

The Coinages of the Attalids and their Neighbours: A Quantified Overview

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The chief aim of this paper, which is all about quantification, is to put the coinages issued by the Attalids themselves in perspective with the many other coin series struck nearby during the same period. A fair number of die-studies have been produced which are of interest for our topic, and these allow us to get a clearer idea of what was ‘abundant’, ‘substantial’ or ‘meagre’.¹ This paper thus takes the form of an overview, trying to take into account recently published material, but without aiming to discuss at length the details of the many chronologies involved (for this, see Meadows, Chapter 5 above; Ashton, Chapter 7 below).

PERGAMENE TETRADRACHMS STRUCK UNDER OR IN THE NAME OF PHILETAIROS

The Attalid kings never struck royal gold issues, silver drachms, or small silver denominations.² The only royal coinage they issued

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¹ It may be seen as a development of Callataÿ 1993a: 26–7. The results of the majority of the relevant die-studies, as well as estimates of the original numbers of dies, may be found in Callataÿ 1997b.

² Le Rider 1992: 234–6; *contra* Seltman 1913.

was silver tetradrachms, and that on a small scale, as demonstrated by the die-studies of Newell and Westermark. Although it would now be possible to collect much more material than Newell and Westermark managed to do, these studies none the less offer a firm basis for quantification, with a comfortable ratio of 'number of specimens to number of obverses' ('n/o') (except for Group VII, with a low ratio of 1.94).

The chronology proposed by Westermark has been slightly revised by Le Rider, thanks to the study of the large Meydancikkale hoard presumed to have been buried in c.235 BC.³ Indeed, while tetradrachms of Group VIA are well documented in the hoard, those of Group VIB are absent. This introduces an imbalance in the numismatic documentation between the periods before and after 235 BC. The question is how long Groups VIB and VII lasted: as late as c.155 BC (as argued by some); or with a much earlier terminal date (as advocated by others).⁴

Table 6.1 takes into account some changes introduced since Westermark concerning the numbers of specimens (n) and obverse dies (o). It also gives numbers for the issues struck at Pergamon by Lysimachos, as well as for the first issues of tetradrachms produced by Philetairos, following the new dates given by Meadows (Chapter 5 above).⁵ The modified chronology proposed by Meadows creates a first, short phase of abundant monetary production for the years 282–281 BC, followed by nearly two decades of low production. If this is correct, such a pattern of heavy initial activity may find parallels with other Hellenistic royal coinages. When Ptolemy I Soter decided, in 300 BC or shortly after, to create a closed monetary economy, c.200/250 tetradrachm obverse dies were engraved in the space of a few years.⁶ One may think as well of the massive issues of

³ Le Rider 1989a and 1992. On the hoard (*CH* V 41), see Davesne and Le Rider 1989: 334–40.

⁴ On this question, see below. Strangely enough, specimens of Group VIB are nearly absent from recent auction sales (e.g. not a single coin is recorded in the online sales archive www.coinarchives.com).

⁵ For a similar internal comparison of the Attalid coinages, see Le Rider 1989a: 183–4.

⁶ Not c.3,000, as argued by Davesne. Yearly O (drachm): c.200. See Callatay 2005b: 124–5; Le Rider and Callatay 2006: 228–9.

Table 6.1. Royal Pergamene tetradrachms from Lysimachos to Eumenes II

Coinages	o	n	n/o	O (Carter)	O (drachm)	Yearly O (drachm)
Lysimachos (c.287/6–282)	15	123	8.20	15.5	62.0	15.5
Philetairos—Newell I and II (c.282–281) ⁷	12	41	3.42	14.8	59.2	29.6
Philetairos—Newell III (c.280–271) ⁸	8	36	4.00	9.1	36.4	3.6
Philetairos—Group II (c.270–263)	10	47	4.70	11.2	44.8	5.6
Eumenes I—Group III (c.263–241) ⁹	20	96	4.80	22.4	89.6	(17.0)
Eumenes I—Group IVA (c.263–241)	35	132	3.77	40.2	160.8	(17.0)
Eumenes I—Group IVB (c.263–241)	20	59	2.95	25.6	102.4	(17.0)
Eumenes I—Group V (c.263–241)	5	30	6.00	5.4	21.6	(17.0)
Attalos I—Group VIA (c.241–235)	23	103	4.48	26.1	104.4	17.4
Attalos I—Group VIB (c.235–189)	18	50	2.78	23.7	94.8	2.1
Eumenes II—Group VII (c.180–165) ¹⁰	37	96	2.59	50.5	202.0	13.5
Total (c.287/6–165)					978.0	8.0

(Lysimachos = Arnold-Biucchi 1998; Philetairos = Newell 1936 and 1941: 316–18 [Philetairos Group I]; Philetairos to Eumenes II = Westermark 1961)

lifetime Alexanders, especially in the Macedonian mint of Amphipolis (c.1,000 obverses), or of the city of Rhodes after the synoecism in 408 BC (Yearly O (drachm): c.18).¹¹ However, the relative abundance of this first phase must not disguise the limited amount of silver converted into coins. Even with the high average of 30,000 coins per obverse die, the 30 or so obverses struck between 287/6 and 281 (Lysimachos + Newell Series I and II) make no more than 600 talents of silver, to be compared with the 9,000 talents kept by Lysimachos in the treasury at Pergamon (Strabo 13.4.1).

⁷ Newell Series I ('Horned horse/elephant') is extremely rare (5 specimens for 3 [?] obverse dies: see SC I: 15).

⁸ The additions made by Ingvaldsen (1992: 176–8) do not modify the estimate (41 tetradrachms for 8 obverse dies).

⁹ Numbers and dates for Groups III–VIB are those given by Le Rider 1992: 240–1.

¹⁰ See Meadows, above, Ch. 5 (pp. 164–9). Westermark knew 35 dies for 59 coins.

¹¹ Ashton 2001a: 92 (Rhodes).

Table 6.2. Size of some royal and dynastic silver issues in number of obverse dies for Attic drachms

Coinages	O (Drachm)	Number of years	Yearly O (Drachm)
Tetradrachms of Alexander (c.332–290)	c.12,000	42	c.285.7
Tetradrachms of Ptolemy II at Alexandria (285–246)	c.5,148	39	c.132.0
Drachms of Alexander (c.332–290)	c.3,300	42	c.78.6
Ptolemaic tetradrachms at Alexandria (127–97)	c.2,280	30	c.76.0
Tetradrachms of Demetrios Poliorketes (c.306–287)	c.916	19	c.48.2
Macedonian silver coins of Philip II (c.359–315)	c.1,969	44	c.44.7
Tetradrachms of Antiochos III (223–187)	c.1,600	36	c.44.4
Tetradrachms of Seleukos IV (187–175)	c.400	12	c.33.3
Tetradrachms of Nikomedes III–IV (c.128–74)	c.1,800	54	c.33.3
Tetradrachms of Mithridates Eupator (c.97–64)	768	33	c.23.3
Silver coinages of Mausolos (c.377/6–353/2)	c.450	24	c.18.8
Silver coinages of Idrieus (c.351/0–344/3)	c.120	7	c.17.1
Silver coinages of Pyrrhos (280–276)	c.64	4	c.16.0
Tetradrachms in the name of Philetairos (c.280–165)	c.857	115	c.7.5

(see Callatay 2005a: 87 [improved])

But the main point of interest is the low yearly productivity for the entire period (c.280–165 BC). With c.7.5 equivalent of obverse dies for Attic drachms per year (856.8/115), this is about 1/17 of what Ptolemy II Philadelphos was able to strike in the mid-third century BC and less than 1/5 of what Antiochos III regularly issued at the end of the third and start of the second century BC. As illustrated by Table 6.2, Attalid averages come well behind other recorded silver coinages for fourth-century and Hellenistic kings or rulers.¹² This low production is amply confirmed by the circulation pattern: 2 per cent for the Attalid tetradrachms in the large Meydancikkale hoard (60 out of 3,057 Attic-weight tetradrachms), 1.4 per cent in the Tell Halaf

¹² For a comparison with the production of civic mints at the same period, see below, Tables 6.11–13.

hoard (5 out of 352), and so on.¹³ This paucity is also illustrated by the hoard found in the official excavations of the Asklepieion at Pergamon itself: only 2 Philetairoi out of 22 Attic tetradrachms.¹⁴

The weight-standard of the Attalid tetradrachms is also low: most coins weigh between 16.60 and 16.99 g, well below the contemporary Seleukid or Alexander tetradrachms (16.90–17.09 g). Moreover, the distribution of the weights is less accurate than for the Alexanders, which would conceivably have suggested something like a closed circulation system, if this hypothesis was not entirely ruled out by the hoard evidence.¹⁵ The re-dating of the first groups of Philetairoi (down to VIA) by Le Rider has not been seriously contested. But what about the latest issues? It very much depends on the ongoing debate about the date of the first cistophoroi (see below). Different scenarios may be proposed, which all try to relate the creation of the cistophoric coinage, coinciding with the latest issues of Philetairoi (Group VII) (though there is room here for a series of parallel issues of these two coinages) to the date of the so-called cistophoric countermarks. In these different scenarios, the countermarks could be (a) contemporaneous with the first issues of cistophoric tetradrachms; (b) immediately before (five years?); or (c) well before.

From a quantified point of view, it must be noted that the adapted chronology as advocated by Le Rider for Group VIB of the Philetairoi (235–189 BC) creates a significant decline in production for the second part of the reign of Attalos I (yearly $O = 2.1$, to compare with $c.17$ for the three decades before).¹⁶ If, in addition, one hypothesizes a high chronology for the introduction of the cistophoroi ($c.185$ BC), Group VII is now compressed into a very short period of time (defined here as 189–185 BC), with a tremendous increase of production during these four years (yearly $O = 60.2$ [$240.8/4$]). The comparisons given in Table 6.2 make such a hypothesis very unlikely.

A more even distribution is proposed by Meadows in Chapter 5 above. A close examination of the hoard evidence leads him to

¹³ Le Rider 1992: 241; Le Rider and Olçay 1989.

¹⁴ Boehringer, in Ziegenaus and de Luca 1968: 132–4.

¹⁵ Le Rider 1992: 242–3; and Marcellesi 2008: map 2.

¹⁶ François Queyrel has recently and characteristically argued that we should recognize the portrait of Attalos I in some obverses of the Philetairoi, as well as in the Herakles depicted on contemporaneous Alexanders (Queyrel 2003).

Table 6.3. Pergamene tetradrachms under or in the name of Philetairos (summary by reigns—as proposed by Meadows)

Coinages	o	n	n/o	O (Carter)	O (drachm)	Yearly O (drachm)
Philetairos (c.282–263) ¹⁷	30	124	4.13	34.7	138.8	7.3
Eumenes I (c.263–241) ¹⁸	80	317	3.96	93.6	374.4	17.0
Attalos I (c.241–189)	41	153	3.73	48.6	194.4	3.7
Eumenes II (c.180–150)	36	70	1.94	60.2	240.8	8.0
Total (c.282–150)					948.4	8.1

propose an interruption of roughly a decade (c.189–180 BC?) between Group VIB and Group VII of the Philetairoi. Group VII would have been issued over a period of approximately thirty years (c.180–150 BC), with, as a consequence, an unimpressive yearly average (converted into Attic drachms) of c.8.0, similar to the average attained for the entire sequence of Philetairoi (c.282–150 BC = 8.1).

If, following Meadows, we opt for a date as late as 165 BC for the introduction of the cistophoric coinage, we are left with a kingdom whose territory, population, revenues, and expenditures were considerably enlarged, without consequences for the size of its monetary production for more than twenty years.

