the date of the first coinages of Emporion. So, it can be deduced that the first coinages of Emporion began *c.*515 BC.

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## CATALOGUE

Coins marked with \* are illustrated at **2:1** on the plates.

### **Phase A. *c.*515-500 BC**

#### **I. Uncertain Figure**

1. AR. 14 mm. 4.42 g (1).  
Phocaean pentobol.  
*Obv.* Unidentified figure.  
*Rev.* Incuse square, swastika to r.  
**1\***. 1-1. France. Private coll. The reverse die shows similarities with coin 3.1.

#### **II. Facing head of Silenus**

2. AR. 15.2-12 mm. 4.2 g (1).  
Phocaean pentobol.  
*Obv.* Facing head of Silenus.  
*Rev.* Incuse square.  
**1\***. 2-2. Figueres (Girona). 4.2 g, 15.2-12 mm. Found in the south of Catalonia.
3. AR. 13-8.4 mm. 2.86 g (1).  
Phocaean hemidrachm. Furtwängler 2002, no. 100 and pl. XIII, 3.  
*Obv.* Facing head of Silenus.  
*Rev.* Incuse square, swastika to r.  
**1\***. 3-1? Carcassonne (Aude, France). 2.86 g, 13-8.4 mm (= Furtwängler 2002, n° 100 and pl. XIII, 3). The reverse die shows similarities with coin 1.1.



**III Forepart of Pegasus**

4. AR. 10 mm. 2 g (1).  
 Phocaean diobol?  
*Obv.* Forepart of Pegasus l.  
*Rev.* Quadripartite incuse square.  
 1\*. 4-3. Sagunto (Valencia). S. V. Coll. 2 g, 10 mm. Found in Sagunto. Same reverse die as coin 10.1.
5. AR. 11-12 mm. 3.44 g (1).  
 Phocaean tetrobol.  
*Obv.* Forepart of Pegasus l.  
*Rev.* Incuse square, with wide cross.  
 1\*. 5-4. France. Private coll. 3.44 g, 12-11 mm.
6. AR. 10-13 mm. 2.48 g (6).  
 Phocaean hemidrachm. Muret 1889, n° 197 and 218. Babelon 1907, n° 2394-2395. Furtwängler 1978, Unique d 1 and 2.  
*Obv.* Forepart of Pegasus l.  
*Rev.* Incuse square, with wide cross.  
 1\*. 6-5. Paris. 2.73 g, 13-9 mm. From Auriol hoard (= Furtwängler 1978, Unique d 1).  
 2\*. 6-5. Xilxes (Casellón), F.C. coll. 2.6 g, 11 mm. Found in Morvedre (Sagunto, Valencia).  
 3\*. 6-5. France. Private coll. 2.15 g, 9.5 mm.  
 4\*. 7-6. Salses (Eastern Pyrenees) (= Benezet, Delhoste and Lentillon 2003, pp. 5-8), 2.42 g.  
 5\*. 8-7. Paris. 2.935 g, 14-10 mm. From Auriol hoard (= Furtwängler 1978, Unique d 2).  
 6\*. 9-8. France. Larozas coll. (Laudun, Gard), 2.04 g. Found in Rosellon?
7. AR. 9.5 mm. 1.74 g (1).  
 Phocaean diobol.  
*Obv.* Forepart of Pegasus l.  
*Rev.* Incuse square, with wide cross.  
 1\*. 10-9. France. Private coll. 1.74 g, 9.5 mm.
8. AR. 12 mm. 2.41 g (1).  
 Phocaean hemidrachm.  
*Obv.* Forepart of Pegasus l., crude style.  
*Rev.* Incuse square, swastika r.  
 1\*. 11-10. France. Private coll. 2.41 g, 12 mm.
9. AR. 9-13 mm. 2.38 g (7).  
 Phocaean hemidrachm. Muret 1889 n° 217. Babelon 1907 n° 2403. Furtwängler 1978, Unique e 1 and 2.  
*Obv.* Forepart of Pegasus r.  
*Rev.* Quadripartite incuse square, sometimes with wide cross.  
 1\*. 12-11. France, private coll. 2.81 g., 10-11 mm.  
 2\*. 13-12. France, private coll. 2.52 g, 12 mm.  
 3\*. 14-13. Paris. 2.88 g, 13-11 mm. From Auriol hoard (= Muret 1889 n° 217 = Babelon 1907 n° 2403 = Furtwängler 1978, p. 283, unique e 2).



