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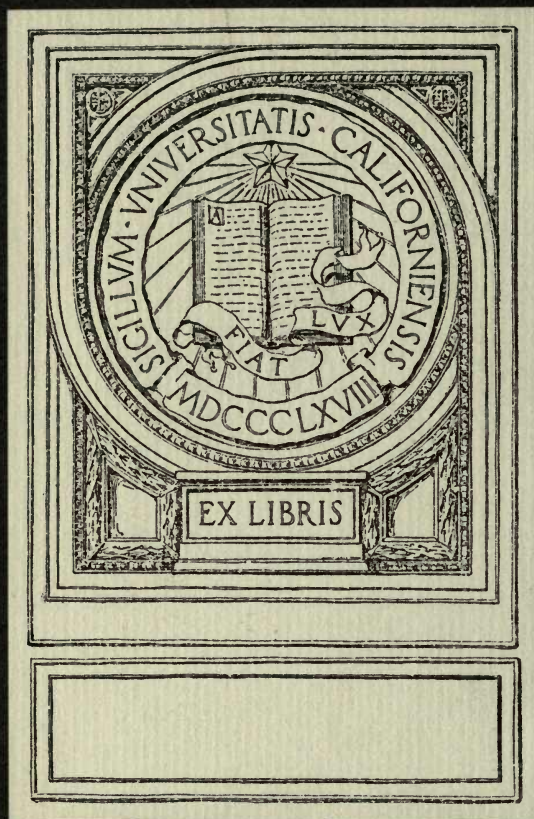
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THE BRITISH ACADEMY

The Silver Coinage of Crete

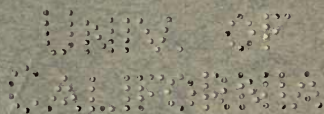
A Metrological Note

By

George Macdonald, C.B.

Fellow of the Academy

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A METROLOGICAL NOTE

By GEORGE MACDONALD, C.B.

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INTRODUCTORY

A YEAR or two ago I was able to acquire for the Hunterian Museum an extremely interesting silver stater, struck at the Cretan city of Itanus. It had formed part of a small collection belonging to Sir Henry Yule, the editor of *Marco Polo*; but there was nothing to indicate how or when it had come into his possession. It appears to be restruck, as are so many other Cretan coins. The style is good, and points unmistakably to a date *circa* 400 B.C. The description is as follows:

Helmeted head of Athena l. [Ι]ΤΑΝΙΩ[N] Eagle standing l., looking backwards; in field r., small Triton; incuse square.

[PLATE, Fig. 1]

The types, it will be seen, are not unfamiliar. What makes the coin remarkable is its weight; it turns the scale at 14.58 grammes (225 grains), whereas the sixteen other known specimens of its class range from a maximum of 11.74 grammes to a minimum of 10.18. The difference is so great as to be explicable only on the hypothesis that the standard is not the same. No clue to the puzzle could be found in the recognized authorities. A systematic survey of Cretan coin-weights was accordingly undertaken, in the hope that a clearer light would be thrown upon the matter. The results can make no claim to finality. But they do seem to carry us some way farther forward, and it may therefore be worth while putting them on record. Professor Gardner's recent book affords convincing proof of the importance of this obscure and difficult department of numismatic study.

From more than one point of view Crete offered special advantages for a survey of the kind. The island is a limited and self-contained

area, and there was already in existence what may not unfairly be called a *corpus* of its coins.¹ That is to say, the material was not excessive in amount, and much of it was readily available. On the other hand, its proper chronological arrangement will always be exceptionally hard to determine. Unskilled engravers were employed in the Cretan mints far more freely than in the mints of any other part of the Hellenic world. Consequently, in applying the criterion of style, it is not always possible to distinguish between degeneration, strictly so called, and mere clumsiness in the copying of first-rate models, such as is apparent in PLATE, Fig. 2, when contrasted with PLATE, Fig. 1. The broad lines of development are, indeed, obvious enough. It is in the handling of individual specimens that trouble is apt to arise. Yet, for the right solution of a metrological problem, reasonable precision of date may be hardly less vital than reasonable precision of weight. At every step, too, progress is more or less seriously hampered by the general limitation that besets all inquiries into Greek coin-standards—uncertainty as to what should be regarded as the norm for each particular group of pieces. Even well-preserved specimens struck from the same dies hardly ever agree exactly, and sometimes the variation is considerable. The truth would appear to be that Greek mint-masters had perforce to acquiesce in rough-and-ready methods of calculation. In default of elaborate mechanical appliances, they probably put their chief trust in the acquired instinct of their skilled workmen, who would be given a definite quantity of metal with instructions to produce from it a specified number of coins.

CURRENT VIEWS: NEED FOR THEIR REVISION.

According to the hitherto accepted opinion two standards, and two standards only, were employed in Crete prior to the introduction of the Imperial coinage: the first was a debased form of the Aeginetic, and the second was the Attic, which began to be used *circa* 300 B. C. and which ultimately prevailed everywhere. The conclusions thus summarized are those of the *Historia Numorum*, and they therefore represent the outcome of a review which was broad and comprehensive rather than detailed. Closer examination shows that considerable modifications are needed. It reveals the fact that, if we are to get at the truth, we must look not merely at the coins as a whole, but

¹ J. N. Svoronos, *Numismatique de la Crète ancienne* (Mâcon, 1890). During the past twenty or thirty years many additional examples have been published in sale-catalogues and elsewhere. Due account was taken of these in the statistics that were compiled for the purposes of this survey.

to some extent also at the issues of individual cities. During the fifth and fourth centuries, more especially, there was far less homogeneity than is usually supposed. Once this has been realized, the problem assumes a new aspect. Meanwhile it can be most conveniently approached through the quotation of Head's *ipsissima verba*¹:

'Down to this time [*i.e.* about the end of the fourth or the beginning of the third century B.C.] the weight standard employed throughout the island had been the Aeginetic, or more properly a debased form of the Aeginetic approaching in weight to the Persic standard which prevailed along the south coasts of Asia Minor and in Cyprus. After the age of Alexander, whose coinage has left but slight traces in Crete (although the absence of Cretan coins in the third century suggests the inference that the currency of the island was at this time Alexandrine), the Attic standard creeps in and replaces the older Aeginetic. In the second century a general revival of the coinage takes place, at first on the pattern of the new Athenian tetradrachms, which afterwards give place to local Cretan types. This coinage continues sporadically until the conquest of Crete by Q. Caecilius Metellus in B.C. 67 when autonomous issues for the most part appear to have been put an end to, until, in the time of the Empire (Augustus to Trajan), a new Romano-Cretan coinage makes its appearance.'

PREVALENCE OF THE AEGINETIC STANDARD PROPER: TWO NORMS DISTINGUISHABLE.

There can be no doubt as to the Aeginetic standard having been employed in Crete from the earliest period of coinage there, or in other words from *circa* 480 B.C. onwards. But it is hardly justifiable to describe the Cretan form of it as 'debased', since that term, as applied to money, conveys a suggestion of deliberate intention. The fall in weight can be accounted for in a perfectly natural way. Wherever a coin-standard spread from one region to another by the method of gradual infiltration, some reduction during the process was virtually inevitable. The phenomenon recurs again and again, and it can be very simply explained. We have seen that in Greek mints the weighing of blanks was not carried out with the scrupulous nicety that modern invention has made possible. Under Gresham's Law it would doubtless be the heavier specimens that would find their way abroad. But, in the course of their travels, even these would be brought below the normal through the wear and tear of circulation. It would thus be 'specimens reduced by a natural and inevitable process that would serve as a model when the standard came to

¹ *H. N.*¹, pp. 383 f.

be introduced elsewhere. The more numerous the intermediate stages, the lower would be the level that was finally touched. The Aeginetic standard had, of course, to travel southwards through the Archipelago before it could take root in Crete, and we catch an instructive glimpse of it upon its journey. The norm for the silver stater of Aegina in its original home may be put at 12·60 grammes, although that maximum is rarely attained and still more rarely exceeded. By the time it had reached the Cyclades in its progress southwards, it had lost fully half a gramme. Imhoof-Blumer says of the archaic coins of that island group, which are somewhat older than the earliest of the Cretan issues, that 'the weight of the best preserved staters is twelve grammes on the average, and is in point of fact more frequently below that figure than above it'.¹ Assuming the same ratio of decline to be maintained, we should expect to find the Cretan norm in the neighbourhood of 11·40 grammes. What are the facts?

If we were to take Crete as a whole, disregarding for the moment the differences between individual cities and making no allowance for the way in which the condition of specimens may vary,² we might fix as a rough average for the three chief denominations—

Staters or Didrachms	11 grammes.
Drachms	5·40 grammes.
Hemidrachms	2·60 grammes.

These, it must be remembered, are averages only. If the figures relating to the staters could be set out in the form of a graph, the curve might rise as high as 12·25 on one side of the line and might sink as low as 9·40 on the other,³ an excess over 12 being, however, of more common occurrence than a fall below 10. The other denominations, if similarly treated, would show a similar oscillation, although the distance between the extremes would naturally be less. Tetrobols were occasionally struck,⁴ and it is important that these

¹ *Griech. Münzen*, p. 13.

² However desirable it might be to allow for this factor, it is not possible to do so, since the 'sources' seldom trouble to note the condition of the pieces that they register.