To be sure, a yearly average of c.2 obverse dies for tetradrachms (8.1 equivalent obverse dies for drachms—a result we may push to 9.5 if we favour the high chronology for the start of the cistophoric coinage of 182/1 BC) would not have allowed the Attalids to pay large expenses in fresh coins. To take one more time the usual estimates of 20,000 coins per obverse die and a yearly pay of 200 drachms per soldier (which is certainly not too generous), it would have allowed them to pay some 850 annual military wages.¹⁹

John Ma (Chapter 2 above) has very usefully gathered the evidence for the Attalid army. Although numbers are scanty, it seems that this army never exceeded 12,000 men, including all kinds of forces (levies, auxiliaries, and mercenaries), while the fleet counted c.30–50

¹⁷ Newell Series I ('Horned horse/elephant') is extremely rare (5 specimens for 3 [?] obverse dies: see SC I: 15).

¹⁸ Numbers and dates for Groups III–VIB are those given by Le Rider 1992: 240–1.

¹⁹ 8.5 (equivalent of obverse die for Attic drachms) × 20,000 (coins per obverse die) = 170,000 drachms/200 (yearly pay of a basic soldier) = 850.

heavy well-equipped warships (*tetreres*). To pay a full year of such forces in fresh coins, meaning a minimum of 480 talents,²⁰ would have required at least the use of 36 obverse dies for tetradrachms. Our numismatic record does not support such a hypothesis. On the contrary, Table 6.3 shows that the *total* number of Philetairoi struck over the first twenty years of Attalid independence (c.282–263 BC) was in the range of these *annual* needs (34.7).

Clearly, the Attalids had many garrisons and employed substantial amounts of mercenaries during the third century BC.²¹ We are informed about the garrisons of Lilaia (c.208 BC), where c.40 per cent of the troops seem to have been mercenaries, and Tralles (third century BC) with a list of 44 names likely all to be mercenaries, while an inscription from Philetaireia is illuminating about the modalities of the contract passed between Eumenes I and his mercenaries.²²

Crete was a major source of supply for mercenaries, as several inscriptions have revealed. The honorific decree of Aptaera for Attalos (II better than I) is further evidence for the fact.²³ Several symmachic treaties must be understood in this general context, too, as the treaty between Attalos I and the Cretan city of Malla (last years of the third century) or the symmachic treaty passed between Eumenes II in 183 BC with thirty Cretan cities.²⁴ In addition, we are informed by Diodoros that Eumenes II was reputed to behave correctly with his mercenaries (Diod. Sic. 31.14).

But, in the absence of quantified evidence, it is safer not to speculate about the total number of mercenaries employed by the Attalids. The presumption is that, as for the Seleukid kings,²⁵ the yearly

²⁰ With the very low value of 200 drachms per soldier (2,400,000 drachms = 400 talents) + 2 talents per warship (80 talents).

²¹ Sion-Jenkins 2001: 22–3; Ma, Ch. 2 above.

²² Lilaia: *FD* III 4, nos. 132–5. Tralleis: *I.Tralleis* 33. Philetaireia: *OGIS* 266. On Aigina, which belonged to the Attalids from 209 to the end of the dynasty (133 BC), see Doyen 2007: 102–3.

²³ Kreuter 1992. Aptaera: *OGIS* 270.12–13 (156 BC).

²⁴ Malla: Ducrey and van Effenterre 1969; Ducrey 1970; Doyen 2007. Eumenes II: *I.Cret.* IV 179, B = *Syll.*³ 627.

²⁵ We know that there were 7,500 mercenaries, out of a total of 62,000 men, in the army of Antiochos III. To pay these 7,500 men in fresh tetradrachms supposed the engraving of at least c.19 obverse dies (7,500 × 200 [admittedly a low average] = 1,500,000 drachms [250 talents]/80,000 [20,000 × 4 drachms] = 18.75). However, the average yearly number of new obverse dies under the reign of Antiochos III was about 11.

monetary production of Philetairoi would have been insufficient to pay in fresh coins these mercenaries only.

ALEXANDERS OF THE LATE THIRD/BEGINNING OF THE SECOND CENTURY BC

To be sure, Philetairoi were not the only 'royal' issue struck at Pergamon under the Attalids. The last years of the third century BC were characterized by a revival of 'Alexander' tetradrachms in many mints, a phenomenon clearly linked with the Syrian and Macedonian wars of the period. As shown by Table 6.4, several die-studies have been published concerning these late Alexanders, including those issued at Pergamon. It must be noted that contemporary Alexander tetradrachms were issued by certain other mints for which we are still awaiting die-studies. However, as documented by the Gaziantep hoard, these were produced in smaller quantities.²⁶ The exception is the large mint of Aspendos, for which McIntyre is currently producing a die-study. To compare the quantities of the different Pamphylian Alexanders recovered in relevant Syrian hoards, Aspendos comes first, before Perge and Phaselis (see Table 6.5). Considering the hoard evidence, it is likely that c.100 obverse dies were used for the mint of Aspendos, which is also the result obtained by Boehringer, who counted a total of 101 obverse dies.²⁷ It should further be noted that the Phaselis Alexanders are currently under revision by McIntyre and that a substantial part of what has previously been attributed to Phaselis may be re-assigned to other mints. Taken together, these late Alexanders form a large coinage, struck in much higher quantities than the issues in the name of Philetairos themselves (38.0 to compare with the 2.1 of Group VIB [c.235–189 BC]). The yearly average for the Alexanders of Pergamon alone (6.3 [c.205–190 BC]) may have partly compensated for the weak production of Philetairoi during the same period (2.1). It will be noted that the Alexanders of Pergamon and the Philetairoi of Group VIB were issued on roughly

²⁶ Alexandria Troas, c.189–180; Kolophon, c.200–190; Phokaia, c.210–190; Nisyros, c.201, Side (one coin known: Seyrig 1963b: pl. VI.6). Gaziantep hoard: Meadows and Houghton 2010.

²⁷ Boehringer 1999: 67.

Table 6.4. Civic Alexanders in Asia Minor (c.210–190 BC)

Coinages	o	n	n/o	O (Carter)	O (drachm)	Yearly O (drachm)
Pergamon Alexander tetra. (c.205–190) ²⁸	20	75	3.75	23.7	94.8	6.3
Mylasa Alexander tetra. (c.210–190) ²⁹	5	15	3.0	8.4	33.6	0.8
Chios Alexander tetra. (c.202/1–190)	14	96	6.86	14.8	59.2	4.9
Rhodes Alexander tetra. (c.205–190) ³⁰	36	160	4.44	40.9	163.6	10.9
Perge Alexander tetra. (223–191)	73	361	4.95	81.2	324.8	10.2
Termessos Major Alexander tetra. (205–203)	1	16	16.0	1.0	4.0	1.3
'Phaselis' Alexander tetra. (c.216–183)	58	337	5.81	62.8	251.2	7.9
Aspendos (c.213–185)	–	–	–	(c.100)	(c.400)	(c.14.3)
Total (c.223–188)				(332.8)	1331.2	(38.0)

(Pergamon and Rhodes = Kleiner 1971; Mylasa = Delrieux 2007b; Chios = Bauslaugh 1979; Perge = Colin 1996; Termessos Major = McIntyre 2006; Phaselis = Heipp-Tamer 1993 and Metcalf 1994: 43)

the same basis (extrapolated number of obverse dies [O/Carter] = 23.7 in both cases), but during a much shorter period of time for the Alexanders (fifteen years [c.205–190 BC], to compare with forty-six years [c.235–189 BC]).

It remains to explain to what purpose these Alexanders were struck. Different commercial explanations have been put forward by Rostovtzeff, Seyrig, Boehringer, and Le Rider in the case of the Pamphylian issues.³¹ Boehringer argued for a special trade convention between these cities and the Seleukid power, while Le Rider

²⁸ On the date of the Alexanders struck at Pergamon, see Ashton 2004: 94–5 (with references to earlier literature, including Boehringer 1972: 41–4 and 1974: 16–17).

²⁹ The catalogue of Delrieux is divided into two phases: (a) c.210–c.190 BC (10 coins) and (b) c.188–c.170 BC (5 coins). But these two groups are linked by the obverse die no. 4 (Delrieux 2007b: 254–7).

³⁰ Ashton 2004 demonstrated that the first two issues of Kleiner (struck by only one obverse die) have to be dated well before the others, in the 220s.

³¹ Rostovtzeff 1939; Seyrig 1963b; Boehringer 1972: 52–68; Le Rider 1972: 257 ('les villes de Pamphylie jouèrent alors un rôle commercial important. Il faut croire que les Pamphyliens allaient chercher des produits orientaux en Syrie et les payaient en espèces pamphyliennes, puis les vendaient pour la plus grande partie en Asie Mineure occidentale . . . Cet épisode commercial pamphylien'); Le Rider 2001a: 43–6.

Table 6.5. Some hoard evidence for Pamphylian Alexanders (c.223–181) and tetradrachms of Side

Hoard	Aspendos	Perge	Phaselis	Side	Total
<i>IGCH</i> 1318 (Sardes, c.190)	6	6	1	13	60
<i>IGCH</i> 1410 (Mektepini, c.190)	39	35	17	4	752+
<i>IGCH</i> 1411 (central Asia Minor, c.190)	3	7	3	3	c.400
<i>IGCH</i> 1413 (Ayaz-In, c.190–188)	13	11	11	34	170+
<i>IGCH</i> 1537 (Kosseir, c.190)	3	3	4	9	82+
<i>IGCH</i> 1546 (Aleppo, c.170)	10	5	2	2	35+
<i>IGCH</i> 1542 = <i>CH</i> IX 528 (Ain Tab)	48	33	18	0	c.200
<i>IGCH</i> 1547 (Khan Cheikoun, c.165)	25	28	18	22	103
<i>CH</i> VI 37 = <i>CH</i> VII 98(Ma'Aret en-Nu'man, c.162)	71	63	57	38	
<i>Sub-total A</i>	218	191	131	125	
<i>IGCH</i> 1773 (Tell Kotchek, c.150)	20	7	15	3	604+
<i>CH</i> IX 517 (Anatolia, c.150)	118	44	68	13	379+
<i>CH</i> IX 527 = <i>CH</i> X 308 (Gaziantep, c.143)	44	14	21	23	1,916
<i>Sub-total B</i>	182	65	104	39	
Total	400	256	235	164	

(Bauslaugh 1990: 52; Metcalf 1994: 49; and Meadows and Houghton 2010: 178–80)

attributed these abundant issues of Alexanders to the spirit of enterprise of Pamphylian bankers.³² For Seyrig, followed by Le Rider, there was a hierarchy among Attic-weight tetradrachms circulating on Seleukid territory: Seleukid tetradrachms came first, then the Alexanders, and at last the other tetradrachms.³³ Such a hierarchy, with slightly different values for each type of coinage, would have explained why it was advantageous for the cities of western Asia Minor to strike Alexanders. These commercial views, in line with those developed by Rostovtzeff, bring Seyrig to claim that these cities were involved in 'une industrie de la monnaie' ('a coining industry').³⁴

³² Boehringer 1972: 67; Le Rider 1972: 258.

³³ Seyrig 1958: 193 (= Seyrig 1966: 7); Seyrig 1973: 87–8; Le Rider 2001a: 52–3.

³⁴ Le Rider has commented: 'Je comprends cette expression de la façon suivante: les villes en question se seraient efforcées de produire en vue du commerce avec le royaume séleucide autant d'alexandres qu'elles pouvaient, pour obtenir le profit monétaire qu'apportait la cotation favorable de ce numéraire. Cette motivation, à mon avis, non seulement aurait développé l'activité émettrice de ces ateliers, mais aussi, probablement, aurait orienté un plus grand nombre de commerçants vers le royaume séleucide' (2001a: 53).