- 4\*. 15-14. Marseille. 2.52 g, 12-9 mm. From Auriol hoard (= Furtwängler 1978, p. 283, Unique e 1).  
 5\*. 16-15. France, private coll. 2.18 g, 8.5-9.5 mm.

10. AR. 10 mm. 1,88 g (2).

Phocaeen diobol.

*Obv.* Forepart of Pegasus r.

*Rev.* Quadripartite incuse square.

- 1\*. 17-3. Madrid. Cores 6. 1.99 g, 10 mm. Found in Puig de les Sorres (Girona). Same reverse die as coin 4.1.  
 2\*. 18-16. Vall d'Uixó (Castellón), M.M. coll. 1.77 g, 10 mm. Found in Arse (= Ripollès-Llorens 2002, p. 519, n° 1).

#### IV. Eagle head

11. AR. 7 mm. 0.52 g (1).

Phocaeen hemiobol.

*Obv.* Eagle head l.

*Rev.* Incuse square. Its style shows similarities with coin 10.2 (Pegasus r.; MM coll. 1.77 g) and 15.1 (Heracles head; Chevillon coll.).

- 1\*. 19-17. France. Private coll. 0.52 g, 7 mm.

#### V. Lion walking l

12. AR. 10-13 mm. 3.17 g (1).

Phocaean tetrobol.

*Obv.* Lion walking l.

*Rev.* Incuse square, with wide cross.

- 1\*. 20-18. Madrid. Cores coll. 10. 3.17 g, 12-9.5 mm. Found in Puig de les Sorres (Girona).

#### VI. Heracles head

13. AR. 9-10 mm. 2.28 g (1).

Phocaean hemidrachm.

*Obv.* Heracles head r.

*Rev.* Incuse square.

- 1\*. 21-19. France. Chevillon coll. 2.28 g, 10.1-11.2 mm. Found near Narbone.

14. AR. 10 mm. 2.63 g (1).

Phocaean hemidrachm.

*Obv.* Five lines displayed in arch. Heracles head?

*Rev.* Quadripartite incuse square divided diagonally.

- 1\*. 22-20. Madrid. Cores coll. 13. 2.63 g, 10 mm. Found in Puig de les Sorres (Girona).

#### VII. Uncertain objects

15. AR. 10 mm. 2.22 g (1).

Phocaean hemidrachm.

*Obv.* Forepart of Pegasus r.?

*Rev.* Incuse cross.

- 1\*. 23-21. Madrid. Cores coll. 14. 2.22 g, 10 mm. Found in La Creueta (Quart, Girona).

16. AR. 11-12 mm. 3.2 g (1).  
 Phocaean tetrobol.  
*Obv.* Uncertain object, rose or similar?  
*Rev.* Quadripartite incuse square divided diagonally.  
 1\*. 24-22. Castellón (Spain). F.C. coll. 3.2 g, 12-11 mm. Found in Morvedre (Sagunto, Valencia). Same reverse die as coins 17-1?
17. AR. 10-11.5 mm. 3.185 g (1).  
 Phocaean tetrobol. Muret 1889 n° 251. Babelon 1907 n° 2431. Furtwängler 1978 p. 284, Unique g.  
*Obv.* Uncertain object, tentatively identified by Furtwängler as the head of a tuna fish.  
*Rev.* Quadripartite incuse square divided diagonally.  
 1\*. 25-22? Paris, 3.185 g. From Auriol hoard (= Muret 1889 n° 251 = Babelon 1907 n° 2431 = Furtwängler 1978, p. 284, Unique g). Same reverse die as coins 16-1?
18. AR. 9-10 mm. 2.02 g (1).  
 Phocaean hemidrachm.  
*Obv.* Schematic figure. Several lines crossing.  
*Rev.* Incuse square, with wide cross.  
 1\*. 26-23. Madrid. Cores coll. 3. 2.02 g, 10-9 mm. Found in Crespià (Girona).
19. AR. 8.6-11 mm. 2.59 g (1).  
 Phocaean hemidrachm.  
*Obv.* Unidentified figure.  
*Rev.* Quadripartite incuse square, with wide cross.  
 1\*. 27-24. France. Private coll. 2.59 g, 11-8.6 mm. It could be an overstrike.
20. AR. 9-11 mm. 1.79 g (1).  
 Phocaean diobol.  
*Obv.* Unidentified figure.  
*Rev.* Incuse square, with wide cross.  
 1\*. 28-25. France. Private coll. 1.79 g, 9-11 mm.
21. AR. 10 mm. 3.57 g (1).  
 Phocaean tetrobol.  
*Obv.* Horse head r.?  
*Rev.* Quadripartite incuse square, with wide cross.  
 1\*. 29-26. Madrid. Cores coll. 8. 3.57 g, 10 mm. Found in Puig de les Sorres (Girona).
22. AR. 10 mm. 2.37 g (1).  
 Phocaean hemidrachm.  
*Obv.* Horse head r.?  
*Rev.* Incuse square.  
 1\*. 30-27. Madrid. Cores coll. 5. 2.37 g, 10 mm. Found in Puig de les Sorres (Girona).