³ Even these limits are exceeded in a few exceptional cases. Thus Svoronos (*op. cit.*, p. 160, No. 25) records a stater of Gortyna, now in Berlin, which is said to weigh 12·95 grammes. A misprint is, of course, possible, and at present the statement cannot be verified. At the other extreme is the stater of Itanus which was published in *Num. Chron.*, 1913, p. 384. It scales no more than 7·68 grammes, but is admittedly 'badly worn, hence its low weight'.

⁴ I have noted an unmistakable group of four at Cnossus, with an average weight of 3·91 grammes. Two of these are in the Hunter Collection (*Catalogue*, ii. p. 175, Nos. 15 f.), and the latter of them is figured here (PLATE, Fig. 7).

should not be mistaken for abnormally light drachms or abnormally heavy hemidrachms. Where, as at Cnossus, there are drachms and hemidrachms belonging to the same issue, the distinction is quite clear. Smaller denominations, such as obols, hemiobols, and tri-hemiobols, are not infrequent, but in the present state of our knowledge an examination of the weights of these would not be worth the trouble it would cost.

Based though they are on the coinage of the island as a whole, the averages given above are sufficiently high to make it practically certain that the reduction which the Aeginetic standard underwent in Crete was the outcome of purely general causes. At the same time it is not altogether satisfactory to be confronted with a stater of 11 grammes where one of about 11.40 was anticipated. It therefore becomes necessary to see whether a better result can be got by considering the issues of individual cities. Even a superficial scrutiny brings marked differences to light. Thus, out of 211 staters of Phaestus, of whose weights I have been able to secure a record, there are only 17, or 8.05 per cent., that fall below 11 grammes. At Gortyna with 198 staters the corresponding percentage is 10.1. At Cnossus, on the other hand, with 128 it rises as high as 41.5. A contrast so startling affords *prima facie* grounds for suspecting the presence of two distinct norms. And, if we probe the matter farther, we shall find that the suspicion is more than justified. Here a brief digression on procedure is required.

The difficulty of determining the norm in any particular case has already been alluded to. The obvious plan is to calculate the average weight of all the members of the group in question. Indeed, where only a few coins are available, there is nothing else to be done. At the best, however, the results are apt to be of doubtful value; two or three abnormal pieces may disturb the balance of the whole. After a good deal of experiment I am convinced that by far the most trustworthy method is one originally suggested by M. E. Babelon,¹ and first turned to practical account by Mr. G. F. Hill²—the construction, with the aid of squared paper, of what may be termed a 'table of frequency'. Each column of squares is regarded as representing some small fraction of the unit, a twentieth (say) of a gramme, and a series of such columns is marked accordingly, beginning with the heaviest coin in the group and continuing in regular descent until the lightest has been reached. Within the limits thus staked off the weights of the various specimens are then indicated by dots

¹ *Traité*, i. pp. 577 f., note 4.

² *Num. Chron.*, 1906, pp. 342 f.

placed inside the blank squares, one to a square and each in its appropriate column. The outcome is a complete conspectus of the weights of the group. While abnormal examples are revealed as abnormal and are not allowed to mar the general effect, the approximate position of the norm stands out conspicuously in the shape of a solid block of dots, very often crowned by a more or less prominent projection.¹

As was hinted above, it is essential to the success of the method just described that the coins available for the construction of the tables should be reasonably numerous. Consequently, although an attempt was made to apply it to the Aeginetic staters of all of the Cretan towns, there were only four cases in which a perfectly certain and definite result was obtained. These were Gortyna, Phaestus, Cnossus, and Cydonia. At the two former towns the norm lay between 11.20 and 11.85 grammes, being slightly heavier at Gortyna than at Phaestus. At the two latter it lay between 10.65 and 11.30; being rather lighter at Cydonia than at Cnossus. We shall not be far wrong if we fix it at 11.55 for Gortyna and Phaestus (with a tendency to sink lower at Gortyna and to rise higher at Phaestus), at 11.10 for Cnossus, and at 10.95 for Cydonia.² The drachms of the same four towns, when tested in the same manner, bear witness to a similar difference of norm. Further, the evidence from the remaining cities of Crete, incomplete as it is, is useful for confirmation; in the great majority of instances the lighter norm would appear to have been followed. It will be observed that at Gortyna and Phaestus the reduction in the weight of the Aeginetic stater, as compared with its weight in the Cyclades, is even less than we were prepared for. We may conclude that these were the two earliest of the Cretan towns to strike their own money, and that it was from them that the practice spread to the other parts of the island. This gives a new significance to the archaic staters with the quaint legends through which the types are made to proclaim themselves 'the stamp of Gortyna' (PLATE, Fig. 3) and 'the stamp of the Phaestians' (PLATE, Fig. 4).³

It is, of course, possible—though hardly probable—that the Aeginetic standard reached the northern side of Crete by a different and more circuitous route, the longer journey involving a greater loss

¹ For a practical example, see E. S. G. Robinson in *Num. Chron.*, 1915, p. 261.

² This, too, although there has been excluded from the table the specially light set of Cydonian staters which will be dealt with presently.

³ It is interesting to find that one of these archaic staters, which is uninscribed and may, therefore, belong to either city, is restruck upon a stater of Siphnos: it weighs 11.76 grammes. See Imhoof-Blumer, *Antike griechische Münzen*, p. 13 and cf. *supra*, p. 4.

than would have been incurred if the direct line from the Cyclades had been followed, as it apparently was to Gortyna and Phaestus. One thing, however, is clear. We may dismiss the idea that the prevalence of the Persic standard on the southern coasts of Asia Minor and in Cyprus had any influence in bringing about the reduction we have been discussing. The Cretan staters, which not infrequently approach or even exceed 12 grammes, can hardly have been interchangeable by tale with staters of the Persic standard, for which a maximum of 11.50 may safely be assumed. And, unless a system of interchange was secured, no practical purpose would have been served by the reduction. A workable *agio* could have been arrived at without it. Moreover, although it is notorious that restriking was a very common custom in the mints of Crete, I have not met with a single instance of a coin of Persic weight being selected for such treatment, whereas the choice of foreign coins of Aeginetic weight has frequently been noted.¹

Incidentally, the testimony of restruck coins throws an interesting light on the official attitude towards the two distinct norms whose existence within the island was revealed by our tables of frequency. The difference between them would seem to have been ignored. Both at Gortyna and at Phaestus the mint-masters used staters of Cnossus as *flans* on which to impress their own types,² thus affording another proof of that neglect of scrupulous exactitude which has already been mentioned as characteristic of Greek moneyers. The bulk of the pieces struck on the Aeginetic standard in Crete must have been looked upon as readily interchangeable, although each city continued, as a rule, to maintain at its own mint the particular norm which it had adopted when it first began to issue coins. Here and there exceptions may perhaps be detected. At Praesus, for example, the table of frequency, inconclusive though it be owing to lack of numbers, seems to suggest that the older staters were minted upon the heavier norm and their successors upon the lighter one. At Lyttus, again, something of the same sort may have happened,

¹ Thus we have staters (Svoronos, *op. cit.*, p. 159, No. 8, and p. 160, No. 25), drachms (*ibid.*, p. 66, No. 5), and hemidrachms (*ibid.*, p. 163, No. 42) of Aegina itself; drachms (*ibid.*, p. 261, No. 41) and hemidrachms (*ibid.*, p. 279, No. 17) of Larissa in Thessaly; and hemidrachms of Argos (*ibid.*, p. 270, No. 7, and p. 279, Nos. 16 f.). As to staters of Cyrene (*ibid.*, p. 165, Nos. 65 f., p. 262, No. 53, and p. 263, No. 59) and drachms of the same city (*ibid.*, p. 278, No. 11) see Robinson in *Num. Chron.*, 1915, p. 263.

² e.g. Svoronos, *op. cit.*, p. 162, No. 36, and p. 255, No. 2. The latter of these weighs only 10.15 grammes, showing that it was not simply the heavier pieces that were chosen.

although there, in the absence of any well-defined change of types, nothing short of a careful examination of the whole of the actual coins would enable one to say whether chronology and metrology were in agreement as to a line of demarcation. But at none of the four cities for which reasonably full statistics were procurable does the table give a clear indication of a transition from one norm to the other.¹ Tradition, entrenched behind convention, did not deem it needful to discriminate.

SPORADIC APPEARANCE OF A DEBASED FORM OF THE AEGINETIC STANDARD.

The general truth, then, remains as stated. The statement, however, was expressly limited to 'the bulk' of the pieces struck on the Aeginetic standard in Crete. So far as I am aware, it has not hitherto been recognized that at one time there was employed, in a particular corner of the island, a variety of the Aeginetic standard which may quite legitimately be called 'debased', and whose staters can hardly have been interchangeable with those of either of the ordinary norms. The reason for the debasement is quite obscure. But the evidence for it seems indisputable, and accordingly the coins concerned have up to this point been left out of account. They form a class by themselves, and the fact that this has not previously been noticed is undoubtedly responsible for much of the ill repute that has come to attach to the Cretan form of the Aeginetic standard. Their exceptionally low weight has produced a false impression by distorting the perspective. Now that they have been segregated, we can deal with them separately. In doing so it will be best to begin at the fountain head, which would appear to have been Cydonia.

