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Manipulating Late Hellenistic Coinage: Some Overstrikes and Countermarks on Bronze Age Coins of Pergamum

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JÉRÉMIE CHAMEROY

Manipulating Late Hellenistic Coinage: Some Overstrikes and Countermarks on Bronze Coins of Pergamum

The great diversity in coin production at Pergamum¹ is exceptional among Hellenistic cities, and reflects the political and economic significance of the metropolis from the end of the 4th century BC onwards. The earliest coins struck by Pergamum were civic ones in gold, silver and bronze with the ethnicon as legend, emitted from the end of the 5th (hemidrachms, obols, chalkoi) or during the 4th century BC (gold staters and their thirds, maybe Alexander tetradrachms, chalkoi), while dynastic tetradrachms in the names of Lysimachos, Alexander (posthumous) or Seleucos appeared in the 280s. Later, in the 260s, the first tetradrachms in the name of Philetairos were followed by an abundant dynastic bronze coinage, which continued under his successors.

It is a great pleasure for me to express my thanks to the directors of the Kommission für Alte Geschichte und Epigraphik des DAI and the DAI Istanbul, CHRISTOF SCHULER and FELIX PIRSON, who allowed me to carry out this work by inviting me regularly for study visits to Munich and Bergama. My thanks go particularly to RICHARD ASHTON (who initiated this paper) for his insightful comments, LÉOPOLD MIGEOTTE for helpful remarks on an earlier draft of this study and to CLIVE BRIDGER for improving my English.

The following abbreviations are used: BOGAERT, *Banques* = R. BOGAERT, *Banques et banquiers dans les cités grecques*, 1968; CARDINALI, *Amministrazione* = G. CARDINALI, *L'amministrazione finanziaria del comune di Pergamo*, MAIB 10, 1916, 181–193; CHAMEROY, *Chronologie* = J. CHAMEROY, *Chronologie und Verbreitung der hellenistischen Bronzeprägungen von Pergamon: der Beitrag der Fundmünzen*, Chiron 42, 2012, 131–181; GAUTHIER, *Légendes* = P. GAUTHIER, *Légendes monétaires grecques*, in: J.-M. DENTZER – P. GAUTHIER – T. HACKENS (eds.), *Numismatique antique. Problèmes et méthodes*, 1975, 165–179; HOWGEGO, *GIC* = C. HOWGEGO, *Greek Imperial Countermarks*, 1985; LE RIDER, *Contremarques* = G. LE RIDER, *Contremarques et surfrappes dans l'Antiquité grecque*, in: J.-M. DENTZER et al. (above) 27–56; MARCELLESI, *Pergame* = M.-C. MARCELLESI, *Pergame de la fin du V^e au début du I^{er} siècle avant J.-C.* *Pratiques monétaires et histoire*, 2012; MIGEOTTE, *Finances* = L. MIGEOTTE, *Les finances des cités grecques aux périodes classique et hellénistique*, 2014; VIAL, *Délos* = C. VIAL, *Délos indépendante (314–167 avant J.-C.)*, BCH suppl. 10, 1984.

¹ The best overview of the coinage struck in Pergamum is the study of MARCELLESI, *Pergame*. In *Gnomon* 85, 2013, 711–718 I explained why I cannot accept MARCELLESI's chronology for the 2nd and 1st century BC coinage or her interpretation of the temple coins as royal issues of the late Attalid period.

Beside civic and dynastic coins, there are some rare silver coins and more abundant series of bronze coins bearing the name of the divinities Asklepios Soter² or Athena Nikephoros on their reverse.³ Finally, there is as yet no consensus on the character of the cistophorus: this light-weight tetradrachm introduced under Eumenes II bears no explicit legend which would allow it to be identified as a royal or a federal coinage.⁴ Despite this uncertainty regarding the cistophorus, it seems clear that the use of the name of the first Attalid, of a god or of the ethnicon in the genitive on coin reverses shows the existence of different authorities minting in the city. To paraphrase MARTIN JESSOP PRICE, we could define an issuing authority as the authority that gives (and I would add finances) the operation of striking coinage to a mint, which may, indeed, have been no more than a blacksmith's workshop, but something which was officially checkable.⁵ In this way, the city, the Attalid dynast and the temples of Asklepios Soter and Athena Nikephoros met the costs of the minting operation from their own funds and must have been able to control and check the output of their own emissions. Nevertheless, the functioning of the system does not imply the existence of specific mints in Pergamum for each of these authorities, the production of which may have been centralised in a single building (the blacksmith's workshop of PRICE) similar to the large square building excavated in the southeast corner of the Athenian Agora, where production of bronze coins took place from the 4th to the late 1st century BC.⁶

² Associated with Hygieia in a single and rare bronze emission (CHAMEROY, *Chronologie*, 172, n° 32).

³ The attribution of the bronze coins in the name of Athena Areias to Pergamum (MARCELLESI, *Pergame*, n° 58) is not confirmed by the coin finds, which tend to suggest a production of these coins between Sardis and Priene (J. CHAMEROY, *Gnomon* 85, 2013, 715). Following J. NOLLÉ, *Chiron* 44, 2014, 309f. in response to S. PSOMA, *AJN* 20, 2008, 233f. (for Pergamum), I prefer the term temple coins to panegyry coinages for the bronze coins issued in the name of the Pergamene deities.

⁴ F. S. KLEINER – S. P. NOE, *The Early Cistophoric Coinage*, 1977, 120–125 consider the cistophoric coinage to be «the king's money»; likewise MARCELLESI, *Pergame*, 146 describes it as the «nouvelle monnaie royale attalide»; following H. SEYRIG, *RN* 1963, 24f. MEADOWS and THONEMANN point out the federal character of the iconography of the cistophoric coinage as if it were the product of a koinon (P. THONEMANN [ed.], *Attalid Asia Minor*, 2013, 32, 199).

⁵ M. J. PRICE, in: *Le origini della monetazione di bronzo in Sicilia e in Magna Grecia*, 1979, 360.