That statement not only conflicts with a dogma of the Primitivists/Substantivists dear to Hasebroek and Finley, namely that cities, seen as political bodies, rarely dealt with imports (above all in case of cereal shortages) and never with exports. But it is also contradicted by modern research. As convincingly demonstrated by Meadows, Pamphylian Alexanders, just like the other issues of Alexander tetradrachms, were struck to match military expenditures. Since the pivotal dates of these coinages were linked with Seleukid armies operating in the area, Meadows is not afraid to call them 'quasi-Seleukid coinages'.³⁵

TWO ISSUES OF ATTIC TETRADRACHMS STRUCK
AT PERGAMON AFTER 188 BC (MEDUSA/ATHENA
NIKEPHOROS AND HEAD OF EUMENES II/KABEIROI)

In addition to the Philetairoi of Group VII, two other issues of Attic tetradrachms, hence perhaps intended for external use (Le Rider 2001a: 38 n. 3), were struck at Pergamon after 188 BC. Neither seems to have been of any great significance in terms of abundance (although the die-study provides no clue to estimate the original production, their absence or extreme rarity in the many large hoards of the time makes it unlikely that they were produced on a large scale) but are of extraordinary iconographic interest.

The issue with the personal portrait of Eumenes II is known thanks to two coins from different dies, with a set of control marks shared by some Group VII Philetairoi (Nicolet-Pierre 1989: Issue 13).³⁶ This issue is likely to have been struck in the years 166–159 BC (which implies a low chronology for this Group VII), and it may well be that one of the two specimens comes from the Ma³Aret hoard buried in 162 BC, allowing us to date the issue to c.165.³⁷

³⁵ Meadows 2009a. Other Alexanders: Picard 1982. Indeed, the first issue at Perge in 223 BC may be linked with the expedition of Seleukos III against Attalos I, the beginning of coinage at Aspendos in 213 BC with the capture of Achaïos at Sardis, etc.

³⁶ The two coins are: (1) London, BM, inv. 1849; and (2) Paris, BnF (= *Leu*, Sale 33, 1983, 364). See Westermarck 1981; Bauslaugh 1982; Nicolet-Pierre 1989; de Chaisemartin 1993; Mattingly 1993a; Queyrel 1999.

³⁷ Mattingly 1993b: 83; Le Rider 1989a: 176; Le Rider 2001a: 50–1.

The issue with the ‘Head of Medusa/Athena Nikephoros’ is generally assigned to Pergamon, despite the lack of any control mark, which in itself is unexpected for Pergamon. Known from three specimens (two obverse dies), this issue has been dated to 181, on the assumption that it marks the celebration of the Nikephoria or, later, to mark the celebration of the victory of Eumenes over the Galatians in 168.³⁸

CISTOPHORIC COUNTERMARKS AND THE DATE OF THE INTRODUCTION OF THE CISTOPHORIC COINAGE

At some point after the treaty of Apameia (188 BC), the Attalid kings produced an entirely new coinage, sometimes qualified by the Moderns as the ugliest Greek coinage ever produced. It represents on the obverse an open *cista mystica*, hence its name of cistophoric (‘cista-bearing’), and on the reverse a bow case flanked by two entwisted serpents as well as the initials of mints, most of them easily recognizable.³⁹ It seems that, with this coinage, Eumenes II installed a closed monetary economy: inside the Attalid kingdom, every merchant or foreigner was forced to traffic with these cistophoroi, which had the value of Attic tetradrachms but only 3/4 of their weight (12.6 g instead of 16.8 g). Hence large profits accrued to the king (see below for an estimate) which, in good economic theory, implies that the king was also able to keep prices low enough inside his kingdom to attract foreign merchants, despite the unfavourable but compulsory exchange of currency. If we may freely speculate about the revenues these cistophoroi brought to the royal treasury, we could hypothesize that, with a benefit of one drachm on the exchange of each cistophoric

³⁸ The three coins are: (1) Paris, BnF (15.90 g, 1 h [from the Larissa or Sitichoro hoard: *IGCH* 237]; see Le Rider 1973: 66; Le Rider 1989a: 175); (2), London, BM ([from the Larissa or Sitichoro hoard]; see Price 1989: pl. 55); and (3) *Leu*, Sale 7, 9 May 1973, 207 (16.08g–12h; see Le Rider 1973: 68) = Copenhagen ([from the Ma’ Aret en-Nu’man hoard]; see Mørkholm 1984). See Le Rider 1973 (who gives two dates: 181–168/7 BC or before 189 BC); Le Rider 1989a: 174–6; Le Rider 2001a: 51; Mørkholm 1991: 172. For the iconographic type, see Fanta 2001.

³⁹ On the types of the cistophoric coinage, see now Kosmetatou 1998 and Szaivert 2008; Thonemann, above pp. 30–4.

tetradrachm, this currency could have made nearly 2,000 talents profit for the Attalids from the beginning to 133 BC ($567 \times 20,000 = 11,340,000$ drachms = 1,890 talents).

Specialists disagree about the date of the introduction of the cistophoric coinage. Astonishingly, the range of advocated possibilities spreads over more than three decades (c.192–155 BC).⁴⁰ While recent literature may have given the impression that the high chronology (in the 180s) was now favoured by a majority of scholars,⁴¹ Meadows argues in Chapter 5 above, using hoard evidence, for a much lower chronology, with a start-date in the 160s. Several external categories of evidence help us to fix the chronology.

Four varieties of Philetairoi (classified as the last issues of Group VII) have the same set of 'monogram + symbol' as the earliest issues of cistophoroi.⁴² This seems to indicate that both coinages were struck in parallel for a time (on this, see Meadows, Chapter 5 above). The Ma'aret hoard, certainly buried in 162 BC, contains one such Philetairos sharing its monogram and symbol (Issue 19: $A\Sigma$ + thyrsus) with the first cistophoric issues, thus providing a firm *terminus ante quem* for the introduction of the cistophoric coinage. How long this coin took to travel from Pergamon to Syria is open to speculation, but it looks unlikely that the cistophoric coinage could have begun after 166 BC.

On the other hand, two coinages, namely the civic tetradrachms of Side and the Pamphylian Alexanders struck at Perge, Aspendos, and

⁴⁰ Crawford 1985: 158 ('at some point between 180 and 160'). On the literature concerning the cistophoric coinage, see Kienast 1961.

⁴¹ For the high chronology, see Ashton, Ch. 7 below; Seyrig 1963a (188 BC); Boehringer 1972: 21, 40–6 (shortly after 190–188 BC); Le Rider 1972: 256 n. 1 (180–170 BC); Mørkholm 1979a: 47–50 (179–172 BC); Waggoner 1979: 8 (criticizing Kleiner and Noe 1977); Allen 1983: 112–13 (before 190 BC); Price 1989: 233 (before 180); Le Rider 1989a: 169 (between c.185–180 and c.175–170 BC); Bauslaugh 1990: 61–4 (183–180 BC); Ashton 1994 (before 182/1 BC); Ashton 2001a: 94 (end of the 190s? BC); Harl 1991 (before 190 BC); Le Rider 2001a: 37 n. 2; Szaivert 2005. For a late date of introduction, see Noe 1950; Kleiner 1971: 117; Kleiner 1972: 17 n. 1 (166 BC); Boehringer 1975: 57–9 (166 BC); Kleiner 1980: 45–8 (166 BC); Szaivert 1983 (after 168 BC); Nicolet-Pierre 1989: 212 (159–150 BC).

⁴² See Nicolet-Pierre 1989: 208–9. (1) $A\Sigma$ + thyrsus (Nicolet-Pierre 1989: Issue 19; Kleiner and Noe 1977: Issue 1a). (2) $A\Sigma$ + dolphin (Nicolet-Pierre 1989: Issue 25; Kleiner and Noe 1977: Issue 3). (3) MA + dolphin (Nicolet-Pierre 1989: Issue 20; Kleiner and Noe 1977: Issue 23c). (4) ΔA + thyrsus (Nicolet-Pierre 1989: Issue 21; Kleiner and Noe 1977: Issue 24e). It looks odd that Kleiner and Noe classified the varieties 3 and 4 later in their chronological sequence (Issues no. 23c and 24e). On this, see also Le Rider 1989a: 171–2.

Phaselis, were punched by the so-called cistophoric countermarks. These countermarks depict a bow case (the reverse type of the cistophoroi)⁴³ as well as the initials of what are clearly mints, all located within the boundaries of the new Pergamene kingdom after Apameia. Out of the twelve sets of letters indicated on these countermarks, seven fit with early cistophoric mints (Pergamon, Ephesos, Tralleis, Sardeis, Apameia, Laodikeia, and Adramytteion), while two more are for mints known to have issued cistophoroi later (Synnada and Stratonikeia).⁴⁴ Robert Bauslaugh has devoted a special study to these countermarks (gathering 151 instances, among which some are uncertain), to which whom we may now add some others.⁴⁵ With perhaps *c.*150 obverse dies (in the absence of a die-study, this number is no more than a best guess),⁴⁶ the civic coinage of Side looks more abundant than the coinages of Aspendos, Perge, and Phaselis. It was also far more heavily punched with cistophoric countermarks than the Pamphylian Alexanders (121 to 23: see Table 6.6).⁴⁷ As noticed by Bauslaugh, there is a general but imperfect correlation between the number of countermarks for each mint (with Sardeis and Pergamon at the forefront: see the last column of Table 6.6) and the size of their cistophoric coinages.⁴⁸ So, despite the size of its cistophoric coinage, Ephesos is only documented by 3 countermarks. It is all the more

⁴³ Meadows (above, p. 170) astutely argues that this is a ‘misnomer’, since it is not proved that these countermarks were necessarily applied once the cistophoric coinage already existed.

⁴⁴ For the three remaining ones—*TOP* (Toriaion), *ΣΑΛΗ* (Sala), and *ΕΛΗΣ*(?)—see Thonemann 2008.

⁴⁵ On this, see Mowat 1906; Rostovtzeff 1939: 294; Seyrig 1958: 187–8 (= Seyrig 1966: 1–2); Boehringer 1972: 46; Le Rider 1975: 43–4; Kleiner 1980: 49; Leschhorn 1989: 23–42; Metcalf 1994.

⁴⁶ The large hoard of 560 Sidetan tetradrachms (n) buried after 150 BC (Meadows 2006) and published by Leschhorn 1989 (*CH IX 521*) enables us to distinguish 218 obverse dies (o). With a ratio ‘n/o’ of 2.57, the original number of obverses is estimated at 299.3 by the simplified formula of Carter 1983. But part of this huge production was issued after 188, as proven by the presence of the Kleuchares II issues, which were never countermarked. This group alone would have required *c.*80 obverse dies (75 dies for 836 coins in the database of W. Leschhorn: information from A. Meadows). For the late phases of this coinage, which was still produced in the first century BC, see Arslan and Lightfoot 1999: 35–6; Meadows 2006.

⁴⁷ See Leschhorn 1989 (64 of 560 autonomous Side tetradrachms countermarked [11.4%]); Arslan 1997 (6 of 33 Side tetradrachms countermarked [18.2%]); Büyükyörük 2001. Other countermarks were applied to the Pamphylian Alexanders found in the east (Helios head and anchor are the most frequent: on this, see Metcalf 1994: 44–7).

⁴⁸ Bauslaugh 1990: 49.