### VIII. Ram head

23. AR. 12-14.5 mm. 4.24 g (1).  
 Phocaean pentobol?  
*Obv.* Ram head r.

*Rev.* Six-partite incuse square; one line upright and two horizontal.

1\*. 31-28. France. Private coll. 4.24 g, 12-14.5 mm

24. AR. 10 mm. 2.92 g (1).

Phocaeen hemidrachm.

*Obv.* Ram head r.; the engraving is partially dotted.

*Rev.* Quadripartite incuse square divided diagonally.

1\*. 32-29. France. Private coll. 2.92 g, 10 mm.

25. AR. 9 mm. 1.8 g (1).

Phocaeen diobol.

*Obv.* Ram head r.; dotted engraving.

*Rev.* Quadripartite incuse square divided diagonally.

1\*. 33-29? Private coll. 1.8 g, 9 mm (<http://www.identificacion-numismatica.com/ibericas-griegas-y-galas-f2/obolo-griego-t30946.htm> [visited 13/5/2010]). Same reverse die as coins 24.1?

26. AR. 9-10.5 mm. 2.255 g (1). - h

Phocaeen hemidrachm.

*Obv.* Ram head r.

*Rev.* Incuse square, with wide cross.

1\*. 34-30. Paris, 2.255 g, 10.5-9 mm. From Auriol hoard (= Muret 1889 n° 355; Furtwängler 1978, p. 283, Unique b).

### IX. Lion Head

27. AR. 8.6-11 mm. 2.76 g (2).

Phocaeen hemidrachm.

*Obv.* Lion head r. Crude engraving.

*Rev.* Incuse square, with wide cross.

1\*. 35-31. France. Private coll. 3.05 g, 10 mm.

2\*. 35-31. Xilxes (Castellón). F. C. coll. 2.46 g, 13-9 mm. Found in Morverdre (Sagunto, Valencia).

### X. Facing head

28. AR. 7-8 mm. 0.34 g (5).

1/32 Phocaeen stater.

*Obv.* Facing head, lion?, with radiate crown?

*Rev.* Incuse square, with wide cross.

1\*. 36-32. France. Private coll. 0.43 g. Found in Sigean (Aude, France).

2\*. 36-32. France. Private coll. 0.35 g, 7 mm.

3\*. 37-33. France. Private coll. 0.28 g, 8 mm.

4\*. 38-34. France. Private coll. 0.31 g, 7-8 mm.

5\*. 39-35. France. Private coll. 0.34 g, 7 mm.

### XI. Female head

29. AR. 5-6 mm. 0.19 g (1).

1/64 Phocaeen stater.

*Obv.* Female head? r.

*Rev.* Incuse square with wide cross.

1\*. 40-36. France. Private coll. 0.19 g, 5-6 mm.

**Phase B. c.500-480 BC****XII. Ram head (dotted)**

30. AR. 10-14 mm. 2.53 g (2).

Phocaean hemidrachm. Muret 1889 n° 288. Babelon 1907: pl. 82, 3. Furtwängler 1978, p. 283, Unique c. Chevillon 2002, p. 31, fig. 2.

*Obv.* Ram head r.; crude engraving, using dots.

*Rev.* Incuse square containing a dotted cross.

**1\***. 41-37. Paris. 2.85 g, 13-10 mm. From Auriol hoard (= Muret 1889 n° 288 = Babelon 1907, pl. 82, 3 = Furtwängler 1978, p. 283, Unique c). According to Furtwängler (p. 82) they were struck contemporaneously with coins from group Qe/Qf; see also Chevillon 2002, p. 31, fig. 2.