⁶ The southwest room of the Agora mint produced ample evidence of bronze coin production (J. MCK. CAMP, *SM* 113, 1979, 52–55; J. MCK. CAMP II – J. H. KROLL, *Hesperia* 70, 2001, 145) which was probably separated from the silver coin production (C. FLAMENT, *Contribution à l'étude des ateliers monétaires grecs*, 2010, 7f., 28). It remains uncertain whether blanks and fragments of rods from a temple in Argos prove mint activity in this building or belong to a votive deposit in the 2nd century BC after the closure of the mint (H. CONSOLAKI – T. HACKENS, in: *Études argiennes*, *BCH suppl.* 6, 1980, 289, 292). See the overview of Greek mints by M. CACCAMO CALTABIANO, in: *I luoghi della moneta*, 2001, 19–28.

Attempts have recently been made to put the chronology of the Hellenistic bronze coinage of Pergamum on a firm basis. The approach has been to use the archaeological evidence from the excavations of the DAI Istanbul in Pergamum, from the surveys of the DAI Istanbul on the city territory of neighbouring Atarneus and from the composition of bronze coin hoards.⁷ Further evidence came from the identification of Pergamene coins struck in brass, as the use of brass (orichalcum) for coining is first attested in the 1st century BC and probably not before ca. 80 BC:⁸ at least four different coin types struck in brass belong without doubt to the latest Hellenistic base-metal series produced in Pergamum (Tab. 1). Most importantly, the study of the coin finds stressed the great differences in the evolution of the bronze and the silver coinages of Pergamum. The end of the Attalid kingdom and its conversion into the Roman Province of Asia brought about only minimal changes in the silver coinage, for the emission of tetradrachms in the name of Philetairos had ended much earlier (in the 160s) and cistophori with minor adjustments continued in production in the Province of Asia. The only real change in coin production after the end of the Attalid dynasty concerns the small denominations. On the death of Attalos III, or after the capture of Aristonicos/Eumenes III at the latest, production of royal bronze coinage ceased in Pergamum, prompting the issue of new bronze series by the temples and the city, neither of which, on the evidence of the coin finds, seems to have struck aes coinage under the Attalids.⁹

Evidence for manipulations on the bronze coinage in Hellenistic Pergamum

The relative chronology of the post-Attalid bronze series I suggested on the basis of the coin finds (Tab. 1) has now to be checked against new evidence in the form of bronze overstrikes. These coins are surprisingly absent from museum catalogues (except that of the British Museum) and more detailed studies.¹⁰ I was not aware of

⁷ CHAMEROY, *Chronologie*, 139–154, summarised in Tab. 1 on p. 170–173. For the excavation campaigns in Pergamum and the surveys in Atarneus see F. PIRSON et al., AA 2009 to 2012.

⁸ The first analyses of CALEY led to the conclusion that the Romans were the first to employ alloys of copper and zinc for coins (E. R. CALEY, *The Composition of Ancient Greek Bronze Coins*, 1939, 82, 90f., 147; id., *Orichalcum and Related Ancient Alloys*, 1964, 3); this was refuted on the basis of a broader sample of analyses (see references to new literature in CHAMEROY, *Chronologie*, 153f., n. 72); A. BURNETT – P. CRADDOCK – K. PRESTON, in: *Proceedings of the 9th International Congress of Numismatics*, 1982, 264f. identified the earliest brass coins as pieces struck at Amisus in 80–70 BC for Mithridates VI. In an article in press for the *Kelainai II* volume, ASHTON suggests on the basis of a hoard a date in the late 90s for the first brass coins of Apameia.

⁹ CHAMEROY, *Chronologie*, 154; id. (n. 3) 718 contra MARCELLESI, *Pergame*, 86, 114, 167.

¹⁰ H. VON FRITZE, in: *Corolla Numismatica. Essays in Honour of B. V. Head*, 1906, 47–62; id., *Die Münzen von Pergamon*, 1913; U. WESTERMARK, *NAC* 20, 1991, 147–159; ead., *SCN* 11, 1995, 29–35; MARCELLESI, *Pergame*; CHAMEROY, *Chronologie*.

them until RICHARD ASHTON kindly showed me an overstruck coin which he gave recently to the Ashmolean Museum. Further research led me to realise that at least three bronze series were involved in overstriking (as host coins or overstruck types): ΑΣΚΛΗΠΙΟΥ ΣΩΤΗΡΟΣ, ΑΘΗΝΑΣ ΝΙΚΗΦΟΡΟΥ and ΠΕΡΓΑΜΗΝΩΝ. It also seems clear that this manipulation cannot be fully understood without examining in detail the countermarks which occur on many coins found in Pergamum itself.

Overstriking and countermarking are of course separate activities which could have been undertaken for entirely different reasons. Successful overstriking completely obliterates the types and legends of the host coin.¹¹ Countermarks are stamps applied to coins by means of engraved punches, and simply add a symbol or letter to the original type which is still legible.¹² Nevertheless, the overstriking and countermarking of Pergamene bronze coins should have been linked for reasons explained in the following.

A look at the Hellenistic coin finds from Pergamum provides the basis for a rough estimate of the countermarking in the polis (Tab. 2). Among 443 Hellenistic bronze coin finds of Pergamum and the Attalids, KURT REGLING recorded only about 29 countermarked coins¹³ while the proportion of the countermarked Pergamene coins observed in the *Stadtgrabung* is even lower (18 out of 520 Hellenistic coins).¹⁴ Thus, countermarking may be described as marginal and occasional phenomenon in Pergamum. However, the composition of the coin finds cannot reflect the entire reality, since part of the countermarked coins may have been overstruck at a later stage (see below) erasing any traces of the first manipulation. In addition to this remark, it is worth noting that only three types of countermarks – an owl, a snake-staff and the city's monogram – appear regularly on the few Hellenistic stamped bronze coins from Pergamum recorded as found in the city itself since the beginning of the 20th century.¹⁵

¹¹ D. MACDONALD, *Overstruck Greek coins*, 2009, viii.

¹² The countermarking of foreign Attic-weight tetradrachms with a round countermark of a bow in a quiver and the initial letters of Pergamum is known from the first half of the 2nd century BC. The reasons for countermarking foreign silver coins are very different from those for countermarking Pergamene bronze coins for local use and cannot be discussed here (A. MEADOWS, in: P. THONEMANN [ed.], *Attalid Asia Minor*, 2013, 170–173; MARCELESI, *Pergame*, 136f. with further references).