The most numerous, though not the oldest, group of Cydonian staters have on the obverse the head of a nymph or Maenad, r., wreathed with vine-leaves and grapes, and on the reverse a figure of a naked archer, probably the hero Kydon, stringing his bow (PLATE, Fig. 8). Occasionally a dog with raised forepaw stands facing the archer. My list contains twenty-six examples of this series which are unquestionably minted on the lighter of the two usual Cretan norms; they range between 11.35 and 9.53 grammes, and yield an average of 10.87 grammes, all save the lowest being well over 10. There is, however, a unique stater with similar types, which is distinguished from the others by the presence of a symbol above the

¹ Some of the earliest coins of Cnossus are, however, heavy enough to suggest that they may reflect the norm used throughout at Phaestus and Gortyna.

dog, and which weighs no more than 9.25 grammes (PLATE, Fig. 9).¹ Had it stood alone, the abnormal weight might readily have been attributed to accident. It is only when we examine the next group that its significance becomes apparent.

It will be found that the latter pieces have the head on the obverse turned to l. and wreathed with vine. The reverse has the archer Kydon as before, and sometimes he is accompanied by his dog, always with a symbol in the field above. But here the presence of the dog has a real meaning, as will be clear from the following list of all the examples whose weights I have been able to ascertain :

Coins without dog or symbol.

11.83
11.52
11.41
11.38
11.30
11.20
11.04
11
10.98
10.85
10.80
10.48
9.95

Coins with dog and symbol.

9.72
9.51
9.50
9.49
9.44
9.43
9.42
9.40
9.40
9.27
9.26
9.23
9.14
8.90

Examination reveals a difference in the obverse also ; on the lighter series the bunches of grapes in the nymph's hair have been replaced by ivy leaves. And the evidence of the contemporary drachms, so far as it goes, is to the same effect, for the average weight of 11 examples on which there is no dog is 5.37 grammes, giving a stater of 10.74, whereas the solitary drachm on which the dog appears, weighs no more than 4.65 grammes,² and would therefore give a stater of only 9.30. The gap between the two classes is thus about $1\frac{1}{2}$ grammes, too considerable to be the result of an accident, particularly as it is clean-cut, with little or no gradation on either side and practically no difference in the comparative preservation of the specimens. The first explanation that suggests itself is that the lighter pieces are later, and that their appearance indicates the substitution of one standard for another. Plausible as it may seem, this theory must be dismissed

¹ Svoronos, *op. cit.*, p. 99, No. 2. The coin subsequently passed into the Bunbury Collection (*Sale-Catal.*, Pt. i. Lot 1162), and is now in the British Museum.

² *Ibid.*, p. 101, No. 17.

as untenable. The symbol above the head of the dog establishes a direct connexion with the unique stater mentioned above (PLATE, Fig. 9), and so proves that the earlier group, too, had a light series as well as a heavy one. Unfortunately the condition of the obverse is such that it is not possible to determine definitely whether there was a corresponding difference in the head-dress of the nymph. It will be interesting to have this point settled should a better-preserved specimen come to light.

Moreover, it can be shown that, on the one hand, the drop was not permanent, and that, on the other, it was not due to a temporary lapse at this particular mint. We find that the same division recurs in the succeeding series of Cydonian staters. The beautiful pieces bearing on the obverse a female head wreathed with ivy, and on the reverse a hound suckling an infant, yield when weighed two very similar groups, which are, however, indistinguishable by any difference of type. The heavier is represented on my list by only two examples, which weigh 11.33 and 10.91 grammes respectively,¹ and so give an average of 11.12, the ordinary norm of Cydonia. On the other hand, seven specimens of the lighter group yield an average of no more than 9.11 grammes, with a maximum of 9.52 and a minimum of 8.39.² A contemporary drachm, with types similar to those of the staters, weighs 4.62 grammes.³ In all probability it is an abnormally light example of the heavier class, for a parallel series on which, however, the ivy-wreathed head is replaced by a head of Athena,⁴ is certainly struck on the 'debased' standard. The average weight of the ten specimens I have noted is only 4.15 grammes, with a maximum of 4.58 and a minimum of 3.62.

Notwithstanding the obvious difficulty attending such a conclusion, the facts seem to leave us no option other than to suppose that the two classes were in circulation simultaneously, having been struck for different markets. The difficulty is perhaps less serious than might at first sight appear. The Greek trader was accustomed to handle a miscellaneous currency, and his sense of weight must have been highly developed. He was not likely to confuse two sets of staters whose norms were separated by an interval of not less than a gramme and a half, even if he received no assistance from the types. And we have seen that, in the case of those with the archer Kydon, the

¹ One of them is in Paris; for the other see *Hunter Catalogue*, vol. ii. Pl. XLI. 8.

² Svoronos, *op. cit.*, p. 104, Nos. 36 f.

³ *Ibid.*, No. 38.

⁴ *Ibid.*, Nos. 39 ff.

presence or absence of the dog provided him, during one period at least, with a very obvious guide. With the drachms the risk of confusion was naturally greater. Doubtless that is why, in the case of the later coins with the hound suckling an infant, a different obverse type was employed. We shall have occasion to refer to this question at a subsequent stage. Meanwhile it may be pointed out that the 'normal' standard seems to have survived the disappearance of the 'debased' one. There is a set of Cydonian hemidrachms,¹ having on the obverse a head of Apollo and on the reverse the hound suckling an infant, which are proved by their style as well as by the form of the inscription (KYΔΩNIATAN) to be later than the pieces of which we have been speaking. The average of the six known specimens of the set is 2.55 grammes, which is virtually the norm for this denomination on the ordinary Aeginetic standard as used in Crete.²

The debased Aeginetic standard is traceable also at Aptera. It is true that the earliest and best-known staters of that city—those with an armed warrior standing before a sacred tree—are struck on the lighter of the two ordinary Cretan norms. My list of twenty-three examples brings out an average of 11.03 grammes, with a maximum of 11.53 and a minimum of 9.61. But there is a much rarer series, with a head of Apollo on the obverse and a naked warrior on the reverse,³ which must be regarded as debased; the only two specimens that are known weigh 9.30 and 9.01 grammes respectively. Again, Allaria appears never to have employed the ordinary standard at all. Her silver coins are all drachms, and the fourteen recorded specimens have an average weight of no more than 4.47 grammes, with a maximum of 4.80 and a minimum of 4.03. This represents an average of slightly less than 9 grammes for the stater. Ceraia is possibly in like case, although there the *data* are inadequate and the evidence consequently less convincing. She, too, struck nothing but drachms, and the three examples I have been able to find have weights of 4.90, 4.62, and 3.76 grammes.⁴ The view that the debased standard was intended to meet the needs of a particular market is confirmed by the

¹ They are called 'drachms' in *Hist. Num.*², p. 464. But this is clearly a misprint. For an illustration see Svoronos, *op. cit.*, Pl. X. 2 (p. 107, No. 61).

² The weight of 11.62 grammes given for Svoronos, *op. cit.*, p. 107, No. 59, suggests that Aeginetic staters were also minted with the later form of inscription. But the coin, which is in Paris, has been re-weighed for me by M. Dieudonné, who informs me that the figure should be 14.62. It, therefore, belongs to the same set as No. 60, for which see *infra*, pp. 18 f.

³ *Hunter Catalogue*, ii. p. 169, No. 6 (Pl. XL. 16).

⁴ If the last of these is in reasonably good condition, it may be a tetrobol. As it is in Vienna, I have no means of ascertaining the facts.

fact that its use seems to have been confined to a particular geographical area. At all events, Cydonia and Aptera lay close together at the north-western extremity of the island. Although we do not know precisely where Ceraia was, it is generally believed to have been near Polyrhenum,¹ and if so it cannot have been far from Cydonia and Aptera. The site of Allaria is wholly doubtful. Bursian, without giving his reasons, expresses a belief that it was on the Bay of Mirabella, at the north-eastern end of the island. Svoronos, who also favours the east, would rather make Allaria an inland town and would place it midway between Hierapytna and Minoa. But he candidly admits that his surmise is prompted solely by the existence at this spot of a modern village called *Messalare*, which he suspects of preserving the old name.² In all the circumstances the employment of the debased standard seems at least as promising a clue. Ought Allaria not to be searched for in the west rather than in the east?

LIMITED VOGUE OF THE ATTIC STANDARD: COINS WITH ATHENIAN TYPES.

The great majority of the silver coins of Crete were minted on the Aeginetic standard. But there remain a certain number, for whose weight we have still to account. It may be recalled that Head in his first edition, after emphasizing 'the absence of Cretan coins in the third century', was disposed to infer that 'the currency of the island was at this time Alexandrine', and that he then went on to say that after the age of Alexander 'the Attic standard creeps in and replaces the older Aeginetic'.³ The drift of his argument was that the first coins to be minted in Crete on the Attic standard were Alexandrine, and that the new system of weight, starting from this vantage-ground, gradually secured a supremacy which in the end became complete. The pivot of the whole theory was Müller's attribution of tetradrachms with the types of Alexander to Lyttus, Itanus, Aptera, Cydonia, and Phalasarna, on the strength of the symbols which they bear.⁴ These identifications, however, like so many more of Müller's, are now generally discredited. In the second edition of the *Historia Numorum* they are abandoned *sub silentio*. At the same time, the third century is left a good deal less barren of ordinary Cretan coins than it originally was. But, in spite of the withdrawal of the pivot,

¹ Svoronos, *op. cit.*, p. 45.