Table 6.6. Summary of the identifiable cistophoric countermarks

	Side	Aspendos	Perge	Phaselis	Total
Sardeis	29	4	2	–	35
Pergamon	28	2	1	4	35
Apameia	20	6	–	–	26
Tralleis	13	2	2	–	17
Adramytteion	6	–	1	1	8
Laodikeia	7	1	–	–	8
Synnada	5	1	–	–	6
Stratonikeia	5	–	–	–	5
TOP	4	–	–	–	4
Ephesos	2	–	1	–	3
Sale	2	–	–	–	2
Total	121	16	7	5	149

(Bauslaugh 1990, Metcalf 1994, Meadows 2009a: 78 n. 55; and info. A. McIntyre)

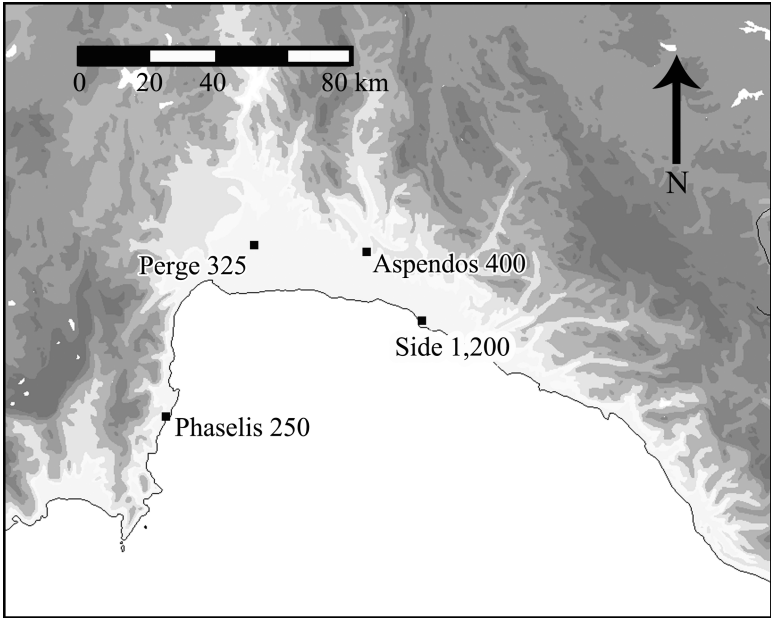
tempting to detect here a careful and systematic plan, related to the introduction of the cistophoric coinage itself.⁴⁹

Andrew McIntyre observes that the ratio of cistophoric countermarks decreases as one travels west, with the highest result (c.11.4 per cent) obtained for Side. This is true if we look at the absolute numbers of countermarks (16 for Aspendos, 7 for Perge, and 5 for Phaselis). In the cases of Perge and Phaselis, we have modern monographs which provide us with two useful figures: the total number of tetradrachms and the number of those which have been countermarked. It turns out that the proportion of countermarked Pamphylian Alexanders is 2.0 per cent for Perge (7 coins out of 344) and 1.8 per cent for Phaselis (5 coins out of 274).⁵⁰ We may also proceed in a different manner, comparing the number of known countermarks (even those not quoted in the relevant monographs) to the estimated number of dies. This procedure gives the following results: 0.16 for Aspendos (16 countermarks for c.100 obverse dies), 0.09 for Perge (7 countermarks for c.80 obverse dies), and 0.16 for Phaselis (5 countermarks for c.30 obverse dies, rather than 63: see above).⁵¹ Map 3 gives for each

⁴⁹ 'By comparison [sc. with the anchor countermarks], the Pergamene countermarking reflects higher control and accountability and more limited scope' (Bauslaugh 1990: 51).

⁵⁰ The numbers do not support the idea that Phaselis behaved differently from Perge (and Aspendos?), with proportionally fewer Alexanders countermarked (Meadows 2009a: 78–9).

⁵¹ Incidentally, this is not without interest for calculations of survival rates. If, as hoards seem to indicate, cistophoric countermarks were applied on c.1.8% of all the Pergean and Phaselite Alexanders, and we postulate an average productivity for each obverse die of 20,000 coins, the following ratios emerge: 1 to c.4,120 for Perge



Map 3. Side, Aspendos, Perge, and Phaselis and their estimated production of tetradrachms (c.220–180 BC)

Pamphylian mint the estimated volume of coins produced, expressed in equivalent of obverses for Attic drachms. In addition, and despite the smallness of the samples, it may well be the case that cistophoric countermarks were not applied randomly whatever the mint: it seems that the Alexanders of Aspendos were primarily countermarked by Apameia, while those of Phaselis were mainly countermarked by Pergamon (see Table 6.6).

As Pamphylian Alexanders are dated, they allow us to define a *terminus post quem* for these countermarks.⁵² With new chronologies and material in mind, we can produce the following table.⁵³

(1,600,000 coins [80 × 20,000] / [7 / 0.018]), and 1 to c.2,200 for Phaselis (600,000 [30 × 20,000] / [5 / 0.018]). A similar ratio of 1.8% would give 1 to c.2,100 for Aspendos (2,000,000 [100 × 20,000] / [17 / 0.018]). Again, put into perspective, the global likelihood of these numbers is satisfying (see Callatay 2005a).

⁵² Bauslaugh 1990: 52.

⁵³ On the question of their chronology, see Boehringer 1972: 55–68; Boehringer 1999; Mørkholm 1978; Price 1991: 346–8; Heipp-Tamer 1993: 68–71; Colin 1996: 31–3; McIntyre 2007; Meadows 2009a.

Table 6.7. Cistophoric countermarks on dated Pamphylian Alexanders (cols. 2–4); yearly production as attested by number of recovered coins (n) as well as recorded obverse dies (o) + number of attested countermarks with the anchor and the head of Helios (cols. 5–6)

Years	Perge (223/ 2–191/0)	Aspendos (213/2–185/4)	Phaselis (216/5– 184/3)	Perge (o/n)– Anchor/Helios	Phaselis (o/n)– Anchor/Helios
211/0	–	3 (Sar)	–	(2/17)–0/0	(2/8)–4/0
210/209	–	–	7? (Per) ⁵⁴	(4/12)–1/0	(2/5)–2/0
209/8	–	5 (Per)	8 (unc)	(2/8)–1/0	(1/9)–5/0
208/7	16 (Adr)	–	–	(7/26)–8/0	(3/20)–9/2
207/6	–	–	–	(3/17)–4/0	(5/14)–4/2
206/5	–	8 (Tra, Sar)	–	(3/28)–6/2	(2/15)–8/1
205/4	19 (Tra)	–	–	(2/14)–0/0	(8/21)–14/2
204/3	–	–	–	(5/21)–6/0	(3/6)–3/0
203/2	–	11 (Sar, Apa) ⁵⁵	14 (Per, Per)	(2/21)–6/1	(2/21)–12/1
202/1	22 (Sar, Sar)	12 (Per?) ⁵⁶	–	(4/10)–2/1	(1/6)–2/0
201/0	–	–	–	(4/16)–4/0	(1/5)–4/1
200/199	24 (Eph) ⁵⁷	14 (Lao)	–	(3/20)–7/0	(1/9)–3/0
199/8	–	–	–	(4/19)–5/0	(3/8)–2/0
198/7	–	16 (Tra) ⁵⁸	–	(2/22)–15/1	(2/5)–1/0
197/6	27 (Per, Tra) ⁵⁹	–	–	(2/13)–3/0	(1/0)–0/0
196/5	–	18 (Apa) ⁶⁰	–	(3/17)–4/0	(1/3)–1/1
195/4	–	19 (Syn)	22 (Per, Adr)	(2/26) ⁶¹ –1/0	(2/15)–8/0
194/3	–	–	–	(2/2)–1/0	(2/9)–3/0
193/2	–	–	–	(2/6)–3/1	(4/17)–8/1
192/1	–	–	–	(3/10)–2/0	(1/9)–5/1
191/0	–	23 (Apa, Sar)	–	(1/9) 3/1	(3/14)–6/1
190/189	XXX	24 (Apa, Apa) ⁶²	–	XXX	(0/0)–0/0

(continued)

⁵⁴ Sale CNG E230 (March 2010) 109 (information McIntyre).

⁵⁵ SNG München 664 (Meadows 2009a: 78 n. 55).

⁵⁶ SNG Berry 325 (information McIntyre).

⁵⁷ SNG Turkey I, 34 (information McIntyre) = sale Triton III, 1999, no. 387.

⁵⁸ Sale Gorny (21 March 1982) 14 (information McIntyre).

⁵⁹ Sale CNG 72 (2006) 370 (Meadows 2009a: 78 n. 55 [attributed to year 23]).

⁶⁰ Sale Lanz 62 (1992) 378.

⁶¹ Numbers are tricky for Perge: it would be misleading to estimate the production from the number of surviving coins, which collapse after year 29 (195/4 BC). An entirely different picture emerges from the number of obverses and the ratio ‘number of coins/number of obverses’ (pace Boehringer 1972 and Le Rider 1972: 254–5).

⁶² Sale Lanz 62 (1992) 379 and Lanz (26 Dec. 1983) 174 (information McIntyre). At some point during year 24 at Aspendos (Oct. 190/Oct. 189), a major innovation occurred, with the introduction of yearly symbols. It is all the more tempting to link this with some measures related to the battle of Magnesia.

Table 6.7. Continued

Years	Perge (223/ 2–191/0)	Aspendos (213/2–185/4)	Phaselis (216/5– 184/3)	Perge (o/n)– Anchor/Helios	Phaselis (o/n)– Anchor/Helios
189/8	XXX	–	–	XXX	(1/5)–5/0
188/7	XXX	Apa ⁶³	–	XXX	(0/0)–0/0
187/6	XXX	–	–	XXX	(1/4)–3/0
186/5	XXX	28 (unc.) ⁶⁴	–	XXX	(1/7)–6/0
185/4	XXX	–	–	XXX	(1/3)–2/0
184/3	XXX	XXX	–	XXX	(1/6)–3/0
183/2	XXX	XXX	XXX	XXX	XXX
Total	7	17	6	(62/344)–84/7	(55/244)–124/13

(Bauslaugh 1990: 46; Metcalf 1994: 47; Meadows 2009a: 78 n. 55)

Robert Bauslaugh thought that cistophoric countermarks were applied c.188–183 BC.⁶⁵ The latest occurrence we have is on an Alexander struck at Aspendos during the 28th year of the local era, corresponding to the year October 186/September 185 BC. This is very useful, but does not give us either a strict *terminus post quem*, since it leaves open the possibility that these countermarks were applied for a period of several years before 186 BC, or a *terminus ante quem*, since there is no reason to doubt that these countermarks were also applied later.

Let us admit first that it is difficult to determine how long this process took. The number of Pamphylian Alexanders that were countermarked, both in Perge and Phaselis, seems to be less than 2 per cent of the total. We are here much in need of a die-study of the countermarks themselves but, even without, we may speculate on the total number of coins countermarked. If we estimate the volume of the three mints as c.210 obverse dies (c.100 for Aspendos, c.80 for Perge, and c.30 for Phaselis), this gives a total production of c.4,200,000 tetradrachms, assuming that each obverse die had an average productivity of 20,000 coins. Taking as valid a proportion of 2 per cent of countermarked coins (although it is likely to be less),

⁶³ This countermark belongs to the Gaziantep Hoard and is now kept in the Gaziantep Museum (Augé et al. 1997: 75 no. 114; Meadows 2009a: 78 n. 55; Meadows and Houghton 2010: 179, nr. B1428).

⁶⁴ Sale UBS 57 (15 Sept. 2003) 171 (unidentifiable mint under an anchor countermark—information McIntyre).

⁶⁵ Bauslaugh 1990: 64.

this would give a total of *c.*84,000 countermarked Alexanders. Concerning Side, if we retain the proportion of *c.*11.4 per cent of cistophoric countermarks,⁶⁶ it is likely that the number of countermarked 'civic' tetradrachms was *c.*342,000 or not far distant ($150 \text{ dies} \times 20,000 = 3,000,000 \text{ coins} \times 0.114$). All in all, we would be dealing with a total number of some 426,000 applied cistophoric countermarks, which corresponds to 284 talents. This result is not far from the indemnity of 350 (+ 127) talents which Polybios informs us that Antiochos III had to pay Eumenes II over five years after the treaty of Apameia.⁶⁷ From a quantified point of view, it is thus tempting to link the cistophoric countermarks with the penalty due to Eumenes, all the more so since cistophoric countermarks only appear on the coinages described by Meadows as 'quasi-Seleukid'.⁶⁸

At this point, the most likely chronology would appear to be the following: (a) the cistophoric countermarks in *c.*188–183 BC; (b) the start of the cistophoric coinage in *c.*183 BC; (c) the end, some years later (178 BC?) of the Philetairoi, which had been struck for a period in parallel with the first cistophoric issues. But in addition to the objections to this chronology made by Meadows in relation to the date of the final group of Philetairoi, we may add some others.