¹³ K. REGLING, *AvP I 2*, 1913, 355. The precise number remains unknown, because of the vague description of the Athena/owl in wreath coins (10 coins «einige mit Gegenstempel Schlangentab»), but it stays well below 37 countermarked coins.

¹⁴ H. VOEGTLI, *Die Fundmünzen aus der Stadtgrabung von Pergamon*, 1993 for the campaigns 1973–1981, unpublished documentation of the author for the years 1982–1998. The coins examined are exclusively single finds, so that the bronze coins from the hoard discussed below («Kanalmünzfund») are not included in Tab. 2.

¹⁵ REGLING (n. 13) 361 ascribed to Pergamum a Hellenistic countermark featuring a bee. However, the bee countermark is very rare at Pergamum itself; REGLING recorded it on only two bronzes (both Athena/trophy, Fig. 17); it does not occur on any of the coin finds from the 1970s to 2014 which I have studied in Pergamum. It thus seems very unlikely that it was applied in Per-

The fact that they have been exclusively applied to Pergamene coins suggests that the initiative of countermarking came from the minting authorities acting in the city. Furthermore, the owl, snake-staff and city monogram countermarks occur, with few exceptions, only on the series which were involved in overstriking, namely the ΑΣΚΛΗΠΙΟΥ ΣΩΤΗΡΟΣ, ΑΘΗΝΑΣ ΝΙΚΗΦΟΡΟΥ and ΠΕΡΓΑΜΗΝΩΝ type. Considering the coin finds and bearing in mind the unknown part of countermarked coins that may have been overstruck, the countermarking of the Asklepios/snake on omphalos coins and the Athena/trophy coins must have been particularly intensive,¹⁶ while the Athena/Nike coins¹⁷ and the scarce Athena/owl in wreath coins show more rarely a countermark (Tab. 2). The cases where one of the three countermarks occurs on more than one coin type are too exceptional to prove that the «outsider» coins like n° 20 and 29 (Tab. 2) were deliberately countermarked. Their countermarking was more likely accidental, because their type was very similar to that of the systematically

gamum itself (see below). Another countermark, a star, was applied exclusively to Attalid bronze coins of types Asklepios/temple key and Asklepios/snake and grapes (e.g. SNG Copenhagen 356–358). The fact that no example of either issue with or without countermark has yet been recorded from Pergamum suggests that they should be attributed to another mint within the Kingdom, which may or may not have been responsible for the star countermark (CHAMEROY, *Chronologie*, 145). Only two countermarks (owl, city monogram) are recorded from the Hellenistic coin finds published by VOEGTLI (n. 14) 7, pl. 7.

Nevertheless, many Hellenistic bronze coins from Pergamum were countermarked outside the city for reasons I cannot explore here (this is attested in cities of Moesia Inferior and Thrace, which countermarked their own, as well as foreign coins: T. GERASSIMOV, *Bulletin de l'Institut Archéologique Bulgare* 15, 1946, 81). The phenomenon is particularly frequent on the temple coins probably accepted as currency outside Pergamum (CHAMEROY, *Chronologie*, 159). The countermark «Head of Artemis r.» occurs on obverse of Asklepios/snake on omphalos (Berlin IB 1900), on Attalid coin Athena/coiled snake (SNG France 5, 1656), on Athena/trophy (Münzen u. Medaillen 30 [28/05/2009] 360); «Lion's head, r.» on obverse of Athena/two confronted bull heads (FAC 82273); «Bee» on obverse of Athena/trophy (REGLING [n. 13] 355: 2 coins = Fig. 17 and Berlin 18233548; SNG V, Ashmolean Museum, IX, 851; ANS 1953.171.528) and of Athena/owl on palm branch (Berlin 18233419; Authentic Ancient coin i47192; Lanz \$SUK2038 [06/05/2015]); monogram T and K on obverse of same type (Ashmolean Museum HCR 9441); «Kithara» on obverse of Asklepios/snake on omphalos (SNG Tübingen 2414) and of Athena/trophy (SNG V, Ashmolean Museum, IX, 842; ANS 1947.99.52, 1953.171.529); «rider» on obverse of Asklepios/eagle (ANS 1944.100.43240); «Poppy with ears of corn» on Athena/trophy (Yale 2004.6.2440); monogram of Θ and K(?) on obverse of Athena/trophy (Lanz ta338 [18/02/2014]; Lanz bs694 [19/02/2014]; Savoca ^ZZZ0168 [27/06/2015]); monogram of A, Π and O on obverse of Athena/trophy (GN #AFT0001 [05/05/2015]; GN = HA0275 [01/09/2015]). The list is not exhaustive. Apart from the bee, these countermarks have not yet been recorded among the coin finds from Pergamum.

¹⁶ In Tab. 2, the Asklepios/snake on omphalos and Athena/trophy coins without countermark may have been lost in Pergamum before the acts of countermarking took place.

¹⁷ For the Athena/Nike series, the countermark owl occurs exclusively on the emission Tab. 1, n° 39,6 the proportion of which remains unknown among the Athena/Nike listed by REGLING (n. 13) and VOEGTLI (n. 14).

countermarked coins – so Attalid and Asklepios Soter coins n° 20 and 29, both showing a coiled snake, were occasionally countermarked with an owl on the reverse (Figs. 14–15).¹⁸ The confusion became easier owing to the worn state of some coins. Thus, the fact that countermarking and overstriking in late Hellenistic Pergamum involved mostly the same coin types shows that both actions were carried out fairly close in time to one another, since the coins in question were still in circulation or still available (e.g. as coins stored in temples). This supports the study in tandem of the overstriking and countermarking of the Pergamene bronze coins.