² *Op. cit.*, p. 2.

³ See *supra*, p. 3.

⁴ *Num. d'Alex. le Grand*, Nos. 900-909.

the Attic standard is still allowed to play too prominent a part. Its vogue was in reality extremely limited.

That there was a considerable slackening of activity at the Cretan mints throughout the third century, is more than probable. But there is no reason for believing that a Macedonian supremacy was responsible. A sufficient explanation can be found in the general condition of the island. Foreign intrigue, civic jealousies, and petty disputes about boundaries combined to produce a state of affairs that was not far removed from anarchy.¹ Towards the close of the period, however, there was a lucid interval, which was marked by the issue of the earliest coins of Attic weight that can be certainly claimed as Cretan.² These were tetradrachms, closely modelled on the Athenian tetradrachms of the 'new style' which began to make their appearance soon after 229 B.C. when Athens concluded a *foedus aequum* with Rome. The types are identical as well as the standard. The resemblance indeed is complete, except that the name of Athens and the crest of the magistrate are replaced by the name of a Cretan town and, usually at least, its *παράσημον* (PLATE, Fig. 5). As will be seen from the following list of the surviving specimens with their weights, seven cities are known to have participated. They were—

Cnossus—16.44.

Cydonia—16.10, 15.97, 15.40, 15.05, 13.68 (in poor condition).

Gortyna—17.13, 16.58, 16.50, 16.47, 16.19, 15.92 (a piece broken away), 15.42, 14.84, 14.52.

Hierapytna—16.59, 16.50, 16.05, 15.97.

Lappa—17.2.

¹ For a summary of the scanty historical notices see Niese, *Geschichte der griech. und makedon. Staaten*, ii. pp. 427 ff.

² Sir Arthur Evans is inclined to attribute to the mint of Cydonia a remarkable tetradrachm with the types of Lysimachus, also of course of Attic weight, which he purchased at Rethymno, where it was offered him in company with tetradrachms of the group now to be described, including some of Cydonia. There is an exactly similar piece in the Hunter Collection (*Catalogue*, i. p. 434, No. 86). If Sir Arthur's interesting suggestion be accepted—the grounds for it do not seem to me to be quite convincing—the Lysimachus tetradrachms must be contemporary with the tetradrachms that have Athenian types, for one of the strongest links in the argument is the occurrence, on both, of the magistrate's name ΑΙΘΩΝ. As the Hunter Cabinet is fortunate enough to possess a good specimen of each coin I have been able to compare them closely, but have failed to detect any similarity of fabric such as might have been looked for, had they had a common origin. I have placed them side by side here (PLATE, Figs. 5 and 6). The bevelled edge of the obverse of Fig. 6 is characteristic of a whole set of tetradrachms of Lysimachus, but I do not remember observing it on any coins of Cydonia. Sir Arthur, however, tells me that he has found analogies for the fabric at various cities of Crete.

Polyrhenum—16.70, 16.46, 16.14, 16.03, 15.77.

Priansus—15.80, 15.79, 15.24.

The sudden emergence of this group is remarkable, and one cannot avoid speculating as to its occasion. Beulé¹ put it about 200 B. C., acutely connecting it with the political activities of Cephisodorus, whose tomb Pausanias saw at Athens. Cephisodorus, according to Pausanias, was 'a popular leader and a most determined opponent of Philip, son of Demetrius, king of Macedonia'. He 'gained for the Athenians the alliance of two kings, Attalus the Mysian and Ptolemy the Egyptian, as well as the alliance of independent peoples, to wit, the Aetolians and the islanders of Rhodes and Crete. But when the succours from Egypt, Mysia, and Crete were mostly delayed, and the Rhodians, whose strength was in ships only, were of little avail against the Macedonian infantry, Cephisodorus sailed with other Athenians to Italy and begged the help of the Romans'.² From Polybius (xvii. 10) we learn that Cephisodorus and his colleagues went to Rome in 198–197 B. C. This appears to be the only reference in the literary sources to a friendship between Crete and Athens at a time that would suit the style of the coins, and Beulé's conjecture was accordingly accepted by Poole.³ Head was more cautious, believing that the types might have been adopted for commercial rather than for political reasons.⁴ At the same time he acquiesced in Beulé's date.

Head's scepticism seems to me fully justified; even on the statement of Pausanias the formation of the alliance was an emergency measure, and the Cretans were so half-hearted about it that they did not furnish the troops they had promised. But I am inclined to go farther than Head, and to place the issue twenty years earlier. The Athenian tetradrachms of Crete have all the characteristics of a federal coinage. Now we are told by Polybius (iv. 53 f.) that about 220 B. C. practically the whole island was welded into a league under the joint leadership of Cnossus and Gortyna. Lyttus alone, an ancient colony of Sparta, declined to be coerced into agreement, with the result that in the end she was utterly and unexpectedly destroyed.⁵ The confederacy was short-lived, but that it was a reality while it lasted seems to be indicated by a reference to τὸ κοινὸν τῶν Κρηταίων in an inscription which was found at Magnesia on the Maeander, and which is assigned

¹ *Monnaies d'Athènes*, pp. 90 ff.

² Pausanias i. 36. 5 f. The translation is Sir James Frazer's.

³ *Num. Chron.*, N. S. i, p. 174.

⁴ *B. M. Guide*, p. 98 (vi. B. 30), and *H. N.*², p. 462. This possibility had also occurred to Beulé (*l. c.*).

⁵ Ἀρδην καὶ παραλόγως ἀνηρπάσθη (Polybius, *l. c.*).

to the last quarter of the third century B. C.¹ It is no doubt hazardous to argue from the non-existence of any particular coin when a chance discovery may dispose of the argument to-morrow. Nevertheless one cannot refrain from observing that Lyttus is conspicuous by its absence from the list of towns where Athenian tetradrachms were minted. Nor would it be fair to recall its destruction in or about 220, and to say that this absence might be cited with equal cogency in support of Beulé's conjecture. The town was soon rebuilt. We do not know the date of its restoration, but its recovery must have been tolerably rapid. As early as 183 B. C. its citizens stood fourth in the list of thirty-one Cretan communities whose treaty of alliance with Eumenes II is recorded in a Gortynian inscription.² Only Cnossus, Gortyna, and Phaestus took precedence. This time it was Cydonia that stood aloof.

It is true that, as has been already indicated, there is nothing in the literary sources to suggest an association of Athens with the confederacy of 220. But the literary sources are too scanty to make the objection a serious one. And in any event, as Head has pointed out, the motive underlying the choice of types may have been purely commercial. By 220 the Athenian coins of the 'new style' had made good their claim to enter on the heritage of popularity which their predecessors of the 'old style' had enjoyed

ἐν τε τοῖς Ἑλλήσι καὶ τοῖς βαρβάροισι πανταχοῦ.

There would thus be nothing surprising in their being taken as a model. Cnossus, by the way, is represented by Polybius as having been the moving spirit of the federation. It is a curious coincidence that Cnossus should also be the city which issued the only coins of native Cretan types that are of indubitably Attic weight.³ These are the large 'spread' tetradrachms having on the obverse the bearded head of Zeus or Minos and on the reverse a square labyrinth. That they are considerably later than the coins with Athenian types is evident, not only from their style, but also from the fact that they are sometimes⁴ restruck on tetradrachms of Antiochus IX (114-95 B. C.), whose money, by the way, is less likely to have reached Crete in the ordinary course of trade than through the medium of returning mercenaries. The weight is well maintained. The average of the twenty-nine specimens known to me is 16.27 grammes. Only six fall below 16.12

¹ O. Kern, *Inscriben von Magnesia*, p. 36, No. 46, and Dittenberger, *Sylloge*², No. 259 (*Sylloge*³, ii, No. 580).

² Dittenberger, *Sylloge*², i, No. 288 (*Sylloge*³, ii, No. 627).

³ See, however, *infra*, p. 21, as to Gortyna at a later period.

⁴ Svoronos, *op. cit.*, p. 78, No. 99 (two examples).

and, of those six, two at least are restruck on Seleucid tetradrachms.¹ In the face of such a record it is impossible to believe that the lighter pieces—many of them certainly older—which occur at Cnossus and elsewhere, are correctly described as being of ‘reduced Attic weight’.

WIDESPREAD USE OF THE RHODIAN STANDARD.

How, then, are we to classify them? To find an answer, we may turn to Hierapytna, where the system which they represent was developed more fully than at any other Cretan city. With the exception of the four Athenian tetradrachms already registered and a very few older pieces of Aeginetic weight, the whole of the known coins of this town are struck on the standard that has hitherto been called ‘reduced Attic’. The following is a list of the examples I have noted:

Tetradrachms—15.50, 15.15, 15.10, 15.09, 15.05, 14.90, 14.85, 14.50.