**2\***. 41-37. Valreas (France). Chevillon coll. Durban-Corbières. 2.20 g, 14-11 mm. Site du Calla (11)

**3\***. 41-37. France. Private coll. 1.55 g. Found in Sigean (Aude 11), near Pech Maho.

31. AR. 8-10 mm. 1.22 g (3).

Phocaean trihemiobol. Furtwängler 1978, p. 238. Reynaud 1983, p. 6, n° 3.

*Obv.* Ram head r.; crude engraving, using dots. Furtwängler 1978, p. 238, sees similarities with the style of coins Qe-Av.1.

*Rev.* Irregular incuse square containing a dotted cross. It could be the type defined as 'dépression en fer à cheval'.

The reverse of the Reynaud specimen shows a Phocaean incuse square, but the following dies have the distinctive Emporitan dotted cross.

**1\***. 42-38. France. Private coll. 1.30 g. From a hoard probably found in Provence (= Reynaud 1983, p. 6, n° 3).

**2\***. 43-39. Marseille, 1.25 g, 9-7 mm. From Auriol hoard. Furtwängler 1978, p. 283, Unique a. Chevillon 2002, p. 31, fig. 3.

**3\***. 44-39. Madrid. Cores coll. 18. 1.10 g, 10-9 mm. Found in Castell de Burriac (Cabrera de Mar, Barcelona).

32. AR. Three groups of *c.*9 / 8-7 / 6-5 mm., weighing *c.*0.70 / 0.35 / 0.17 g.

Phocaean tritetartemoron and fractions (1/32 and 1/64). Furtwängler 1978, group Qf. *CNH*, p. 3, n° 1. Villaronga 1997, 1.2.2.1, n° 49-83.

*Obv.* Ram head r.; dotted engraving.

*Rev.* Incuse square containing a dotted cross.

**1-37\***. Furtwängler 1978: group Qf. From Auriol hoard. Coin illustrated is Auriol group Qf-19.

**38-87\***. Villaronga 2003, pp. 24-26, n° 95-120, 123-146. A part of these were published by Villaronga 1997 and others were auctioned by *Áureo* 27/2/2002. Coin illustrated is number 54.

**88**. Paris A. F. 493. From Morella hoard (= Ripollès 1985, n° 3 = Villaronga 1997, n° 51).

**89\***. Barcelona, GNC 20499. From Pont de Molins hoard (= Campo 1987, p. 154, n° 3 = Campo 2003, fig. 3, n° 5 = Villaronga 1997, n° 58).