Various interpretations have been offered for countermarking coins. The countermarks may have been intended to restore the value of worn coins,¹⁹ to change the coins' value, or to avoid the need for re-striking.²⁰ In an important article HENRI SEYRIG related countermarking to demonetisation, arguing that an issuing authority could demonetise coins at will and remonetise them for a fee by countermarking.²¹ Nevertheless any financial advantage for the counter-stamping authority is not proven by any document. Other explanations like protecting the own civic or royal coinage by countermarking, i.e. charging a penalty against foreign bronze coinages,²² or strictly political interpretations of the phenomenon such as those proposed for the countermarking of dynastic bronze coins by West Pontic cities,²³ do not concern us in the case of Pergamum, where only the own coins struck in the city were stamped. Furthermore, the hypothesis of countermarking to revalidate worn coins can be already

¹⁸ The same occurred with at least one temple coin Apollo/tripod (Tab. 1, n° 31) countermarked with an owl on the reverse (SNG France 5, 1862); however the attribution to Pergamum of this coin in the name of Asklepios Soter is doubtful (CHAMEROY, *Chronologie*, 150, n. 62).

¹⁹ E.g. in Cyme, where countermarked bronze coins from a hoard are so worn as to be almost illegible (J. G. MILNE, *NC* 1913, 394). Nevertheless, MILNE does not exclude other explanations for countermarking.

²⁰ HOWGEGO, *GIC*, 14.

²¹ H. SEYRIG, *Syria* 35, 1958, 190 «Les bronzes démonétisés auraient été apportés par les utilisateurs auprès d'une instance de la cité qui, moyennant une redevance, aurait appliqué sur ces mêmes bronzes une contremarque restituant leur valeur aux monnaies décriées»; LE RIDER, *Contremarques*, 42, 44f., and MACDONALD (n. 11) xi, following SEYRIG.

²² A. HOUGHTON – C. LORBER – O. HOOVER, *Seleucid Coins II*, 2008, 198f.

²³ The interpretations expounded by S. TOPALOV, *New Contributions to the Study of the Countermarking of Coins in the Area of the West Pontic Cities 3rd–1st Centuries BC*, 2002 are not convincing, because they leave too many questions unanswered. Why did West Pontic cities need to countermark bronze coins of Lysimachos or Antiochos II after the death of the dynasts if their coins circulated in those cities when they were alive (*ibid.* 162f., 171)? Why would cities like Apollonia or Messambria countermark their freshly minted coins merely in order to inform the citizens that the same countermarks applied to foreign coins belonging to the city (*ibid.* 170f., 175, 178)? Why would Apollonia countermark its own coins of the late 2nd to the early 1st c. BC in order to demonstrate to Rome the change of its political orientation (*ibid.* 181, 183)? The economic interests of each city involved in the countermarking must have played a greater role than those suggested by TOPALOV.

ruled out, because many countermarked Pergamene coins show little or no sign of circulation.²⁴ It seems therefore more likely that countermarking in Hellenistic Pergamum was related to an economic intervention in the coin supply of the city like demonetisation, change of value or an alternative to re-striking.

The other way of manipulation covered here – the overstriking – is a priori easier to explain: it involved demonetised or devalued coins which served as blanks to save time, as well as the provision of metal for producing coins with new and valid types. If one accepts that both manipulations were performed in the not yet identified, but assumed mint building of Pergamum under the responsibility (or for the benefit) of one of the different mint authorities, their study sheds some light on the organisation of bronze coin production in Pergamum, as well as on the administration of the civic and sacred funds.

Countermarks and overstrikes of Athena Nikephoros on the Asklepios Soter series

The coin shown to me by RICHARD ASHTON (Fig. 1) is a temple coin of Athena Nikephoros of the type Athena/trophy (Tab. 1, n° 33) and has obvious signs of an overstrike. On the obverse the original type is easily recognisable to the right of the head of Athena: the host coin shows a profile head occupying the whole of the blank, with hair and beard clearly pointing to Asklepios. A few details of the reverse of the host coin are still visible, such as the T of the legend [ΑΣΚΛΗΠΙΟΥ ΣΩ]Τ[ΗΡΟΣ] and the tail of a snake on the left. There is no doubt that the Athena/trophy coin was overstruck on a specimen of Asklepios/snake on omphalos (Tab. 1, n° 30). At least four other overstrikes of Athena/trophy on Asklepios/snake on omphalos can be added to the list (Figs. 2–5), one in the collection of the British Museum,²⁵ the others from recent auctions. If one interprets the monogram of the city in the right field of the reverse (Figs. 3–4) and the monogram ΔΙ in the left (Fig. 5) as the signs of two different issues of Athena/trophy, this would mean that the Asklepios/snake on omphalos coins once demonetised were not overstruck en bloc, but probably over a certain period of time (see comments below on Figs. 6–7).

²⁴ Countermarked bronze coins from Pergamum showing scarcely signs of wear: Asklepios/snake on omphalos, with owl countermark on reverse (Pergamum MK 2146, 2162; SNG France 5, 1815; SNG Tübingen 2412; FAC 80968; CNG 201 [17/12/2008] 74); Athena/Nike with owl countermark on obverse (ANS 1944.86.2, 1954.82.7); Athena/owl perched on monogram, all in wreath, with snake-staff countermark on obverse (SNG V, Ashmolean Museum, IX, 856). The list is not exhaustive.

²⁵ Although WROTH recognised the coin BMC (Mysia) 131, n° 177 (not illustrated) as an overstrike, it has hitherto escaped the attention of scholars (Fig. 2).