Didrachms—7.72, 7.68, 7.64, 7.60, 7.58, 7.57, 7.57, 7.54, 7.51, 7.50, 7.50, 7.50, 7.47, 7.45, 7.42, 7.40, 7.40, 7.38, 7.38, 7.37, 7.35, 7.32, 7.30, 7.30, 7.28, 7.25, 7.25, 7.25, 7.19, 7.16, 7.15, 7.08, 7.08, 7.05, 7.04, 7.02, 6.88, 6.85, 6.85, 6.85, 6.84, 6.62, 6.38.

Drachms—4.14, 3.71, 3.67, 3.63, 3.63, 3.61, 3.60, 3.59, 3.50, 3.40, 3.40, 3.38, 3.35, 3.20.

These coins must belong to one or other of two standards—the Phoenician or the Rhodian (originally the Chian). And the obvious popularity of the didrachm is a strong argument in favour of the latter; Rhodian didrachms are relatively much more common than Phoenician ones. Besides, the weights are a little too high to be Phoenician, whereas they are exactly right for Rhodian. Speaking of the standard when it was first introduced at Rhodes *circa* 395 B. C., Head gives 15.55 as the maximum for the tetradrachm, 7.77 for the didrachm, and 3.88 for the drachm.² In the centuries that followed, there was considerable fluctuation. At one time, indeed, the drachms struck at Rhodes were so light that in Crete they might have passed as Aeginetic hemidrachms.³ But, as we shall see presently, the transplanting of the standard took place very early and, that being so, there was no reason why it should consistently reflect, in the land of its adoption, all the variations that special conditions may have produced at home. In point of fact, the Cretan coins of Rhodian weight

¹ Svoronos, *op. cit.*, pp. 77 f., No. 97 and No. 99.

² *B. M. Cat. Caria, &c.*, p. civ.

³ One was actually so restruck at Cnossus: Svoronos, *op. cit.*, p. 88, No. 175.

are, as a rule, well up to the original level. Here and there we shall meet with small groups that are exceptional. That, however, need not surprise us.

The conclusion that has been drawn from the list of weights at Hierapytna is amply supported by more general considerations. It is true that intercourse with Ptolemaic Egypt must have made the Phoenician standard familiar enough to the Cretans. But Rhodes was much nearer to Crete than was Africa, and in the days of her greatness her traders must have been frequent visitors to the neighbouring island. Nor were the bonds between the two commercial only. In spite of the obscurity in which the history of Crete during the Hellenistic period is shrouded, we catch occasional glimpses of the intervention of Rhodes, now as the influential friend of one city, now as the declared enemy of others. Thus an inscription, now in the Museo Archeologico at Venice,¹ records the conclusion of a defensive and offensive alliance between Rhodes and Hierapytna towards the end of the third century B. C. Naber, who was the first to print the document,² was inclined to date it *circa* 220 B. C. Niese³ and others would put it sixteen or twenty years later. It is a remarkable fact that Head, arguing on grounds of style, should have attributed to *circa* 200 B. C. the earliest Hierapytnian coins that were (as we now see) struck on the Rhodian standard.

Returning to the Hunter coin of Itanus which was our starting-point, we find ourselves in a position to identify it as a Rhodian tetradrachm. Its weight (14.58 grammes) falls within the limits supplied us by the list from Hierapytna. But the identification lends a new importance to its date. The style, as has been already pointed out, is good, being in no way inferior to that of the very best of the Aeginetic staters with similar types. This latter series is attributed by M. Babelon to *circa* 376-360 B. C.⁴ The Rhodian tetradrachm cannot be any later. Mr. Hill and I independently placed it shortly after 400 B. C., while Mr. E. S. G. Robinson was disposed to think it might have been struck even before the turn of the century. In the circumstances absolute accuracy of dating is, of course, impossible. Nor is it necessary for our present purpose. The general trend of expert opinion is sufficiently well defined to warrant the statement that the Rhodian standard was originally introduced into Crete very soon after it made its first appearance in the city that gave it its name. No other coin of Itanus of Rhodian

¹ Dittenberger, *Sylloge*³, ii, No. 581.

² *Mnemosyne*, 1852, p. 79.

³ *Geschichte der griech. und makedon. Staaten*, ii, p. 431, footnote ²⁷.

⁴ *Traité*, 2^e partie, iii, pp. 901 f.

weight is known, and we have already made a complete inventory of the Rhodian issues of Hierapytna. It will be of interest to bring together now the whole of the evidence for the use of the standard in other Cretan towns:

ARCADIA—Of this city, as of Itanus, only a single Rhodian coin appears to have survived, and that a tetradrachm. It is in the Bodleian collection, and was first published by Svoronos in his *Προσθήκαι*.¹ It weighs 14.99 grammes.

CNOSsus—The Cnossian tetradrachms of Attic weight were mentioned above. They have a head of Zeus or Minos on the obverse and a *square* labyrinth on the reverse. Svoronos records² two pieces on which the types are similar but smaller, and which weigh 13.90 and 12.04 grammes respectively. But for the fact that it is oxidized, the latter of these might be an abnormally heavy stater of Aeginetic standard. Its condition, however, precludes such an explanation. It undoubtedly belongs to the same system as its companion, and this can hardly be anything save the Rhodian. It is true that the Rhodian tetradrachms of Crete generally weigh a good deal more than 13.90 grammes. On the other hand, in Rhodes itself after *circa* 300 B.C. even 13.90 would be exceptionally heavy for a tetradrachm. Another set of coins of Cnossus is more normal. They have on the obverse a head of Apollo, with the name ΠΟΛΧΟΞ, and on the reverse a *circular* labyrinth.³ The seven specimens which I have noted weigh 14.69, 14.52, 14.50, 14.48, 14.45, 14.32, and 14.30 grammes respectively. The analogy with Hierapytna is conclusive.

CYDONIA—At Cydonia it would seem that the Rhodian standard was employed, simultaneously with the Aeginetic and the debased Aeginetic,⁴ for the coins having an ivy-wreathed head on the obverse and a hound suckling an infant on the reverse. A fine specimen, published some years ago, is said to weigh 13.77 grammes.⁵ Unless there is a misprint—and the correctness of the text is so far confirmed by the size of the piece as shown in the illustration—this can only be a Rhodian tetradrachm. It belongs to the fourth century B.C. Considerably later a series of Rhodian tetradrachms, with a head of Artemis

¹ *Εφ. Ἀρχ.*, 1889, Pl. XI. 9.

² *Num. de la Crète ancienne*, p. 78, No. 101.

³ Svoronos, *op. cit.*, p. 77, No. 96.

⁴ See *supra*, p. 10.

⁵ Hirsch, *Auktions-Katalog*, xiii, No. 2943, Pl. XXXII.

on the obverse and a full-length figure of the goddess on the reverse, was struck by the magistrate ΠΑΣΙΩΝ.¹ The weights in grammes of the 8 known specimens are as follows: 14.91, 14.62,² 14.59, 14.53, 14.46, 14.44, 14.36, 14.25.

GORTYNA—The first group which calls for notice at Gortyna is assigned in *H. N.*² to the third century B.C. On the obverse is Europa seated in a tree, on a branch of which an eagle is perched; on the reverse is a bull with reverted head and the legend ΓΟΡΤ(ΥΝΙΩΝ).³ I have noted the following weights: 6.65, 6.55, 6.37, 6.22, 6.21, 6.20, 5.39. It is not easy to be clear as to the system to which these pieces belong. With the exception of the last, which is obviously subnormal, they are too heavy to be Aeginetic drachms. At the same time they are too light to be didrachms of the original Rhodian standard, such as we met with at Hierapytna. On the other hand, they correspond exactly to the contemporary didrachms of Rhodes itself, and it is probably with these that we should class them. Confirmation of the suggestion is provided by the popularity, during the next period, of a denomination which is clearly the half of the pieces of which we have been speaking, and which seems to be the Rhodian drachm. It is represented by two different sets of coins, both having a head of Zeus upon the obverse and both usually described as drachms of the reduced Attic standard. Of the first set,⁴ which have on the reverse a naked male figure, seated on a rock, 28 examples are recorded, and of these as many as 21 lie between 3.30 and 2.80 grammes, while 4 are heavier and 3 lighter. My list of the second set,⁵ the reverse type of which is a naked male figure—possibly the founder Gortys—advancing with spear and shield, includes 21 specimens, 12 of which lie between the limits indicated, while 5 are heavier and 4 lighter. Taken by themselves, these figures would be fairly convincing. But their significance is substantially increased by the fact that three or four of the first set bear the name of ΘΙΒΟΣ. This was the magistrate who was responsible for striking the much larger pieces that have a head of Zeus on the obverse and a standing figure of Athena on the

¹ Svoronos, *op. cit.*, p. 107, Nos. 59 f.

² See *supra*, p. 11, footnote 2. All these pieces read ΚΥΔΩΝΙΑΤΑΝ, which points to their being contemporary with the Aeginetic hemidrachms having the same legend.

³ *H. N.*², p. 467, and Svoronos, *op. cit.*, pp. 170 f., Nos. 104 ff.

⁴ Svoronos, *op. cit.*, pp. 177 ff., Nos. 157 ff.

⁵ Svoronos, *op. cit.*, pp. 175 ff., Nos. 143 ff.

reverse. The latter are very rare. Svoronos¹ speaks of only two examples, and I have not been able to add to his list. They weigh 15.25 and 14.36 grammes respectively, and would thus appear to be Rhodian tetradrachms. If that be so, the smaller pieces must obviously be Rhodian drachms. Those with the name of ΟΙΒΟΣ are among the heaviest.² The lightest of all weighs but 2.5 grammes.