First, the Pamphylian hoard 1977 is likely to have been buried *c.*180 BC (it includes a tetradrachm of Phaselis dated to the Year 33 = 184/3 BC), and certainly no later than 175 BC.⁶⁹ However, despite its size—76 Pamphylian Alexanders, consisting of 20 from Perge down to Year 33, 28 from Phaselis down to year 33, and 28 from Aspendos down to Year 26—it does not include a single instance of a cistophoric countermark.⁷⁰ This is none the less not too disturbing, since, as we saw, only *c.*1.8 per cent of the Pamphylian Alexanders were countermarked, which means that, on a strict proportionality, the

⁶⁶ CH IX 521; see above.

⁶⁷ Polyb. 21.43.20–21. My calculations look similar to those offered by Bauslaugh (1990: 58 n. 51), who, starting from a supposed average productivity of 10,000 countermarks per die, estimates that *c.*75 dies would have been necessary to strike 477 talents, i.e. 715,500 coins, in five years.

⁶⁸ Meadows 2009a.

⁶⁹ CH V 43 and VI 34.

⁷⁰ I am grateful to Andrew McIntyre for this information. This is not exactly in line with the statement of Bauslaugh, who argues that the Pamphylian hoard supports his view for dating the cistophoric countermarks to the years 188–183 BC (Bauslaugh 1990: 63).

Pamphylian hoard ought to have included only 1.37 countermarked tetradrachms.

More importantly, we fail to observe any increase in the number of countermarks over the years. Quite the contrary: in the case of Phaselis, no less than eleven years (and 74 coins in the catalogue of Heipp-Tamer) have to be placed after the last recorded countermark (Year 22), and a similar pattern is observed for Perge (six years and 67 coins as recorded by Colin after the latest countermarks of Year 27). It very much appears as if these countermarks were applied once these Pamphylian Alexanders were largely mixed in circulation. Even if our samples are meagre, it is worth noticing the absence of correlation between the occurrences of countermarks and the volume of the issues. This is especially conspicuous for Phaselis.

Some of these cistophoric countermarks were themselves countermarked by an anchor. This type of countermark is attested in the Latakie hoard, buried in 169 BC, which thus seems to give us a *terminus ante quem* for the cistophoric countermarks.⁷¹

Another question is whether these countermarks prove that cistophoroi were already being struck at the time they were applied, or whether we can defend the idea—as Meadows does in this volume—that we are dealing with two separate phenomena. The general assumption is that the cistophoric countermarks were applied in order to accept Attic weight tetradrachms into Attalid circulation during the years following the introduction of the cistophoroi: ‘the earliest purpose of cistophoric countermarks would have been to validate foreign coins of heavier weight circulating in the area in order that the latter might serve as necessary bullion before the new domestic coinage had been minted in sufficient quantity’.⁷² However, many questions are left open. Even if we endorse the idea that the cistophoric countermarks are linked to the silver indemnity paid by the Seleukids after Apameia,⁷³ it remains necessary to explain why it was felt useful to add the initials of the mints. Above all, why countermark Attic tetradrachms at all, i.e. full-weight coins corresponding to the value of

⁷¹ Seyrig 1973: 55; Leschhorn 1989: 40.

⁷² Waggoner 1979: 9 n. 6. See also Seyrig 1973: 35–6; Le Rider 1975: 43 n. 87a; Le Rider 1989a: 168–9; Thonemann 2008: 48–9.

⁷³ Polyb. 21.43.20–1: an initial indemnity of 127 talents 1,208 drachms to be completed with 350 talents within the next five years.

the light-weight cistophoroi? Meadows observes that the mints whose initials were put on the countermarks are precisely those, such as Ephesos or Sardeis, which refrained from striking Alexanders at a moment when nearly every city in Asia Minor did so. This suggests that there may have been a large-scale agreement between the Attalids and the cities, with consequences for cities located outside the boundaries of the Pergamene kingdom.

At this point, the safest statement we can make about the introduction of the cistophoroi is that it cannot have happened after 162 BC (Ma'aret hoard),⁷⁴ and is unlikely to have happened before 186 BC (Year 28 at Aspendos). I would have a preference for a more restricted period of c.180–170 BC.

If this is correct, it would be sufficient to break the link made by many between the treaty of Apameia and the creation of the cistophoric coinage. Several years, and perhaps a whole decade or even longer passed in between. And for that period, we are left with an expanded territory, meaning normally the immediate capacity to raise more taxes and revenues (not to take into account the indemnity to be paid by the Seleukids), but with no increasing of the monetary production.

As for the cistophoroi, we are fortunate to have a die-study for the issues struck before the Romans. Table 6.8 retains the dates proposed by Kleiner and Noe for each major mint.⁷⁵

Spread over some forty-three years (c.166–123 BC), these cistophoric issues correspond to a yearly average expressed in equivalents of obverses for Attic drachms of 51.9. Even following a high chronology for the start of the series (e.g. 186–123 BC), the yearly average would still be as high as 35.4 (2,232.2/63). These averages are considerably higher than those obtained for the Philetairoi (see Table 6.1: 8.0), and are in the same range as those reached by the Seleukids (see Table 6.2).

This leaves us in no doubt that the cistophoric coinages were highly controlled by the Attalid kings and were not, as sometimes argued,

⁷⁴ The first epigraphic evidence for cistophoroi comes later, at Delos, in c.150 BC (*I.Délos* 1422—see Robert 1951: 167; Le Rider 1989a: 163 n. 1).

⁷⁵ On minor mints, see Le Rider 1990; Le Rider and Drew-Bear 1991; Thonemann 2008. Le Rider insists on the paucity of these minor mints (15 coins and 3 obverse dies for those discussed in 1990: 701).

Table 6.8. The cistophoric coinages (c.166–123 BC)

Coinages	o	n	n/o	O (Carter)	O (drachm)	Yearly O (drachm)
Eumenes III–Aristonikos (c.132–130) ⁷⁶	5	32	6.40	5.3	21.2	7.1
Pergamon cistophoroi (c.166–123)	120	299	2.49	167.5	670.0	20.3
Apameia cistophoroi (c.166–123)	48	116	2.42	68.2	272.8	8.3
Ephesos cistophoroi (c.166–128)	100	342	3.42	121.6	486.4	12.8
Laodikeia cistophoroi (c.160–145)	4	21	5.25	4.4	17.6	1.2
Sardeis-Synnada cistophoroi (c.166–128)	22	55	2.50	30.7	132.8	3.5
Tralleis cistophoroi (c.166–128)	97	247	2.55	133.8	535.2	14.1
Tralleis half-cistophoroi (c.166–128)	20	30	1.50	48.1	96.2	2.5
Total cistophoroi (c.166–123)					2,232.2	51.9

(Kleiner and Noe 1977)

a truly civic coinage.⁷⁷ The amount of die-sharing between mints strongly points to a single minting place for issues allegedly coming from different mints, or alternatively to a transfer of dies between mints, as was clearly the case with the travelling mint of Aristonikos.⁷⁸ The fact that the mint of Tralleis was in charge of nearly all the fractions points too in the direction of a general policy established at a higher level. At least, with three ‘mints’ presenting a yearly average superior to 10 (20.3 for Pergamon, 14.1 for Tralleis, and 12.8 for Ephesos), we are dealing with monetary issues apparently too big to be civic. Compare these figures with the data on civic mints in Table 6.11: c.9.5 for Rhodes (c.408–190 BC), c.4.1 for Miletus (c.259–190), c.2.8 for Alabanda (c.197–100 BC), etc. None the less, we may introduce some flexibility in this scenario: cities may have negotiated in some way with the Attalids, as proposed by Le Rider

⁷⁶ On Eumenes III–Aristonikos, see Robinson 1954; Kampmann 1978; Adams 1980; Bussi 1997.

⁷⁷ Crawford 1985: 159; Le Rider 1989a: 185; *contra* Szaivert 1983.

⁷⁸ Single minting place: Kleiner and Noe 1977, supported by Kinns 1986b: 164. Die-transfer: Mørkholm 1979b. Cistophoroi of Pergamon are linked to Sardeis, Synnada, Apameia, ‘KOP’, and Basileus Aristonikos.

who, with others, points out that Ephesos was certainly responsible for monetary issues of Attic weight-standard under Attalid rule.⁷⁹

Rome too may have interfered in this process, as illustrated by overstrikes. Out of the 7 identifiable types overstruck with cistophoric types of Ephesos (5 occurrences) and Tralleis (2 occurrences), 5 are for Macedonian First Meris tetradrachms and 2 for tetradrachms with Thasian types,⁸⁰ both coinages struck for the Romans in Macedonia. Moreover, these overstrikes occur only with specific issues,⁸¹ which all belong to the same period, the years before the end of the Attalid kingdom (c.155–139 BC).⁸² Considering the nature of the overstruck coinages, and the unlikelihood that these coinages ever circulated within the Attalid kingdom, it seems logical to postulate that Romans were responsible for having provided the bullion for these specific issues of cistophoroi.⁸³ Put into perspective, this dispatch of silver is all the more fascinating, since recent research has pointed out other similar bullion transfers. We can tentatively reconstruct the following attractive sequence: (a) in 154 BC, silver was provided by Prousius (and the Attalids) to Aiolian and Ionian cities for their wreathed coinages (see below); (b) in 145–140 BC, silver was provided by the Romans to the Attalids from their Macedonian controlled coinages; and (c) in 123–120 BC, Athenian issues of tetradrachms were brought to Macedonia by the Romans.⁸⁴

At last—and most astonishingly in my mind—past literature has never addressed the simple but challenging question: in what kind of currency did Eumenes II and his successors defray their military expenditures? John Ma calculates that the Attalids were involved in twenty-four conflicts, meaning perhaps fifty years of campaigning in 144 years (277–133 BC). The ratio of conflicts strongly arose after Apameia: c.13 years out of 99 before (277–189 BC); c.23 years out of 43 afterwards (188–145 BC). Because of the

⁷⁹ Le Rider 1989a: 187–9; Kinns 1999. Crawford 1985: 160: ‘The whole monetary history of Ephesos in this period should caution against any facile linking of freedom and the production of silver coinage.’

⁸⁰ *CH* II 94, fig. 11.

⁸¹ 2 for Ephesos: star and laurel branch (c.150–140 BC), *K* and Artemis (c.140/139 BC); 1 for Tralleis: filleted tripod (c.155–145 BC).

⁸² It should be noted that, since the weight differs between cistophoroi and Attic tetradrachms, these overstrikes required that the weight of the Macedonian or Thasian tetradrachms be reduced by one quarter.

⁸³ Callataÿ 2011: 68–9.

⁸⁴ Callataÿ 1991–1992 and Meadows 2002b.

Attalid closed monetary economy—but here we have to be cautious not to over-interpret the hoard evidence, which is not as strong as it is sometimes considered to be—cistophoroi have been mainly considered in a trade or commercial context, all the more since they appear at first sight to be civic coinages.