As mentioned above, many Asklepios/snake on omphalos coins²⁶ were stamped on the reverse with a round countermark depicting an owl with closed wings facing right (Fig. 9).²⁷ Some Asklepios/snake on omphalos coins occurring in Pergamum²⁸ have an owl sitting on the snake as part of the reverse type (Fig. 10). This new issue is thus linked with the countermarking episode.²⁹ There can be little doubt that the owl countermark was applied to equate the old Asklepios/snake on omphalos coins with the new issue bearing the type with the owl sitting on the snake.³⁰ In fact, it is not easy to understand the extent of the relationship between the extensive countermarking of the Asklepios/snake on omphalos coins and the overstriking of this coin type. One may suggest that the overstriking concerned all coins of this type (with and without the owl countermark, with and without the owl sitting on the snake as the reverse type) and thus formed a later stage of the manipulation on the coins of Asklepios, leading possibly to the recycling of most of these bronze coins. This may be reflected in the *«Kanalmünzfund»* from Pergamum where only two Asklepios/snake on omphalos (one countermarked with owl) are present, while late Hellenistic Pergamene coins (Tab. 1, n° 37; 39; 41) make up 58 % of the identified coins.³¹ Finally, it is worth mentioning that both manipulations on the coins of Asklepios Soter (countermark owl

²⁶ The owl countermark occurs very rarely on the reverse of Attalid coins (SNG France 5, 1695; Lindgren 290; Pergamum MK 2805, 3793) and on temple coins with Asklepios/snake-staff: three countermarked coins among the coin finds from Pergamum: two coins from 82 of this type are countermarked in the first inventory of REGLING (n. 13) 355; Pergamum MK 3157. Other examples in auctions: GN #FT1767 (11/03/2015); Savoca #ALX5653 (03/04/2015). These coins were probably mistaken for coins with Asklepios/snake on omphalos and do not betoken a broader countermarking operation (see n. 15 above).

²⁷ There are some variants of the countermark (e.g. owl on base or branch[?] r.: Pergamum MK 2878; owl in profile facing r.), but it is not clear whether or not they belong to different countermarking phases.

²⁸ Among 16 Asklepios/snake on omphalos coins found in the *«Stadtgrabung»*, 2 with the owl as part of the type (VOEGTLI [n. 14] 28, 81 and unpublished documentation by the author). Further examples: Berlin 18233402; SNG France 5, 1813–1814; SNG V, Ashmolean Museum, IX, 872–874; SNG von Aulock 1371, etc.

²⁹ The same phenomenon can be observed in Roman times (HOWGEGO, GIC, 13).

³⁰ Similar cases can be observed, where new bronze coins have as part of the type used the depiction for countermarks applied to older coins: e.g. in Erythrai, Termessos Minor, Seleucia on the Tigris (LE RIDER, *Contremarques*, 38) and Panticapaeum (M. WIDAWSKI, WN 34, 1990, 101). Alternatively, the obverse of old coins was stamped with a countermark depicting the obverse of new bronze series: in Cyne, some Amazon/horse coins show on the obverse a countermark *«bust of Artemis»* (BMC [Aeolis] 111, n° 71–72) corresponding to the obverse of the new Artemis/vase coins (ibid. 113, n° 87–92; MILNE [n. 19] 393); in Mytilene, some Apollo/lyra coins have on the obverse a countermark *«bust of Artemis»* (SNG München 734) corresponding to the obverse of the new Artemis/lyra coins (ibid. 760). In all cases, it seems very likely that the countermark was applied to equate the old with the new coins.

³¹ CHAMEROY, *Chronologie*, 162f. Although the *«Kanalmünzfund»* of 63 bronze coins closes about the middle of the 1st century AD, the vast majority of the coins contained are Hellenistic (36 among 39 identified coins).

and overstriking) refer to Athena Nikephoros, although the original bronze issues were financed by the treasury of Asklepios Soter. We should now look at similar manipulations of the bronze coinage in Pergamum, before proposing an interpretation of the phenomenon.

Overstrikes of civic coins on temple coins

Overstrikes involving temple coins of Asklepios Soter or Athena Nikephoros and the late Hellenistic civic type Athena/Nike advancing r. with wreath and palm branch (Tab. 1, n° 39–40) are recorded here for the first time. They allow us to reach some conclusions about the production of this final coin type.

The Athena/Nike series was produced in at least six different issues (Tab. 1, n° 39, 1–6) which cannot be precisely dated within the 1st century BC. The following list may not reflect the true succession of the six issues,³² but for clarity of presentation I will come to the supposed earliest emission at the end. Some rare coins of the series (39,2) surprisingly bear the ethnicon twice, once under the head of Athena on the obverse and again on the reverse. Most of the Athena/Nike coins have the name of a mint official in the genitive on the obverse, Diodoros (39,3), Demetrios (39,4) or Choreios (39,5), and the ethnicon on the reverse. These officials probably were not magistrates in the proper sense, but commissioners whose role was to control the coin production from the provision of metal to the operation of striking. Thus, Diogenes Laertius (6, 20) records that Diogenes of Sinope was appointed superintendent (ἐπιμελητής) of the workmen in charge of coin production in his city. In the famous inscription of Sestos honouring Menas, the city praised him for the care, justice and zeal he brought to his responsibility as monetary official without mentioning any financial contribution on his part.³³ There

³² Stylistic differences and similarities on the obverse of the coins may support the classification. The heads of Athena with Attic brow-plate helmet on Tab. 1, n° 39,1 and 2 are very similar, i.e. the work of the same engraver, so that the issues 1 and 2 with ΕΠΙ ΠΙΕΡΓΑΜΟΥ and ΠΕΡΓΑΜΗΝΩΝ must have been close to one another; their coins are among the heaviest coins of the Athena/Nike series and may have been the earliest. The helmet of Athena on issue 3 with ΔΙΟΔΩΡΟΥ has a brow-plate or a simple visor, but on issue 4 with ΔΗΜΗΤΡΙΟΥ a simple visor. The head of Athena on issue 5 with ΧΟΡΕΙΟΥ always wears a Corinthian instead of an Attic helmet. On issue 6 the head of Athena is much larger than the head on issues 1 to 5 and the Attic helmet has a simple visor; the coins of issue 6 are much lighter than those of all other series and may have been the latest to be struck.