As compared with the drachms of Hierapytna, then, the group just mentioned exhibits a marked declension from the original Rhodian standard. Yet at one time a lower point still was touched, showing that at Gortyna the standard was occasionally subject to vicissitudes as marked as those which it underwent in Rhodes itself. Proof of this is afforded by another group,³ the weights of the eight members of which are as follows: 2.50, 2.37, 2.13, 2.13, 2.08, 2.04, 1.95, and 1.91 grammes. Although there are many drachms of Rhodes as light or lighter than any of these,⁴ one might have hesitated about their classification,⁵ were it not for a curious piece of confirmatory evidence, the significance of which has hitherto remained unobserved. The obverse type is a facing head of Helios, exactly resembling that on the ordinary Rhodian coins.⁶ Again, while the type of the reverse, an eagle with a serpent in its talons, has nothing in common with the Rhodian *παράσημον*, the abbreviated inscription Γ Ο, which occurs on no other issue of Gortyna,⁷ is a palpable imitation of the Ρ Ο of the drachms of Rhodes.

One might at first sight be tempted to associate with the Rhodian system the tetradrachms having as types the head of Roma and the statue of Artemis Ephesia. On second thoughts, however, this idea must be set aside as inadmissible. They bear the crest of Q. Cæcilius Metellus, the conqueror of Crete, and were doubtless minted *circa* 66 B. C. Svoronos mentions a specimen at

¹ *Op. cit.*, p. 177, No. 156.

² The three on my list weigh 3.77, 3.65, and 3.47 grammes.

³ Svoronos, *op. cit.*, p. 174, Nos. 132 ff.

⁴ See B. M. C. *Caria*, &c., *passim*.

⁵ In *H. N.*², p. 467, they are described as Attic hemidrachms.

⁶ See PLATE, Fig. 10, and the Rhodian drachm (Fig. 11) which is placed alongside for comparison. Svoronos (*l.c.*) describes the facing head on the Gortyna coins as that of Medusa. Wroth's view that it is the head of Helios (*B. M. C.*, *Crete*, &c., p. 44) is far more probable, and is adopted in *H. N.*². Even if Svoronos's description be correct, however, it does not weaken the general resemblance.

⁷ The usual abbreviations are ΓΟΡΤΥ and ΓΟΡ.

Berlin, and another, in poor preservation, at Paris ; the former weighs 15.99 grammes¹ and the latter 14.40. The British Museum now possesses a third, with a weight of 15.09 grammes. The heaviest of these rules the Rhodian standard out. On the other hand, the weight of the remaining two, though relatively low, is in no way inconsistent with the current view that all three are Attic tetradrachms.²

LAPPA—During the fourth century B. C. Lappa struck a few coins on the Aeginetic standard. Subsequently it was, as we have seen, one of the mints that produced tetradrachms with Athenian types. At a still later period there was a fairly abundant issue of pieces that are shown by their weight to be Rhodian drachms.³ They have a head of Apollo on the obverse and a full-length figure of the same god on the reverse. All of them bear the name of the magistrate ΣΥΛΛΟΧΟΣ, so that the issue, if plentiful, must have been short-lived. Of the 17 specimens whose weights I have been able to ascertain, as many as 13 lie between the limits of 3.30 and 2.90 grammes, while the remainder come very close to them (3.47, 3.40, 3.38, 2.75, and 2.65).

LYTTUS—It is generally considered that the whole of the coins of Lyttus are of Aeginetic weight, and that they were struck before the city was destroyed *circa* 220 B. C. But there is a small group whose style does not preclude the possibility of their being subsequent to its restoration. In Svoronos's list,⁴ which I have not been able to add to, it is represented by three examples. They have on the obverse a boar's head and on the reverse an eagle with outspread wings and the inscription ΑΥΤΤΙΩΝ, while they weigh 3.59, 3.52, and 3.18 grammes respectively. They seem clearly to be drachms of the Rhodian system.⁵

¹ Reference to *Z. f. N.* x, p. 119, shows that the '11.99' of Svoronos, *op. cit.*, p. 181, is a misprint. It may be added that the specimen in the Photiades Pacha Sale-Catalogue (No. 1280, Pl. VI), which weighed 16.50 grammes, was acknowledged to be false, and was withdrawn without being put to the hammer.

² Svoronos, *op. cit.*, p. 165, includes under No. 66 a Berlin coin, restruck on a stater of Cnossus, which is said to weigh 16.62 grammes. The other examples of No. 66 are all of Aeginetic weight, and it is hardly doubtful that '16.62' is a misprint for '11.62'.

³ Svoronos, *op. cit.*, p. 213 f., Nos. 22 f.

⁴ *Op. cit.*, p. 238, No. 85.

⁵ The two small coins published by Mr. G. F. Hill and Captain Cameron in *Num. Chron.*, 1913 (p. 385, Pl. XV, Nos. 18 f.), are also late. Metrologically they are difficult to place (2.22 and 1.98 grammes). But it is possible that they are light Rhodian drachms. Many of the later drachms of Rhodes with the facing head of Helios are even lighter.

POLYRHENIUM—Besides coins of Aeginetic standard and tetradrachms with Athenian types, Polyrhenium issued a small series of what appear to be Rhodian tetradrachms. They have on the obverse a whiskered head, bound with a taenia, which is possibly that of Philip V of Macedon as Apollo, and on the reverse a seated female figure holding a small statue of Nike.¹ They are later than *circa* 200 B. C. and three of the four recorded examples bear magistrates' names. The weights are as follows:—15.56, 15.51, 14.70, and 14.02. Along with these may be classed a more numerous set of smaller pieces,² which have as types a facing head of Dictynna and a figure of Apollo advancing with his bow. One exceptional specimen is as heavy as 2.11 grammes. Thirteen others, however, are known. The heaviest of these weighs 1.97, and, if all are taken together, the resulting average is 1.80. Probably, therefore, they are Rhodian hemidrachms, for a hemidrachm of 1.80 grammes would yield a tetradrachm of 14.40.

RECAPITULATION.

The foregoing *résumé* of the statistical evidence provides, I think, all the categories that are necessary for the proper classification, on metrological principles, of the autonomous silver issues of Crete. It may be convenient to recapitulate them briefly. (a) The dominating standard was the Aeginetic. It was the first to be introduced, and to it the great majority of Cretan coins belong. Care must, however, be taken to discriminate between two norms—a heavier, which was in use at Gortyna and at Phaestus, and a lighter, which was characteristic of Cnossus and of Cydonia. The difference between these two can be explained on grounds that are readily intelligible. (b) It is far more difficult to account for the appearance, at a few towns in the north-west of the island, of what appear to be Aeginetic staters and drachms of decidedly debased weight, minted in some cases side by side with pieces that are in no way abnormal. (c) Next to the Aeginetic standard the most important was the Rhodian. Its occurrence at Itanus *circa* 400 B. C. is noteworthy. But neither then nor when it came into use elsewhere two hundred years later, did it always secure a monopoly at the cities by which it was adopted. Hierapytna was the most conspicuous exception. This suggests that, wherever we find it, the phenomenon should be connected with particular developments of trade. (d) The same may be said of the Attic standard,

¹ Svoronos, *op. cit.*, pp. 281 f., Nos. 40 ff.

² Svoronos, *op. cit.*, p. 282, No. 43.

although there, in so far as the tetradrachms with Athenian types are to be regarded as a federal issue, the influence of political motives can hardly be entirely ignored. Apart from these tetradrachms, it was only at Cnossus and, to a much more limited extent, under Roman domination at Gortyna that the Attic system obtained any footing at all.

In the course of the inquiry one or two features of general interest have emerged. The apparent indifference of the official mind to scrupulous exactness of weight was well illustrated by the fact that the coins of Cnossus, despite their somewhat lighter norm, were freely used as *flans* at Phaestus and Gortyna. This is a clear warning against the too strict application of modern canons to the solution of questions of ancient metrology. Not less significant is the evidence for the simultaneous employment of two (or even three) different standards at one and the same town. It has, of course, long been known that such a practice was not uncommon. Under the later Seleucid kings, for instance, some of the great cities of the Syrian coast, to meet the needs of different streams of trade, issued two parallel series of tetradrachms, one of which followed the Attic system and the other the Phoenician. There, however, all risk of confusion was obviated by using characteristic obverse and reverse types for each series. The surprising thing is that in Crete so simple a precaution was not always felt to be necessary. Thus, at Itanus it would be impossible to distinguish the Rhodian tetradrachm from the Aeginetic staters by the help of the eye alone. Mr. E. S. G. Robinson has drawn attention to an analogous difficulty at Cyrene.¹ He points out that the more highly developed instinct of the Greek trader would enable him to surmount it with an ease that it is hard for us to appreciate. That is doubtless true. But it is probably also true that the custom of appealing to the balances in private transactions enjoyed a much longer life than one is sometimes disposed to credit it with.² However that may be, the central fact remains, and the example of Itanus may sometimes be helpful to numismatists who find themselves baffled by seemingly abrupt and unaccountable changes of standard. To take a familiar *crux*,³ is it quite certain that at Abdera each variety of weight-system must necessarily be associated with a period of its own?