I seriously wonder if a significant part of this coinage was not struck for military expenditures too, a suggestion reinforced by the rhythm of production as described in this volume by Meadows and the strong correlation between the heavy last pre-Roman issues and the war against Aristonikos. For the sake of argument, let us make a rough calculation: suppose that, for the period 188–133 BC, the average level of the Attalid army (combining peacetime and wartime) was 5,000 men (well below the 12,000 guessed as a maximum by Ma) and that all these men were badly paid at the rate of 200 drachms per year. This means an absolute minimum of 55 million drachms, which represents 9,166 talents (a result which gives us a vivid idea of what Lysimachos or Philetairos could have done with the similar amount kept in their treasury at Pergamon), or the use of 687.5 obverse dies for cistophoric tetradrachms. To be more realistic, we can easily double these numbers. Now, the entire production of cistophoroi before 133 BC may be estimated to have required *c.*568 obverse dies. Certainly we ought not to confuse military annual expenditures with cumulative monetary production, since it is unlikely that soldiers were paid only with fresh coins, but we have to recognize that the Attalid army represented an enormous cost. We have also to take into account the fact that most conflicts and wars sustained by the Attalids after Apameia were conducted on their own territory, be it against external threats (184–182 BC: Prousius I; 180–179 BC: Pharnakes and the Galatians; 168–165 BC: the Galatians; 156–154 BC: Prousius II; 149 BC: Prousius II), which sometimes led to Pergamon itself being besieged, or against internal rebels (as with the city of Selge). Hoards of cistophoroi found within the large Attalid kingdom may not necessarily have belonged to traders, and some of them are likely to be connected with military events, as in the cases of the two Phrygian hoards of Polath (*CH* VIII 446) and Afyon Karahisar (*IGCH* 1415) and the anomalous *IGCH* 1453, which included 57 cistophoroi mixed in with 11 tetradrachms of Prousius, 8 of the Seleukid king Demetrios I (as well as 5 ‘quasi-Seleukid’ tetradrachms of Side) and 5 late Philetairoi.

Anyhow, we need to consider carefully how unlikely it is that all the royal issues (Philetairoi) before 188 BC should be attributed to the need to cover military expenditures (and even so, their production would not be sufficient), while considering all the royal-civic coins (cistophoroi) minted after Apameia as motivated by trade.

THE POST-APAMEIAN ALEXANDERS (c.188–160 BC)

Many cities of western and southern Asia Minor either continued striking or started to strike Alexander tetradrachms after 188 BC. These include Aigai (c.188–160 BC), Alabanda (c.172–162), Antiocheia on the Maeander (c.190–170), Assos (c.188–160 BC), Chios (33 obverse dies), Erythrai (1 or 2 obverse dies), Kyme (c.170–151 BC), Methymna (c.188–180 BC), Miletos (c.190–165 BC), Myrina (c.188–160 BC) and Temnos (c.162–143 BC) and even possibly Pergamon.⁸⁵

In itself, this phenomenon is odd since, after Apameia, Rome took severe steps to control or forbid the recruitment of mercenaries. It would then appear logical to have observed a decreasing of the Alexanders as the favourite currency for mercenaries. This presumption remains so far difficult to substantiate, since few die-studies have been done for these post-Apameian Alexanders, which appear in many hoards (as in the Gaziantep hoard). However, Meadows' recent study of Alabanda shows that no fewer than 40 obverse dies for Alexanders were engraved there during the years 185–170 BC, while this number is about 45 for Chios during the years 190–160 BC.⁸⁶

The Gaziantep hoard, buried in 143 BC, thus surely after the end of the Alexanders, gives a large-scale picture of what was circulating at that point.⁸⁷ Out of 1,916 coins, 339 are Alexanders, among which those from Alabanda are the most numerous with 110 coins, followed by Temnos (86), with all the others following well behind: 15 for Kyme, 14 for Mytilene, 12 for Myrina, 7 for Chios (which is curiously under-represented here), and so on. If we exclude the pre-Apameian

⁸⁵ Aigai: Meadows and Houghton 2010: 169. Chios: Bauslaugh 1979. Erythrai: Kinns 1980: nos. 276–80. Temnos: Meadows and Houghton 2010. Pergamon: Meadows, Ch. 5 above.

⁸⁶ Alabanda: Meadows 2008. Chios: Bauslaugh 1979.

⁸⁷ *IGCH* 1542; Meadows and Houghton 2010.

Table 6.9. A comparison between pre- and post-Apameian Alexanders

Coinages	o	n	n/o	O (Carter)	O (drachm)	Yearly O (drachm)
Alabanda Alex. Series III (c.185–170)	40	635	15.88	40.0	160.0	11.1
Chios Alexanders (c.190–160)	33	86	2.61	45.0	180.0	6.0
Post-Apameian Alex. (c.188–160)	c.150	–	–	c.150.0	c.600.0	21.4
Pre-Apameian Alexanders (c.223–188)	–	–	–	332.8	1,331.2	38.0

(Alabanda = Meadows 2008; Chios = Bauslaugh 1979 and Meadows 2008; pre-Apameian = Table 6.4)

Alexanders (79 for Aspendos, Perge, and Phaselis), Alabanda represents *c.*46 per cent of the total (110 out of 240). The Ma'aret en-Nu'man hoard, buried a generation earlier in 162 BC, offers a different pattern. Most of the 263 Alexanders were struck before Apameia (with 182 coins for Aspendos, Perge, and Phaselis); only 60 Alexanders look post-Apameian, and none are to be attributed to Alabanda.⁸⁸

All in all, we should be tempted to estimate all the post-Apameian Alexanders as representing the equivalent of *c.*150 obverses for tetradrachms (*c.*600 equivalent of obverses for Attic drachms). If this is right, this would correspond to a clear decline of production over the period *c.*188–160 BC (Table 6.9).

THE WREATHED COINAGES (*c.*154–135 BC)

Around the middle of the second century BC, a fair number of cities in Asia Minor—but none of those that issued cistophoroi at this period—started to strike tetradrachms with different types for each city, but whose reverses were all surrounded by a wreath; hence their generic name of ‘wreathed coinages’. These coinages, which did not last long, were massively exported to the Near East (they have been

⁸⁸ CH VI 37 = VII 98 = VIII 433. Temnos: 10; Miletos: 8; Chios 7; Myrina: 6; Mytilene: 6; Kyme: 4; Alexandria Troas: 3; Assos: 3; Pella: 1; Samothrake: 1; Teos: 1. See Mattingly 1993b; Le Rider 2001a: 55–6.

Table 6.10. The wreathed coinages (c.154–135 BC)

Coinages	o	n	n/o	O (Carter)	O (drachm)	Yearly O (drachm)
Aigai tetradrachms (c.151–143)	36	4	9.00	4.1	16.4	2.1
Kyme tetradrachms (c.155–143)	79	537	6.80	83.6	334.4	27.9
Herakleia tetradrachms (c.140–135 ?)	25	117	4.68	28.1	112.4	22.5
Lebedos tetradrachms (c.140–135 ?)	8	53	6.63	8.5	34.0	7.2
Magnesia tetradrachms (c.150–140)	36	242	6.72	38.2	152.8	15.2
Myrina tetradrachms (c.160–143)	97	415	4.28	111.2	444.8	26.2
Smyrna Tyche/ Σ ΜΥΡΝΑΙΩΝ (c.150–143)	13	71	5.46	14.2	56.8	8.1
“Syros” tetradrachms (c.140–130?)	13	18	1.38	37.2	130.0	13.0
Technitai of Dionysos (c.155)	1	1	1.00	?	?	?
Total (c.154–135)					1,281.6	67.4

(Aigai = Callataÿ 1993b: 38; Herakleia = Callataÿ 1993b: 38 (not Lavva 1993); Kyme = Oakley 1982; Lebedos = Amandry 1989; Magnesia = Jones 1979; Myrina = Sacks 1985; Smyrna (Tyche/ Σ ΜΥΡΝΑΙΩΝ) = Callataÿ 1993b: 38; Smyrna (Tyche/Lion) = Callataÿ 1993b: 39; ‘Syros’ = Nicolet-Pierre and Amandry 1992 + Callataÿ 1993b: 39; Technitai of Dionysos = Lorber and Hoover 2003)

found in great numbers in hoards buried in north-western Syria). We do have die-studies for nearly all of them; meanwhile recent research allows us to propose refined chronologies.⁸⁹

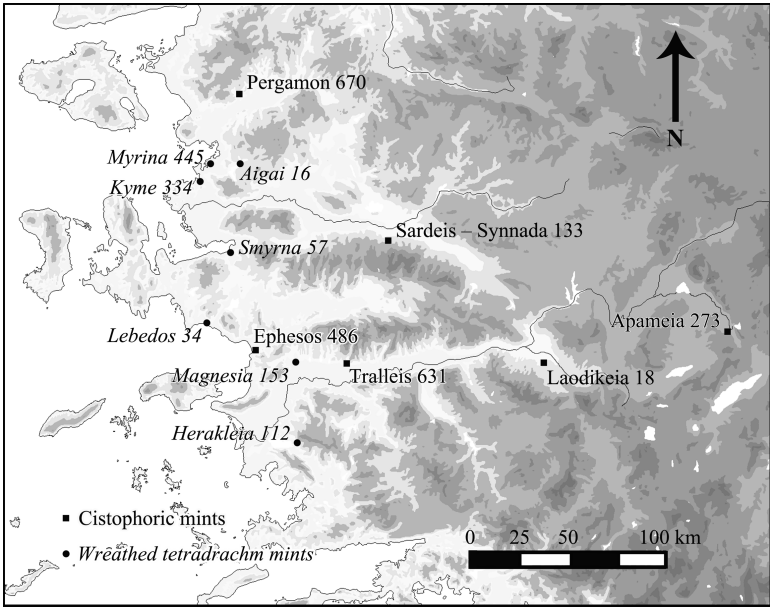
There can be no reason to doubt that these wreathed coinages were produced in massive quantities over a relatively short period. The most up-to-date chronologies assume an early start at Myrina in c.160 BC (but see below for a probable later start-date in 154 BC, for historical reasons), and suggest that some cities were still striking in 135 BC. This slightly expands the period of striking to around 25 years, in contrast with the 10–20 years argued for in the recent past.⁹⁰ None the less, a comparison of the yearly averages obtained by several cities with the numbers provided on Table 6.11 (below) leads to the feeling that these wreathed issues were too abundant to be ordinary civic issues. Hence the notion that the silver for these issues must have been provided by the Attalids.⁹¹

If, as on Map 4, we compare the mints which were responsible for the cistophoroi with those responsible for the wreathed coinages,

⁸⁹ See Meadows and Houghton 2010.

⁹⁰ Ten years (c.155–145 BC): Le Rider 2001a: 50.

⁹¹ Rostovtzeff 1939; Kinns 1987: 107.



Map 4. Cistophoric mints and mints which produced wreathed tetradrachms, with their total productions estimated in equivalent of obverses for Attic drachms.

both in terms of location and volume, it looks like a co-ordinated phenomenon, Ephesos being the only coastal mint to strike cistophoroi. Today, most scholars agree that the wreath was simply a fashionable type without any explicit political meaning, and that these coinages were not intended to replace the Alexanders, which were not officially taken out of circulation.⁹²

Again, the massive presence of such coinages some thousands of kilometres to the east has been explained in various ways. Trade has been considered as the explanation by most modern commentators, with Seyrig and Le Rider at the forefront.⁹³ But, as argued by Psoma

⁹² *Contra* Boehringer 1972: 38–9; Giovannini 1978: 94–5 and 101–2; Giovannini 1982a. See Mørkholm 1980; Picard 1982: 249–50; Le Rider 2001a: 54. For a general presentation of these coinages, see also Gerin 1989.