³³ OGIS I 339. J. MELVILLE JONES, *Testimonia Numaria* I, 1993, n° 377; II, 2007, 211f. There is no real consensus about the function of Menas and his colleague: H. VON FRITZE, *Nomisma* I, 1907, 3 «Kommissorium ohne Titel»; L. ROBERT, *RN* 1973, 50 «commissaires élus *ad hoc*»; GAUTHIER, *Légendes*, 174, 178f. speaks of a «curatèle»; G. LE RIDER, *La naissance de la monnaie*, 2001, 246 of a «mission monétaire» for Menas. At Delos commissioners were elected to take care of coin production (VIAL, *Délos*, 245). Dealing with ἐπιμεληταί occurring on civic coins in Roman times, LENORMANT describes them as «commissaires spéciaux délégués temporairement pour une émission de monnaies» (*La monnaie dans l'Antiquité* III, 1879, 117f.).

is in fact no compelling evidence that the monetary official had to bear the costs of the coin emission he supervised:³⁴ financing a coin issue could have been a matter for the issuing authority alone, i.e. for the city in the case of the Athena/Nike series. In Pergamum control over coin issues may have been allotted to a single monetary official (since bronze coins refer to a single man), while two officials were in charge of coin production in Sestos. Nevertheless, at Pergamum the name of the commissioner was not systematically mentioned on the coins issued under his control;³⁵ many of the Athena/Nike bronzes have no legend, except for the ethnicon on the reverse (Tab. 1, n° 39,6).

We may now turn to the first Athena/Nike issue (39,1), with the legend ΕΠΙ ΠΕΡΓΑΜΟΥ, which differs in many respects from the emissions presented above. In Pergamum, the prefix ΕΠΙ, usually used to introduce the name of a magistrate whose precise function is unfortunately not always explained,³⁶ is more common on civic coins struck under the Roman Empire. The simple form ΕΠΙ plus the name of the proconsul in the genitive occurs on some bronze coins in the name of Tiberius (RPC I, n° 2368–2369), while the first coins bearing the formula ΕΠΙ with a functionary title (στρατηγός) and name belong to the reign of Domitian (RPC II, n° 920–924). In another form without ΕΠΙ, the sole name or the name and the function of an official – γραμματεύς, γυμνασάρχος, ἱερεὺς or ἀρχιερεὺς – appear on coins in the name of Augustus and Tiberius.³⁷ This panorama reveals the great variety of officials figuring on the coins of Pergamum and raises the question how to interpret these legends – as dating formulae or as references to magistrates involved in the minting,³⁸ either as

³⁴ Nevertheless, a financial role of the mint official has been argued e.g. at Kolophon (J. G. MILNE, *Kolophon and its Coinage: a Study*, 1941, 28), at Sestos for Menas and his supposed «pious and just expenditure» for the city (T. R. MARTIN, *Historia* 45, 1996, 264f.); see also R. BENNETT, *Local Elites and Local Coinage: Elite self-representation on the Provincial Coinage of Asia, 31 BC to AD 275*, 2014, 24, assuming that Menas paid at least in part for the production of the coinage.

³⁵ The earliest explicit mention (i.e. a name instead of a monogram) of a monetary official on a coin in Pergamum goes back to the Attalid period (CHAMEROY, *Chronologie*, 177 and tab. 4, n° 20) while they occur much more rarely on temple coins. Surprisingly none of the recorded Hellenistic bronze coins of Sestos bears a magistrate's name.

³⁶ On the function of personal names on coins in general, INGVALDSEN's suggestion that this was to act as a visible sign on the civic coinage to make it easily recognisable and accepted by other cities seems problematic, since bronze coins did not really circulate outside the issuing polis (H. INGVALDSEN, in: K. HÖGHAMMAR [ed.], *The Hellenistic Polis of Kos*, 2004, 96).

³⁷ RPC I, 3 and n° 2363–2365 (name only), n° 2358, 2362 (γραμματεύς), 2360 (priest and γυμνασάρχος), 2361 (γυμνασάρχος), 2366 (ἀρχιερεὺς). The titles are all in the participle form.

³⁸ P. WEISS, in: C. HOWGEGO – V. HEUCHERT – A. BURNETT (eds.), *Coinage and Identity in the Roman Provinces*, 2005, 63–66, pointing out the formular parallels between the erection of honorific statues, the city weights exhibiting names of functionaries and the minting of coins, concludes that the mention of officials implies their direct involvement with the operation in question. However, it seems unlikely to be the case with e.g. RPC I, n° 2368–2369 using the formula ΕΠΙ plus name of the proconsul, that could be interpreted as a form of dating, too.

ones responsible or, so the authors of the RPC I, as contributors to the costs of coin production. The simple Hellenistic form ΕΠΙ ΠΕΡΓΑΜΟΥ (which is the unique occurrence of the form ΕΠΙ with the name in the genitive on Hellenistic bronze coins from Pergamum) is attested on two other coin types Asklepios/snake-staff (of Asklepios Soter n° 29) and Asklepios/eagle (of the Pergamene n° 41) and must have been a formula familiar to a public able to understand the function performed by the official. Otherwise it would probably have been clarified by the mention of a title like those encountered on the civic coins for Augustus and Tiberius mentioned above. Thus, a possible explanation for the Hellenistic legend ΕΠΙ ΠΕΡΓΑΜΟΥ would be to recognise the eponymous official of the city,³⁹ at Pergamum the πρύτανις. The Athena/Nike coins bearing the legend ΕΠΙ ΠΕΡΓΑΜΟΥ may suggest that during the 1st century BC a man named Pergamos assumed the prytany and, given that both functions were assumed by the same magistrate in Pergamum,⁴⁰ the priesthood of Philetairos, too. Unlike HANS VON FRITZE, who understood Pergamos as a personal name, LOUIS ROBERT and ROBERT SHERK saw in him the founder of Pergamum⁴¹ appointed to the prytany by the Assembly. Apart from the fact that the appointment of heroes or divinities to civic responsibilities or priesthoods is well attested in the cities of Asia Minor in the 2nd–1st centuries BC,⁴² this identification appears to be further reinforced by the absence of any Pergamos as personal name attested in Pergamum.⁴³ A parallel could be found in the abbreviated name of πρυτάνεις appearing on the post-Attalid cistophori struck in Pergamum,⁴⁴ so that these silver coins might help date the bronze coins issued under the supposed prytany of Pergamos. In the list given by FRED S. KLEINER of the monograms and initials of the πρυτάνεις figuring on the cistophori, the only occurrence which should correspond to the hero Pergamos combines the

³⁹ GAUTHIER, *Légendes*, 179.

⁴⁰ M. WÖRRLE, *Chiron* 30, 2000, 550f., 554.