**90**. Villaronga 1997: n° 53. From Penedès hoard.

**91-92**. Madrid, IVDJ 2-3.

**93**. *Áureo* 26-27/10/2004, lot 107, 0.06 g.

**94**. *Áureo* 21/9/2006, lot 185, 0.69 g.

95. Áureo 28/4/2004, lot 194, 0.25 g.  
 96. Áureo 21-22/10/2003, lot 113, 0.15 g.  
 97. Hervera 4/7/1997, lot 92, 0.27 g.  
 98. Hervera 11/3/1999, lot 40, 0.1 g.  
 99. Áureo 7/3/2001, lot 210, 0.43 g.  
 100. Madrid. Cores coll. 9, 0.9 g. Found in Puig de les Sorres (Girona).  
 101\*. Madrid. Cores coll. 0.67 g. Found in La Creueta (Quart, Girona).
33. AR. 7-6 mm. 0.08g g (1).  
 1/64 Phocaean stater. Villaronga 1997, n° 70-71.  
*Obv.* Ram head r.; three dots below; dotted engraving.  
*Rev.* Incuse square, containing a dotted cross.  
 1\*. Cores 12.  
 2-3. Barcelona. Private coll. From Empordà hoard (= Villaronga 1997 n° 70-71 = Villaronga 2003, p. 24, n° 121-122).
34. AR. 6 mm. c.0.35 / 0.17 g.  
 1/32, 1/64 Phocaean stater. Villaronga 1997, 1.2.2.2, n° 84.  
*Obv.* Ram head r.; dotted engraving.  
*Rev.* Incuse square, containing a dotted cross and a circle.  
 1\*. Villaronga 1997, n° 84, 0.11 g. From Empordà hoard (= Villaronga 2003, p. 26, n° 148).  
 2\*. Áureo 27/2/2002, lot 201, 0.25 g. From Empordà hoard (= Villaronga 2003, p. 26, n° 147).
35. AR. 8 mm. 0.77 g (1).  
 Phocaean tritartemorion.  
*Obv.* Ram head l.; partially dotted engraving.  
*Rev.* Incuse square with 'dépression en fer à cheval', containing a dotted cross.  
 1\*. 1-1. Paris. 0.77 g, 8 mm. From Auriol hoard. Furtwängler 1978, p. 214, Qe/1.
36. AR. Three groups measuring c. 9 / 7 / 6-5 mm, weighing c. 0.70 / 0.35 / 0.17 g.  
 Phocaean tritartemorion and fractions (1/32, 1/64). Furtwängler 1978: group Qe. CNH, p. 3, n° 2. Villaronga 1997, 1.2.1.1, n° 5-44.  
*Obv.* Ram head l.; dotted engraving.  
*Rev.* Incuse square, containing a dotted cross.  
 1-34\*. Furtwängler 1978, group Qe. From Auriol hoard. Coin illustrated is number 6.  
 35-105\*. Villaronga 2003, pp. 20-22, n° 17-87. From Empordà hoard. A part of these were published by Villaronga 1997 and others were auctioned by Áureo 27/2/2002. Coin illustrated is number 42.  
 106. Barcelona, GNC 20498. From Pont de Molins hoard (= Campo 1987, p. 154, n° 2 = Villaronga 1997, n° 29).  
 107. Barcelona, GNC 76005. From Emporion-1926 hoard (= Campo and Sanmartí 1994, fig 6, n° 12 = Villaronga, 1997, n° 35).  
 108. Madrid, IVDJ 1 (= Villaronga 1997, n° 12).  
 109. Sagunto (Valencia, Spain). S. Vela coll. 0.31 g. Found in Torres Torres (Valencia, Spain) (= Ripollès and Llorens 2002, p. 518, n° 16).  
 110. Áureo 21-22/10/2003, lot 3320, 0.30 g.  
 111. Áureo 5/3/2003, lot 4, 0.28 g.

112. Áureo 16/3/2006, lot 7, 0.39 g.  
 113. Áureo 27/10/2005, lot 60, 0.21 g.  
 114. Hervera 20/5/2004, lot 150, 0.3 g.  
 115. Sagunto (Valencia, Spain), S. Vela coll. 0.23 g.  
 116. Sagunto (Valencia, Spain), S. Vela coll. 0.42 g (incomplete).  
 117. Martí Hervera & Soler and Llach 20/4/2010, lot 33, 0.3 g.  
 118. Madrid. Cores coll. 19, 0.5 g.  
 119. Madrid. Cores coll. 22. 0.65 g. Found in La Creueta (Quart, Girona).  
 120\*. Saint-Germain-en-Laie, priv. coll.
37. AR. Two groups measuring c.8 / 6 mm., weighing c.0.35 / 0.17 g.  
 1/32, 1/64 Phocaean stater. Villaronga 1997, 1.2.1.2, n° 45-48.  
*Oby.* Similar.  
*Rev.* Incuse square, containing a dotted cross and a circle.  
 1-7\*. Villaronga 2003, p. 22, n° 88-94. From Empordà hoard (n° 88, 90-91 and 94 = Villaronga 1997: n° 45-48; n° 89, 92-93 = Áureo 27/2/2002, lots 192, 198 and 204). Coins illustrated are numbers 2 and 5.

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PLATE 1  
(All 2x)



1.1



2.1



3.1



4.1



5.1



6.1



6.2



6.3



6.4



6.5



6.6



7.1



PLATE 2  
(All 2x)



PLATE 3  
(All 2x)



15.1



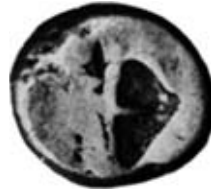
16.1



17.1



18.1



19.1



20.1



21.1



22.1



23.1



24.1



25.1



26.1



PLATE 4  
(All 2x)



27.1



27.2



28.1



28.2



28.3



28.4



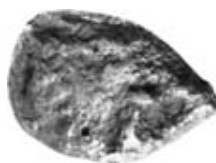
28.5



29.1



30.1



30.2



30.3