⁹³ Seyrig 1973: 76 ('les nouveaux envahisseurs du marché'); Jones 1979; Sacks 1985: 26–9; Le Rider 2001a: 54–8. Amandry is more prudent (1989: 7, 'pour des raisons qui nous échappent').

in this volume (Chapter 8), and already by Hoover and McDonald, such a commercial explanation is hardly compatible with a cessation around 140 BC.⁹⁴ To this question—what commercial reason could there have been for cities under Attalid control to have stopped their large ‘civic’ issues around 140 BC?—we may add another one, which to my mind is still more destructive for the ‘trade’ explanation. What commercial reason could have impelled a city like Lebedos, which had never struck coinage before, suddenly to embark on such a spectacular monetary venture? The same question is valid for cities with a numismatic past: why did Myrina (111 obverses) or Kyme (84 obverses) suddenly decide to strike on an unprecedented scale? In addition, there is no correlation between the size of these wreathed coinages and the supposed commercial importance of the cities concerned, which again points to a phenomenon highly controlled at a higher level.⁹⁵

The military explanation seems preferable. Many authors have related how, in 153 BC, Alexander Balas was helped by Eumenes II in his seizure of the Seleukid throne from Demetrios I.⁹⁶ We are even informed about a certain Herakleides, who recruited mercenaries at Ephesos in this context.⁹⁷ We also know that at the conclusion of the war between King Prusias II of Bithynia and the Attalids (helped by the Romans), which ended with the defeat of Prusias in 154 BC, Prusias was required under the peace settlement to deliver twenty ships to Eumenes, as well as 500 talents within twenty years.⁹⁸ Prusias was also required to give 100 talents to the cities of ‘Methymna, Aigai, Kyme and Herakleia’.⁹⁹ It is hard not to connect this list of cities with the cities that started at the same moment to strike wreathed tetradrachms, even if the quoted amount of 100 talents looks here—a true exception to the rule!—substantially inferior to the wreathed monetary issues we are dealing with (8 obverse dies are enough to monetize 100 talents).¹⁰⁰

⁹⁴ Psoma, Ch. 8 below; Hoover and McDonald 1999–2000.

⁹⁵ Callataÿ 1991: 79.

⁹⁶ See Psoma, below pp. 276–7.

⁹⁷ Polyb. 33.18.13–14.

⁹⁸ Kinns 1986b: 169; Psoma, below pp. 282–9.

⁹⁹ Polyb. 33.13.8.

¹⁰⁰ $8 \times 20,000 = 160,000$ tetradrachms = 640,000 drachms = 106.7 talents.

In Syria itself, as demonstrated by Duyrat, we do observe a remarkable twofold concentration of these hoards which include massive amounts of wreathed tetradrachms. Chronologically, the hoards are concentrated in the 140s BC, forming one of the two hoarding peaks for the region (the other is linked with Alexander the Great, a century and a half before); geographically, most of these hoards have been found in a narrow area in northern coastal Syria, south of Antioch, the very region where Alexander Balas landed and fought against Demetrios I.¹⁰¹ Again, such a restricted area of circulation would be difficult to explain for commercial reasons.

COMPARISONS WITH OTHER SILVER CIVIC COINAGES

Several die-studies allow us to compare the estimates obtained for the royal issues with what was attained by neighbouring Greek cities at the same period (Table 6.11). Not surprisingly, civic coinages are rarely to be compared with royal issues in terms of scale. With a yearly production of *c.*19 equivalent of obverse dies for Attic drachms, Rhodes (*c.*250–190 BC) stands well ahead of Alabanda (4.3), the Lykian League (3.5), Miletos (2.1), Phaselis (1.5), Ephesos (1.4), and Kos (1.3). A yearly average of 2 means that no more than 40,000 drachms (2 × 20,000) were monetized every year, which is less than 7 talents or—to take the usual transcription—the possibility of paying in fresh coins fewer than 200 unskilled workers (at 1 drachm per day and 200 days a year). For cities like Miletos and Ephesos, reputed to have a population greater than 100,000 at the end of the Hellenistic period, this is a very low result indeed, which—taken as such—does not in itself suggest a particularly high level of monetization, as has sometimes been intuitively advocated for this period.

¹⁰¹ Duyrat 2011. *IGCH* 1556: northern Syria; *IGCH* 1557: Teffaha, *c.*20 km east of Tartus; *IGCH* 1559: Akkar, *c.*45 km south-west of Homs; *IGCH* 1560: Ghonsle, *c.*15 km. east of Baniyas; *IGCH* 1562: Aleppo; *IGCH* 1567: Baarin, *c.*15 km. south-east of Massyaf.

Table 6.11. Estimated monetary volumes for contemporaneous cities and leagues

Coinages	o	n	n/o	O (Carter)	O (drachm)	Yearly O (drachm)
Total Ephesos bee drachms (c.202–150?)	70 ¹⁰²	590	8.43	72.2	72.2	1.4
Magnesia didrachms 10.9 g (c.210–200)	5	14	2.80	6.6	17.1	1.7
Miletos total Period IV (c.259–246)	–	–	–	–	59.8	4.6
Miletos total Period V (c.225–190)	–	–	–	–	222.0	6.3
Miletos total Period VI (c.175–86/5)	–	–	–	–	89.1	1.0
Total Miletos (c.259–86/5) ¹⁰³	–	–	–	–	370.9	2.1
Alabanda Series I–II (c.200–190)	3	85	28.33	3.0	12.0	1.0
Alabanda Series III Alex. (c.170–152)	40	635	15.88	40.0	120.0	6.7
Alabanda Series IV (c.145–140) ¹⁰⁴	7	67	9.57	7.0	28.0	5.6
Alabanda Series V ‘cisto.’ (c.167–134)	22	42	1.91	37.5	112.5	3.4
Total Alabanda (c.197–133)					272.5	4.3
Hydisos hemidrachms c.2.2 g (c.150?)	3	15	5.00	3.3	1.7	?
Stratonikeia drachms 3.0 g (c.130–90)	2	8	4.00	2.3	1.6	
Stratonikeia hemidrachms 1.5 g (c.130–90)	62	305	4.92	69.1	24.7	0.6
Total Stratonikeia (c.130–90)					26.3	0.7
Mylasa tetra. (c.246–230 ?)	5	12	2.40	7.1	28.4	1.8
Mylasa ps.-Rhodian drachms (c.165–130)	107	619	5.79	115.9	60.7	1.7
Mylasa ps.-Rhodian hemidr. (c.166?)	41	135	3.29	50.4	14.4	?
Kos Issue XI 6.5 g (c.280–250)	11	90	8.18	11.4	17.6	0.6

(continued)

¹⁰² Kosmetatou 1996 (in an unpublished article) came to different numbers (102 obverse dies for 456 coins). Preference is to be given to the thorough study of Kinns 1999, which included more material and postulated fewer dies.

¹⁰³ The evidence gathered by Deppert-Lippitz has been considerably enlarged by Kinns (1986a and 1998).

¹⁰⁴ 67 coins instead of 63 in Meadows 2008.

Table 6.11. Continued

Coinages	o	n	n/o	O (Carter)	O (drachm)	Yearly O (drachm)
Kos Issue XII 3.0 g (c.280–210)	33	189	5.73	35.8	25.6	0.4
Kos Issue XIII 1.3 g (c.280–210)	39	261	6.69	41.4	12.8	0.2
Kos Issue XIV 15.1 g (c.280–250)	16	142	8.88	16.4	59.0	2.0
Kos Issue XV 6.6 g (c.250–240)	7	18	2.57	9.6	15.1	1.5
Kos Issue XXIII 3.1 g (c.180–170) ¹⁰⁵	16	28	1.75	30.2	22.3	2.2
Kos Issue XXIV 1.5 g (c.180–170)	14	20	1.43	37.2	13.3	1.3
Kos tetrobols 2.1 g (c.145–88)	110	216	1.96	182.0	91.0	1.6
Total Kos (c.280–88)					256.7	1.3
Rhodes (c.250–230)	–	–	–	–	396.0	19.8
Rhodes (c.230–205)	–	–	–	–	246.0	9.8
Rhodes (c.205–190)	–	–	–	–	482.0	32.1
Total Rhodes (c.250–190)					1,124.0	18.7
Rhodes Plinthophoric 2.8 g (c.185–84)	829	1,583	1.91	1,411.9	941.3	9.3
Rhodes post-plintho. 4.2 (c.60–25?)	120	427	3.56	144.2	144.2	4.1
Lykian League drachms (c.167–77)	201	307	1.53	467.1	312.0	3.5
Phaselis staters 10.3 g (c.250–221)	35	126	3.60	41.9	102.8	3.5
Phaselis staters 11.1 g (c.167–130)	21	52	2.48	29.4	77.7	2.1
Total Phaselis (c.250–130)¹⁰⁶					180.5	1.5
Perge tetra. Artemis Series I (c.200–190)	7	42	6.00	7.5	30.0	3.0
Perge tetra. Artemis Serie II (c.170–100)	20	41	2.05	31.8	127.2	1.8
Total Perge (c.200–100)	–	–	–	49.3	157.2	1.6

(Ephesos = Kinns 1999; Magnesia = Kinns 1989; Miletos = Deppert-Lippitz 1984; Kinns 1986a; Kinns 1998; Alabanda = Meadows 2008; Hydisos = Delrieux 2007a; Stratonikeia = Meadows 2002a; Mylasa = Delrieux 1999; Ashton 1992; Ashton 1999; Kos = Ingvaldsen 2002; Kroll 1964; Rhodes = Ashton 2001a: 92; Jenkins 1989 [plinthophoric]; Ashton and Weiss 1997 [post-plinthophoric]; Lykian League = Troxell 1982; Perge = Colin 1996)

¹⁰⁵ Höghammar 2007 has published preliminary die-studies for four Koan silver issues struck from c.200 onwards (using only the evidence of a few major coin cabinets): Issue A (9 coins, 7 obverses), Issue B (1 coin), Issue C (8 coins, 6 obverses), and Issue D (9 coins, 5 obverses).

¹⁰⁶ Not taking into account the Alexanders (similarly for Perge).

ENLARGING PERSPECTIVES

We can now compare the many coinages treated in this quantitative survey. Table 6.12 sums up the main conclusions, with slightly adapted chronologies, in relation to the arguments presented in this paper. The date of 175 BC adopted for the start of the cistophoroi, and 170 BC for the end of the Philetairoi, are nothing more than compromises between high and low chronologies. They have nothing to recommend them in themselves, but adopting a mean value will protect our general yearly estimates from being too seriously affected by future developments of the current controversy.

These comparisons reserve a couple of surprises. During the first century of Attalid rule (c.273–170 BC), the Philetairoi were indeed produced on a small scale, approximately 6.5 times less than the annual production of cistophoroi over the course of the following century, before and after the legacy of Attalos III in 133 BC (c.170–67 BC). This statement holds true whatever the precise chronology adopted for the introduction of the cistophoroi. Incidentally, the range of the difference (7.8 before Apameia, c.53.1 after) is roughly in line with the increase of either territory or population for the Attalid kingdom after 188 BC.¹⁰⁷ Another surprise is the tremendous amount of tetradrachms with a wreath on their reverse struck by cities around the mid-second century BC. The chronology is debated, and it may well be that these coinages were issued in less than the span of nineteen years here adopted; either way, they were for a period a bigger coinage than the cistophoroi themselves. Finally, many readers may be astonished to learn that the Attalid cistophoroi were for a century a coinage struck in higher volumes than the Athenian stephanephoric tetradrachms which were supposed to have invaded the markets everywhere (even though, in absolute terms, more Athenian tetradrachms were eventually issued).

To go further, Table 6.13 is an attempt to quantify, every fifty years from 250 BC to 100 BC, how some major Hellenistic coinages evolved, putting the Attalids in the broad perspective of the Hellenistic world. This is part of a larger project which aims to quantify all

¹⁰⁷ See Thonemann, Ch. 1 above, pp. 1–2.

Table 6.12. Comparisons of the main results with the late cistophoroi (c.133–67 BC) and Athens (c.180–45 BC)

Coinages	Years	O (drachm)	Yearly O (drachm)
Philetairoi (c.282–165)	117	916	7.8
Pre-Apameian Alexanders (c.223–189)	34	1,331	38.0
Post-Apameian Alexanders (c.188–160)	28	600	21.4
Early cistophoroi (c.175–133)	42	2,232	53.1
Wreathed coinages (c.154–135)	19	1,459	76.8
Late cistophoroi (c.130–67)	63	3,200	50.8
Athens (c.180–45)	135	5,328	39.5

(Philetairoi = Table 1; pre-Apameian Alexanders = Table 4; post-Apameian Alexanders = Table 9; cistophoroi = Table 8; wreathed coinages = Table 10; late cistophoroi = Kleiner 1979 [Apameia], Callatay 1997a: 160–79 [Ephesos] and 1993a: 39–40; Athens = Thompson 1961 and Callatay 1993a: 33)

Greek coinages from their very beginnings to the end of the Hellenistic world.