⁴¹ VON FRITZE 1913 (n. 10) 98; L. ROBERT, *Hellenica* II, 1946, 55, n° 11; R. SHERK, *ZPE* 96, 1993, 285, n° 25.

⁴² It has been explained as a sign of difficulty in finding citizens to assume offices which incurred heavy financial burdens for the incumbents, while the appointment of a god allowed the use of the funds of his temple. See e.g. K. HALLOF, *Tyche* 12, 1997, 106f. (Samos); B. DIGNAS, *Economy of the Sacred in Hellenistic and Roman Asia Minor*, 2002, 271; S. DMITRIEV, *City Government in Hellenistic and Roman Asia Minor*, 2005, 45, 143, 158; MIGEOTTE, *Finances*, 353f.

⁴³ In the LGPN database the single Pergamos' record for Pergamum is the coin type Athena/Nike (SNG von Aulock 7490) we are dealing with. The prytany of Pergamos is ignored by E. KOSMETATOU, *AncSoc* 26, 1995, 141–144 (see too SEG 45, 2331). Similarly, the Hellenistic occurrence of Pergamos is not recorded in the new lexicon of Greek coin legends edited by LESCHORN: LAGM I, 240 mentions only 1st–2nd century AD coin legends with the name of the hero; LAGM II, 754 gives false readings for both SNG von Aulock 7490 «ΕΠΙ ΠΕΡΓΑΜΗΝΟΥ» and SNG France 5, 1854 «ΕΠΙ ΠΕΡΓΑ», instead of ΕΠΙ ΠΕΡΓΑΜΟΥ.

⁴⁴ This abbreviation led W. WROTH, *NC* 1882, 19, 40 to understand the prytanis mentioned on the cistophori as the chief member of the municipal Council, under whose immediate authority these coins were supposed to have been minted.

initials ΠIE above the monogram ΠIPY. If the reading (EΠI) ΠIPY(TANEΩΣ) ΠIE(PTAMOY) is correct, the prytany of Pergamos could be dated between ca. 76 and 67 BC, on the evidence of cistophoric coin hoards.⁴⁵

The coins from the first Athena/Nike issue with the legend EΠI ΠIEPTAMOY (n° 39,1) have been described in more detail, because most of them have irregular blanks or are struck off-centre, suggesting hasty or careless production involving the overstrike of older coins. I have so far recorded three coins with detectable traces of overstriking.⁴⁶ The first shows the remains of the profile head of Asklepios to the right of the head of Athena, but on the reverse the traces of the undertype are not recognisable (Fig. 6). Another similar example was recently seen in an auction (Fig. 7). No doubt the hosts were Asklepios/snake on omphalos coins.⁴⁷ On the third overstrike (Fig. 8) the neck of the undertype's head appears to the right of the head of Athena; on the reverse the horned helmet of the trophy and the Φ of [AΘHNAΣ NIKH]Φ[OPOY] are visible and ensure the identification of the host coin as Athena/trophy.

The overstriking of coins of Athena Nikephoros with the civic type Athena/Nike was not the only manipulation made on these temple coins. Probably at an earlier stage, the Athena/trophy coins were stamped on the reverse with the city's monogram (Fig. 11). As in the case of the manipulation described above, this action seems to be linked with the issue of new Athena/trophy coins having the city's monogram engraved in the reverse die (Fig. 12). The countermark validated the older Athena/trophy coins for circulation alongside the new Athena/Nike coins with the city monogram as part of the type. The coin illustrated in Fig. 11 has both the monogram engraved in the die and the countermark with the monogram: this seems to be an error, perhaps caused by the fact that the monogram engraved in the die was not completely visible.⁴⁸ As we have seen, these last coins were overstruck on Asklepios/snake

⁴⁵ F. S. KLEINER, ANSMN 23, 1978, 81, n° 47 and p. 105 for the dating. Nevertheless, KLEINER is aware of only one cistophorus with the initials ΠIE from the Cabinet des monnaies et médailles, Paris (SNG France 5, 1750 = <http://gallica.bnf.fr/ark:/12148/btv1b8503577h> [08/04/2016]). No cistophorus struck under the prytany of ΠIE(PTAMOY) has been recorded in a hoard of 65 cistophori with a latest coin of 55–53 BC discovered in the 'Peristylhaus' in Pergamum (H. VOEGTLI, SNR 69, 1990, 41–48).

⁴⁶ The detectable overstrikes do not of course indicate that all Athena/Nike coins struck under the prytany of Pergamos were overstruck.

⁴⁷ These host coins may or may not have included those carrying the owl countermark or with an owl sitting on the snake in the reverse type. Coins of type Asklepios/eagle (Tab. 1, n° 41) can be ruled out, because they are always made of brass (CHAMEROY, *Chronologie*, 153, 173), while XRF-analyses of the coin illustrated in Fig. 6 have proven a bronze-lead alloy (80% Cu, 13% Sn, 6% Pb [S. HARTMANN, RGZM]).

⁴⁸ Although the countermark was impressed into the coin and, therefore, subject to a slower wear than the original type of the coin (HOWGEGO, GIC, 11), the countermark and the coin's reverse of Fig. 11 show approximately the same degree of wear. This suggests that the application of the countermark to this coin took place shortly after the coin was struck.

on omphalos coins (with or without owl) (Figs. 3–4). In the *«Kanalmünzfund»* cited above, only two Athena/trophy coins are recorded, both without countermark; due to their poor preservation we do not see if their reverse type bear the city monogram at the right side of the trophy.⁴⁹ Besides their intensive countermarking (Tab. 2), it is also not possible to assess the extent of the recycling of old Athena/trophy coins in Athena/trophy coins with city monogram.