At Itanus the difference between the Aeginetic stater and the Rhodian tetradrachm of similar types, which circulated side by side,

¹ See *Num. Chron.*, 1915, p. 262.

² Cf. *English Historical Review*, 1919, pp. 91 f.

³ See *H. N.*², p. 253 ff., and Gardner, *Hist. of Ancient Coinage*, pp. 276 ff.

was as much as three grammes. The two classes of Aeginetic stater at Cydonia were separated by an interval of about half that weight. It is of interest to note that at the latter city the awkward possibilities were at least partially recognized. The use of similar types for the drachms was avoided, while even on the staters an endeavour was at one time made to mark the distinction by the presence or absence of Kydon's dog. So again at Cnossus the Rhodian tetradrachms with the name of ΠΟΛΧΟΣ have a head of Apollo on the obverse and a circular labyrinth on the reverse, whereas the presumably contemporary tetradrachms of Attic weight have a head of Zeus on one side and a square labyrinth on the other. Finally, it would seem that after *circa* 200 B.C. the weights of the lower denominations of the Rhodian and Aeginetic systems sometimes approximated so closely that the Rhodian drachm was regarded as virtually equivalent to the Aeginetic hemidrachm. We have already seen that a drachm of Rhodes was actually so restruck at Cnossus.¹ Similar evidence comes from Gortyna. At one period there was issued there a series of what must be Aeginetic drachms, having as types a head of Zeus and Europa seated on a bull. Svoronos records eight examples,² and I have noted seven others. The weights³ are conclusive as to the system to which they belong; all save one are much too heavy to be Attic drachms. The corresponding halves must, therefore, be Aeginetic hemidrachms. The obverse type is the same as that of the drachms, but the reverse has a bull without Europa. I know of only two examples.⁴ Two others, however, were used as *flans* for the later series of Rhodian drachms with the facing head of Helios and ΓΟ.⁵ That is, the process that was noted at Cnossus is reversed at Gortyna. The proof of interchangeability could not well be stronger.

POSTSCRIPT: CRETAN SILVER COINAGE UNDER THE ROMANS.

In its original intention the scope of this inquiry was limited to the period of autonomous coinage. But it may be convenient, for the sake of completeness, to bring together by way of a postscript the few facts that can be ascertained regarding the silver that was

¹ See *supra*, p. 16, and cf. the two hemidrachms of Rhodes restruck as Aeginetic trihemionols at Cydonia (Svoronos, *op. cit.*, p. 102, No. 18).

² *Op. cit.*, p. 172, Nos. 114 ff. In two cases, however, the weight is not recorded.

³ 5.12, 5.01, 4.97, 4.94, 4.90, 4.88, 4.88, 4.88, 4.85, 4.65, 4.65, 4.53, and 3.49 grammes.

⁴ Svoronos, *op. cit.*, p. 173, No. 119. The weights are 2.05 and 2.01 grammes.

⁵ See *ibid.*, p. 174, No. 133 f., and cf. *supra*, p. 20.

issued while the island was under the dominion of the Romans. Reference has been made above to the Attic tetradrachms struck at Gortyna with the authority of Q. Caecilius Metellus. Imhoof-Blumer is doubtless right in attributing to the same town the cistophorus with the name of ΚΥΔΑΣ ΚΡΗΤΑΡΧΗΣ, the only coin of its class minted beyond the boundaries of Asia Minor. Imhoof gives good reasons for dating it between 66 and 31 B. C.¹ The weight of the Paris specimen is 11.27 grammes, so that the cistophoric standard in its Cretan form was very much the same as the Aeginetic standard in the guise it had worn in Crete four or five centuries earlier. It seems to have been subsequently reduced, probably not as an act of deliberate policy but rather as the result of official indifference, for there can be little doubt but that the highest of the three denominations of the silver of early imperial times is the cistophoric tetradrachm.² The weights of the recorded specimens are notoriously irregular, ranging between 10.47 and 7.65 grammes. The other two denominations will then be the tridrachm (8.36-6.60) and the drachm (2.72-1.80).

The imperial silver of Crete has few attractions for collectors, and consequently our information regarding it is more scanty than it might otherwise have been. Not a little of it is derived from the older numismatists, whose descriptions are not always reliable, and who do not give weights. But its issue would appear to have been inaugurated under Tiberius during the governorship of Cornelius Lupus, who was pro-consul of Crete and Cyrene, and whose condemnation and death in the reign of Claudius was afterwards one of the indictments brought against Suillius Rufus.³ The majority of the surviving specimens bear his name.⁴ The tetradrachms have on the obverse the head of the deified Augustus and on the reverse the head of the Cretan Zeus (ΤΑΝ ΚΡΗΤΑΓΕΝΗΣ), and examples struck at Hierapytna and at Polyrhenium are known. Tridrachms of Axus and of Cydonia are recorded, the types being the laureate head of Tiberius and the head of the Senate, bearded and veiled. Lastly there are drachms of Cydonia, of Eleutherna, of Gortyna, and of Hierapytna, with the head of Tiberius on the obverse and that of

¹ *Monnaies grecques*, p. 210.

² So Imhoof-Blumer, *Griechische Münzen*, p. 164, footnote ². Head, who calls it a didrachm, apparently preferred to regard it as belonging to the Aeginetic system.

³ Tacitus, *Annals*, xiii. 43. For other details of the career of Cornelius Lupus see Klebs, *Prosopographia*, i. 457, No. 1145.

⁴ The others bear the name of Laches: see *infra*. A drachm of Lappa is doubtful, as the magistrate's name is off the *flan* (Svoronos, *op. cit.*, Pl. XX. 13).

the deified Augustus on the reverse. The form of the inscription varies, being sometimes in the nominative and sometimes in the dative, and so indicating more than one issue.

The only other magistrate whom we can associate with the Cretan silver of Tiberius is Laches, whose name occurs on tridrachms of Cydonia and on drachms of Hierapytna. History tells us nothing regarding him, but we know that he must have been the successor and not the forerunner of Cornelius Lupus, since his term of office extended into the reign of Caligula. The evidence for this is supplied by the appearance of his name on a unique drachm of Axus, which has as types the head of the latter emperor and of Germanicus.¹ It is unique, not merely in the sense that only a single specimen is recorded, but also in the sense that Axus is the one Cretan town to whose particular credit any silver of Caligula can yet be placed. It is true that the second edition of the *Historia Numorum*,² on the authority of Svoronos, cites 'Æ coins of Caligula', under Lyttus. Reference to the source, however, reveals serious grounds for doubting the accuracy of the original statement.³ The whole description, and notably the use of the accusative case in the legends, is unlike that of any other silver pieces of Crete, whereas it corresponds exactly to the description of certain bronze coins of Gortyna and Polyrrhenium, most of which are signed by a magistrate Augurinus.⁴ The suspicion that the 'Æ' of Svoronos's list is a misprint for 'Æ' arises at once, and it is fully confirmed by an appeal to Mionnet, who is in his turn the authority from whom Svoronos quotes one of the two examples which he registers, the other being in the Berlin Museum. Mionnet explicitly states that the coin of which he speaks is of bronze.⁵

The uniqueness of the drachm of Axus indicates that the system organized under Tiberius survived for only a short time under his successor. The system that replaced it was possibly instituted by Augurinus, whose name figures on contemporary bronze pieces of Gortyna, Hierapytna,⁶ and Polyrrhenium. It was a provincial issue, minted perhaps at Gortyna, but having neither legend nor symbol to mark the city of origin. The denominations, with their weights, are those introduced by Cornelius Lupus. On all three the obverse is occupied by a head of Caligula with his name and titles. The

¹ Hirsch, *Auktions-Katalog*, xiii, No. 2912 (Pl. XXXI).

² p. 472.

³ Svoronos, *op. cit.*, p. 239, Nos. 88 f.

⁴ *Ibid.*, pp. 181 f., and 284.

⁵ *Descr. de médailles antiques*, Suppl. iv, p. 329, No. 214. So too Sestini, to whom Svoronos (*l.c.*) also refers.

⁶ Svoronos, *op. cit.*, p. 195, Nos. 49 f.

reverse types are—(a) for the tetradrachm a figure of Augustus, clad in a toga and holding a patera and sceptre, enthroned in a quadriga drawn by elephants;¹ (b) for the tridrachm the same figure seated on a curule chair; and (c) for the drachm a head of Augustus radiate, as it is also on the larger pieces. In each of the three cases there are seven stars in the field of the reverse. As these stars reappear later in conjunction with an entirely different type, they may be symbolical in some obscure way of the whole province of Crete. The issue must have been an abundant one, for all three denominations are well represented in our collections, more especially the tridrachms and the drachms. Claudius continued it, substituting his own image and superscription for those of Caligula on the obverse, but with him the most common denomination is the tetradrachm.