The Ptolemies come first with a yearly average in Attic drachms of 100 or more obverse dies. The Seleukids come next with a total production which seems to remain stable around 40 obverse dies per year.¹⁰⁸ In other words, with a long-lasting average of 50 obverse dies per year, the cistophoric coinage represents a higher annual monetization in terms of value (and let us recall that this value is here established as equal with an Attic tetradrachm) than that which was achieved in the Seleukid kingdom. Considering differences of areas and revenues, this comes as a surprise too.

I would make only two brief general comments. First, the general coherence of this table is a powerful argument for the value of this kind of calculation: everything seems proportionate to what we might expect. The absence of any absurd result (which, at this stage of the evidence, would certainly happen if the average productivity per die differed significantly from one place to another) is very encouraging for the trustworthiness of the entire set of data. Secondly, the general trend (Table 6.13, last row: total) is one of growth over time. As the evidence gathered here includes many of the most substantial coinages of the period (Ptolemies, Seleukids, Attalids, Athens,

¹⁰⁸ Antioch, first just one mint among several others, played a major role from Antiochos IV onwards.

Table 6.13. An essay in quantifying (in yearly average of the equivalent of obverse dies for Attic drachms) the evolution of some Hellenistic major silver coinages (250–100 BC)

Coinages	250 BC	200 BC	150 BC	100 BC
Attalid kings	17.0	3.7	51.9	50.8
Wreathed tetradrachms (c.155–140)	–	–	76.8	–
Late Alexanders (c.210–190)	–	38.4	–	–
Seleukid kings	(c.30?)	44.4	c.60	42.4
Ptolemaic kings	132.0	(c.100?)	(c.100?)	76.0
Pontic kings	–	1.6	–	21.3
Bithynian kings	–	(c.10?)	c.20.0	31.8
Cappadocian kings	–	–	–	5.1
Rhodes	19.8	32.1	7.8	7.8
Miletos	4.6	6.3	1.0	1.0
Alabanda	–	1.0	6.2	–
Athens	low	low	27.7	56.1
Total	203.4	237.5	342.0	292.3

(see above, Tables 6.2 and 6.11, Callataÿ 1993a; Callataÿ 2005a; Le Rider and Callataÿ 2006: 226–30 [Ptolemies and Seleukids]; Houghton 1991: 80 [late Seleukids]; Houghton 2002: 15 [Seleukids, c.150 BC])

Rhodes, minor Hellenistic kingdoms), it is likely that this trend is indicative of what really happened. In other words, missing issues are plentiful (especially Macedonia and the Thracian area), but it is less and less likely that they could carry enough weight to modify the general tendency. This tendency undermines the otherwise attractive idea that the Romans seized and brought to Rome a substantial part of the monetized metal circulating in the Hellenistic world: this notion is simply not supported by the quantitative data.¹⁰⁹

ANNEXE I: HOARDS OF CISTOPHOROI

IGCH 352 = *CH* II 125 Hierapytna (Crete), 1933 (30 cistophoroi + 40 Athens)

IGCH 1326 Balikesir (Mysia), 1958, c.133–130 BC (c.100 cistophoroi—New York 28)

¹⁰⁹ Callataÿ 1993a: 44–6. There is some regrettable confusion between the statement in Callataÿ 1993a: 45 ('voilà ce dont on doutera': i.e. that 1,000 tons of silver, out of 3,000, quitted the Hellenistic world to reach Rome) and what can be read in the general conclusion of the book, where the authors endorse the idea (Callataÿ et al. 1993: 91–3).

- IGCH 1327 **Yeşilhisar (Mysia)**, 1963, near Savaştepe, c.130 BC (14 cistophoroi—Istanbul 100)
- IGCH 1328 **Sahnali (Karia)**, 1952, near Dalama, c.130–125 BC (18 cistophoroi—Ankara)
- IGCH 1340 **Smyrna (Ionia)**, 1865, second century BC (40 tetra. and 3 dra. of Smyrna + some cistophoroi—dispersed)
- IGCH 1358 = *CH* V 52 **Karacebey (Mysia)**, 1929, ancient Miletropolis, c.75 BC (271 cistophoroi [Ephesos to year 56 and Tralleis to year 9]—Istanbul)
- IGCH 1359 **Çesme (Ionia)**, 1960, anc. Erythrai, c.70–65 BC (4 cisto. of Pergamon [80–67 BC] + 15 dra. Chios, 14 stephanephoroi Athens, 2 imit. Athens, 1 late Lysimachos [Byzantion], 1 tetra. Mithradates VI, 1 tetra. Nikomedes II—Boston 38)
- IGCH 1383 = *CH* II 113 **Giresun (Pontos)**, 1933, c.77 BC (3 cistophoroi [Ephesos, Pergamon, Apameia], 22 tetra. Mithradates VI, 18 Athens, 7 tetra. Nikomedes II–IV, 3 dra. Cappadocian kings, 2 tetra. Antiochos VII—Istanbul)
- IGCH 1415 **Afyon Karahisar (Phrygia)**, 1876, c.133 BC (120+ cistophoroi [10+ Apameia, 110+ unc. mints])
- IGCH 1452 Asia Minor, c.1876, c.150–145 BC (54 cistophoroi—dispersed)
- IGCH 1453 Asia Minor, c.1962, c.150–140 BC (57 cistophoroi + 11 tetra. Prusias I and II, 8 tetra. Demetrios I, 5 tetra. Side, 5 tetra. Eumenes II)
- IGCH 1455 Asia Minor, c.1928, c.125 BC (158+ cistophoroi—New York 65 and London 16)
- IGCH 1456 Asia Minor, 1971, c.105–100 BC (9+ cistophoroi—casts at the ANS)
- IGCH 1458 Asia Minor, 1955 or earlier, c.100 BC (43+ cistophoroi—New York 43)
- IGCH 1459 Asia Minor, c.1935, c.95 BC (130+ cistophoroi—New York 24)
- IGCH 1460 Asia Minor, 1970, c.95–90 BC (30+ cistophoroi—New York 30)
- IGCH 1461 Asia Minor, 1966, c.88 BC (26+ cistophoroi—casts at the ANS)
- IGCH 1462 Asia Minor, 1961, c.85–80 BC (25+ cistophoroi—casts at the ANS)
- IGCH 1464 Asia Minor, 1971, c.50–40 BC (29+ cistophoroi—casts at the ANS)

- IGCH 1466 Asia Minor, before 1722, first century BC (10 cistophoroi—Oxford)
- IGCH 1467 Asia Minor, 1968, first century BC (c.200 cistophoroi—dispersed)
- IGCH 1746 = CH I 105 **Sarnakonuk**, 1945, 31 BC (15 cistophoroi + 215 Roman denarii, 58 Seleukids, etc.)
- CH II 94 Ionia, 1974, mid-second century BC (50+ cistophoroi).
- CH VIII 437 Unknown find-spot, 1982, c.160 BC (42+ cistophoroi [all first series of K and N]—BM 2)
- CH VIII 446 **Polath (Phrygia)**, 1985, near Ankara, c.150–140 BC (37 cistophoroi—Ankara)
- CH VIII 447 Unknown find-spot, ?, c.150–100 BC (50+ cistophoroi—dispersed, see *Münzzentrum Köln* 41, Aug. 1992, nos. 500–50)
- CH VIII 521 **East coast of Antikythera**, 1976, c.75–50 BC (36 cistophoroi [31 Pergamon to 67 BC] + 3 bronzes Ephesos—Athens)
- CH VIII 525 Asia Minor, 1991/1992, c.65 BC (cistophoroi—dispersed, see *Münzzentrum Köln* 41, Aug. 1992)
- CH VIII 526 Unknown find-spot, 1990, c.65 BC (c.98 cistophoroi—dispersed)
- CH VIII 536 = IX 568 **Pergamon (Mysia)**, 1987, c.50 BC (65 cistophoroi [17 Ephesos and 48 Pergamon]—Pergamon)
- CH VIII 537 Unknown find-spot, 1986, after 48 BC (65+ cistophoroi—dispersed, see *Lanz* 36, 21 April 1986)
- CH IX 524 Unknown find-spot, 1999 or earlier, mid- to late second century BC (cistophoroi—Uşak)
- CH IX 535 **Ahmetbeyli (Ionia)**, anc. Kolophon, 1973, c.120 BC (25 cistophoroi—Izmir)
- CH IX 558 **Gridia (Chios)**, 1959, c.75 BC (2 cistophoroi [Pergamon] + 14 dra. Chios, 1 Athens and 1 Roman denarius [RRC 340])
- CH IX 560 Unknown find-spot (**Mysia**), 1993 or before, c.70 BC (177 cistophoroi [140 Laodikeia, 29 Apameia, 8 Tralleis]—Private coll. New York)

Mixed hoards (chronological order)

- IGCH 1340 **Smyrna (Ionia)**, 1865, second century BC (40 tetra. and 3 dra. of Smyrna + some cistophoroi—dispersed)
- IGCH 1453 Asia Minor, c.1962, c.150–140 BC (57 cistophoroi + 11 tetra. Prusias I and II, 8 tetra. Demetrios I, 5 tetra. Side, 5 tetra. Eumenes II)

- IGCH* 1383 **Giresun (Pontus)**, 1933, c.80 BC (3 cistophoroi [Ephesos, Pergamon, Apameia], 22 tetra. Mithradates VI, 18 Athens, 7 tetra. Nikomedes II–IV, 3 dra. Cappadocian kings, 2 tetra. Antiochos VII—Istanbul)
- CHIX* 558 **Gridia (Chios)**, 1959, c.75 BC (2 cistophoroi [Pergamon] + 14 dra. Chios, 1 Athens and 1 Roman denarius [*RRC* 340])
- IGCH* 1359 **Çesme (Ionia)**, 1960, anc. Erythrai, c.70–65 BC (4 cisto. of Pergamon [80–67 BC] + 15 dra. Chios, 14 stephanephoroi Athens, 2 imit. Athens, 1 late Lysimachos [Byzantion], 1 tetra. Mithradates VI, 1 tetra. Nikomedes II—Boston 38)
- CH* VIII 521 **East coast of Antikythera**, 1976, c.75–50 BC (36 cistophoroi [31 Pergamon to 67 BC] + 3 bronzes Ephesos—Athens)
- IGCH* 352 = *CH* II 125 **Hierapytna (Crete)**, 1933, c.44–42 BC (30 cistophoroi + 43 Athens, 200 Roman denarii, etc.)
- IGCH* 1746 = *CH* I 105 **Sarnakonuk**, 1945, 31 BC (15 cistophoroi + 215 Roman denarii, 58 Seleukids, etc.)

Hoard with known provenance and buried before 130 BC (chronological order)

- IGCH* 1340 **Smyrna (Ionia)**, 1865, second century BC (40 tetra. and 3 dra. of Smyrna + some cistophoroi—dispersed)
- CH* VIII 446 **Polath (Phrygia)**, 1985, near Ankara, c.150–140 BC (37 cistophoroi—Ankara)
- IGCH* 1415 **Afyon Karahisar (Phrygia)**, 1876, c.133 BC (120+ cistophoroi [10+ Apameia, 110+ unc. mints])
- IGCH* 1326 **Balikesir (Mysia)**, 1958, c.133–130 BC (c.100 cistophoroi—New York 28)
- IGCH* 1327 **Yeşilhisar (Mysia)**, 1963, near Savaştepe, c.130 BC (104 cistophoroi—Istanbul 100)
- IGCH* 1328 **Sahnali (Caria)**, 1952, near Dalama, c.130–125 BC (18 cistophoroi—Ankara)
- CH* IX 535 **Ahmetbeyli (Ionia)**, anc. Kolophon, 1973, c.120 BC (25 cistophoroi—Izmir)