The rarity of the drachms of Claudius with the radiate head of Augustus is no doubt partly to be explained by the occurrence of drachms with other types—two Korybantes dancing, Artemis holding torch or bow, a figure of Hope.² And it is probably to his reign that we should assign what seems to be a hemidrachm—it weighs only 1.23 grammes—having on the obverse the bust and name of Agrippina,³ and on the reverse a quiver, arrow, bow, and club. In any event the tendency to break away from the old conventions becomes quite pronounced under Nero. His Cretan silver coins are rare. The least uncommon are tetradrachms of the old system of weight, at least six specimens of which have survived. The reverse has for its type a standing figure of Zeus, surrounded by seven stars in lieu of an inscription. There seem to have been two issues, which are distinguished by the presence or absence of an eagle beside the god. The group with the eagle is the lighter, the three known specimens weighing 9.40, 8.72, and 8.40 grammes, as against 10.20, 9.98, and 9.46 for the remainder.

It has been suggested that Nero was responsible for something more important than a change of type, and that he introduced a new system of weight. The coins that are supposed to testify to this are very rare. They have on the obverse a head of the emperor, with his name and titles in Latin, and on the reverse a head of Claudius or of Agrippina, accompanied by a mark of value, the whole

¹ The quadriga may perhaps be interpreted as confirming the view that the coin is a tetradrachm rather than a didrachm; see *supra*, p. 25, footnote 2.

² Svoronos, *op. cit.*, p. 336, Nos. 9 ff.

³ Svoronos (*op. cit.*, p. 339, No. 30) calls her Agrippina Senior. The use of the title CEBACTH, however, proves that it is the daughter, not the mother.

within a laurel-wreath. There are two denominations, the mark of value on the higher being $\frac{AC}{IT} \overline{K\Delta}$ and that on the lower $\frac{AC}{IT} \overline{IB}$.

The two published specimens of the former (PLATE, Fig. 12) weigh 5.47 and 5.40 grammes respectively. The solitary published example of the latter (PLATE, Fig. 13) weighs 2.37 grammes. All three are in London. Head, who was inclined to accept their conjectural attribution to Crete, proposed to interpret the value-marks as 'ἀσσάρια Ἰταλικά 24' and 'ἀσσάρια Ἰταλικά 12'.¹ Imhoof-Blumer, in adopting Head's conclusions, pointed out that an explanation of the change of system should be looked for in some far-reaching reform of the Roman currency, and he found it in Nero's reduction of the weight of the denarius from $\frac{1}{84}$ to $\frac{1}{96}$ of the Roman pound.² He inferred that advantage was taken of the reduction to try and steady the swaying weights of the provincial silver, the real value of each piece being indicated upon its face.

Much as one must hesitate to differ from two such authorities as Head and Imhoof, I do not feel satisfied that the coins with marks of value are of Cretan origin at all. Mr. E. S. G. Robinson, who has recently been studying the provincial silver of early imperial times, has drawn my attention to the close resemblance which the pieces in question bear to the contemporary silver of Cappadocia. He further tells me that the late Mr. Warwick Wroth left a manuscript note in which he recorded the finding of one or two examples in Paphlagonia, a *provenance* which considerably strengthens the Cappadocian analogy. On the other hand, Mr. Robinson believes that there is some ground for attributing PLATE, Fig. 14 to Crete. It has on the obverse the heads of Nero and Poppaea face to face, and on the reverse the radiate head of Augustus with the remarkable legend ΑΥΤΟΚΡΑ ΚΑΙΣΑΡ ΟΕΟΣ ΟΕΟΥ ΥΙΟΣ ΣΕ. The weight is 7.41 grammes, which would be suitable enough for a tridrachm of the cistophoric standard. Mr. Robinson's suggestion is based upon the obvious likeness between this piece and the bronzes struck at Cnossus, under the duoviri Volumnius and Lupinus, and having on the reverse the heads of Nero and Octavia face to face.³ It certainly deserves very serious consideration. Should it win general assent, the coins of 24 and 12 asses (PLATE, Figs. 12 and 13) will have to be finally removed from Crete. The idea of a common origin for the two sets is precluded by their style.

¹ *Hist. Num.*¹, p. 384.

² *Griechische Münzen*, pp. 164 f.

³ Svoronos, *op. cit.*, p. 95, No. 217, Pl. VIII, 26 f.

In any event, during the latter part of Nero's reign, or possibly upon his death, the island seems to have been deprived of the right of minting in silver at all. There was a brief revival under Trajan whose head, with his name and titles in Latin, appears on a fairly numerous series of drachms (3.25-2.24 grammes) having on the reverse a nymph with the infant Zeus, and the legend KPHT ΔΙΚΤΥΝΝΑ. Thenceforward Crete struck only in bronze.

KEY TO THE PLATE

No.	WEIGHT IN GRAMMES.	
1	14.58	Itanus. <i>Obv.</i> Helmeted head of Athena l. <i>Rev.</i> [I]TANIΩ[N]. Eagle standing l., looking back; in field r., small Triton; incuse square. [Hunter.] <i>Rhodian Tetradrachm.</i> ca. 400-375 B.C.
2	10.62	Itanus. <i>Obv.</i> Similar head r.; rude style. <i>Rev.</i> Eagle as above; rude style. [Hunter.] <i>Aeginetic Stater.</i> ca. 400-375 B.C.
3	11. 8	Gortyna. <i>Obv.</i> Europa riding r. on bull; beneath, dolphin. <i>Rev.</i> ΑΥΜΨΑΔ Ο[Τ ΜΟ]ΜΥΤ40[Α] ¹ Lion's scalp facing; linear square. [Hunter.] <i>Aeginetic Stater.</i> ca. 480-400 B.C.
4	11.86	Phaestus. <i>Obv.</i> Similar type l. <i>Rev.</i> Α[ΥΜ]ΨΑΔ ΟΤ ΑΟΤΨΜΨΑΔ. ² Similar type. [B.M.] <i>Aeginetic Stater.</i> ca. 480-400 B.C.
5	15.37	Cydonia. <i>Obv.</i> Head of Athena Parthenos r.; in front, ΑΙΘΩΝ. <i>Rev.</i> ΚΥΔΩΝΙΑΤΑΝ. Owl r. on amphora; in field r., hound suckling infant; all in olive-wreath. [Hunter.] <i>Attic Tetradrachm.</i> ca. 220 B.C.
6	16.39	Lysimachus. <i>Obv.</i> Head of the deified Alexander r. <i>Rev.</i> ΒΑΣΙΛΕΟΣ ΛΥΣΙΜΑΧΟΥ. Athena Nikephoros seated l.; in front, ithyphallic satyr l., with pedum in l. hand; in ex., trident l.; above, ΑΙΘΩΝ. [Hunter.] <i>Attic Tetradrachm.</i> Third century B.C.
7	3.69	Cnossus. <i>Obv.</i> Head of Hera l., wearing stephanos. <i>Rev.</i> ΚΝΩΣΙ. Square labyrinth; on either side Α Ρ. [Hunter.] <i>Aeginetic Tetrolol.</i> ca. 350-300 B.C.
8	11.57	Cydonia. <i>Obv.</i> Head of nymph r., wreathed with grapes and vine-leaves, and wearing ear-ring. <i>Rev.</i> ΚΥΔΩΝ. Naked archer, stringing bow. [B.M.] <i>Aeginetic Stater.</i> ca. 400-350 B.C.
9	9.27	Cydonia. <i>Obv.</i> Similar. <i>Rev.</i> Similar, but, in front, a dog looking up at archer and raising his forepaw; above dog, arrow-head. [B.M.] <i>Debased Aeginetic Stater.</i> ca. 400-350 B.C.
10	2.13	Gortyna. <i>Obv.</i> Head of Helios, three-quarter face towards r. <i>Rev.</i> Γ Ο. Eagle l., with serpent in talons; border of rays. [B.M.] <i>Rhodian Drachm.</i> ca. 250-150 B.C.
11	2.52	Rhodes. <i>Obv.</i> Similar. <i>Rev.</i> Ρ Ο. Rose with bud on r.; on l., caduceus and uncertain object; above [Ξ]ΩΞΙΚΡΑΘΞ. [B.M.] <i>Rhodian Drachm.</i> ca. 250-166 B.C.
12	5.47	Uncertain. <i>Obv.</i> ΝΕΡΟ·CΛΑΥΔ·ΔΙΥΙ·CΛΑΥΔ·F·CΑΕSΑR·ΑΥG·GΕRΜΑΝΙ. Bust of Nero r., laur. <i>Rev.</i> Bust of Claudius r., laur.; behind $\frac{AC}{IT}$; in front, $\overline{K\Delta}$; all within laurel-wreath. [B.M.] <i>Piece of 24 Asses.</i>
13	2.37	Uncertain. <i>Obv.</i> Similar. <i>Rev.</i> Bust of Agrippina r.; behind, $\frac{AC}{IT}$; in front, \overline{IB} ; all within laurel-wreath. [B.M.] <i>Piece of 12 Asses.</i>
14	7.41	Uncertain. <i>Obv.</i> ΝΕΡΩΝ ΚΛΑΥΔΙ ΚΑΙSΑΡ ΠΟΠ-ΠΑΙΑ ΣΑΒΕΙ ΣΕ Busts of Poppaea r. and Nero l., face to face; above, crescent. <i>Rev.</i> ΑΥΤΟΚΡΑ ΚΑΙSΑΡ ΚΘΕΟΣ ΘΕΟΥ ΥΙΟΣ ΣΕ. Head of Augustus l., radiate. [B.M.] <i>Cistophoric Tridrachm.</i>



1



2



3



5



4



6



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7



8



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10



11



12



14



13



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