Finally, mention must be made of further countermarks as yet not related to overstrikes. The Athena/Nike issue (Tab. 1, n° 39,6) with no obverse legend is sometimes countermarked on the obverse with a round stamp depicting an owl with closed wings facing right (Fig. 13). Some brass coins with Athena/owl perched on the city monogram in a wreath have on their obverses a snake-staff in an oblong countermark (Fig. 16). Despite the difference of the preceding examples, both countermarks of Figs. 13 and 16 were always applied on the obverse of the coins and they appear to be isolated actions conducted independently of the countermarking of Asklepios/snake on omphalos and Athena/trophy. The evidence among the coin finds is too scant to be commented upon: one countermarked Athena/Nike and one Athena/owl in a wreath occur in the *«Kanalmünzfund»*.⁵⁰ Lastly, the manipulations concerned not all late Hellenistic series struck in Pergamum: the very scarce temple coins issued in the name of Asklepios and Hygieia (n° 32)⁵¹, as well as the temple coins of Athena Nikephoros (Athena/owl on palm branch n° 37) and the civic coins n° 41–42 were not subject to countermarking or overstriking in Pergamum. To what extent the fact that the last three types (n° 37; 41–42) were struck in brass might have played a role in escaping the manipulations would be worthy of further research.

*Results for the chronology, production and supply
of bronze denominations in Hellenistic Pergamum*

Before going further in the interpretation it seems necessary to sum up the results of the manipulations on Hellenistic bronze coins observed in Pergamum. First of all, the eight recorded overstrikes involving temple and civic coins from Pergamum provide significant evidence for the relative chronology of the late Hellenistic bronze coins listed in Tab. 1. In particular, the priority of the Asklepios/snake on omphalos emission over the Athena/trophy emission, and the priority of both over the Athena/Nike

⁴⁹ CHAMEROY, *Chronologie*, 162, n° 6–7.

⁵⁰ The 12 worn and corroded Athena/Nike coins of the *«Kanalmünzfund»* cannot be split between the issues defined in Tab. 1, n° 39,1–6. Further evidence would be needed to determine if the presence of a single and countermarked Athena/owl in a wreath coin in the *«Kanalmünzfund»* may indicate an extensive countermarking of this coin type in Pergamum. The countermarked coins in question are described in CHAMEROY, *Chronologie*, 162, n° 8 and 20.

⁵¹ Only a single coin of this type has been recorded so far in Pergamum (MK 2493).

issue that I interpreted as struck under the prytany of Pergamos, can no longer be disputed. Nevertheless, uncertainties still remain over other bronze types in the name of Asklepios Soter, Athena Nikephoros or the Pergamenes.

If we accept the hypothesis that the three bronze types with Asklepios/snake-staff, Athena/Nike and Asklepios/eagle with the legend ΕΠΙ ΠΕΡΓΑΜΟΥ (Tab. 1, n° 29; 39,1; 41) were struck under the prytany of Pergamos, this would prove the issue of different coin types within the same year, for the eponymous official could hold that office only once. Now it would become easier to understand the occurrence of the ἐπιμεληταί (?) Diodoros and Demetrios on exactly the same three coin types (Tab. 3).⁵² The commissioners would have had to supervise three different issues, two civic and one of the Temple of Asklepios, either in parallel or consecutively. The explanation for the production of three bronze issues within a year is presumably that they represented three different denominations: Asklepios/snake-staff coins (ca. 3.5 g) may have circulated as halves of the Athena/Nike coins (ca. 7.6 g), while the brass Asklepios/eagle coins (ca. 7.8 g) may have been equivalent to 1.5 or 2 Athena/Nike coins, which were in bronze (Tab. 3). Finally, most of the Asklepios/snake-staff, Athena/Nike and Asklepios/eagle coins with no mention of a name could have been issued independently of one another, but further evidence from coin finds would be necessary for their dating.⁵³

As for the supply of bronze coins in the city, countermarking and especially overstriking presupposed a steady volume of circulating bronze coinage without regular increase during the 2nd and 1st centuries BC. However, bronze coinage was in the first instance struck for circulation within the city and its territory, and only a few coins would have left the area in which they were accepted at face value,⁵⁴ while bronze coins were rarely hoarded and then only in modest amounts. The main factor reducing the stock of circulating bronze coins would have been the loss of single coins by private persons. Furthermore, during the 1st century BC it seems very likely that a particular

⁵² The production of three different coin types under the supposed prytany of Pergamos would be a strong argument against the notion that Diodoros and Demetrios may have been the names of two or three homonyms in each case, and against the notion that they may have been ἐπιμεληταί in more than one year. Only Diodoros did in fact have a much earlier homonym, who supervised one tiny issue of Attalid bronze coins (Tab. 1, n° 20 for the type; SNG France 5, 1670; Staatliche Münzsammlung München 125/23; Münzkabinett der Staatlichen Museen Berlin Loeb 1906). This all may belabour an obvious point: that we are dealing with the same men and three different denominations.

⁵³ Some Asklepios/snake-staff coins may be related to other temples of Asklepios Soter, such as rare bronze coins bearing the legend ΘΥΑΤΕΙ under the head of Asklepios (BMC [Mysia] 129, n° 153; SNG V, Ashmolean Museum, IX, 879; Solidus Numismatik 6 [19/07/2015] 131) probably indicating that their issue was financed by the Asklepios temple at Thyateira.

⁵⁴ Civic coins of Pergamum are rare outside the city and its chora; only the temple coins of Asklepios Soter (Tab. 1, n° 29–30) and Athena Nikephoros (n° 33; 37), which are commonly found in other cities, would have been accepted as currency outside Pergamum (CHAMEROY, Chronologie, 159f., 180f.).

series of bronze coins from Pergamum's port Elaia⁵⁵ was accepted in the former Attalid capital, where it comprises a third of foreign Hellenistic coins recorded on the Acropolis.⁵⁶ Elaia thus seems to have helped supply Pergamum with fresh bronze coins in the late Hellenistic period. Finally, the overstriking of bronze coins from Pergamum sheds some light upon anomalies quoted in the composition of coin finds. In a preceding study I wondered why the temple coins of Asklepios Soter and Athena Nikephoros were less well represented among the finds of Pergamene coins in the city than outside it.⁵⁷ Now it seems clear that, because the overstriking of civic Athena/Nike coins on temple coins took place only within Pergamum, the temple coins circulating in the polis would tend to become rarer during the 1st century BC, while the temple coins circulating outside Pergamum would have escaped these manipulations. However, the fact that overstriking was carried out on Pergamene coins by an authority (the city) that did not finance the temple coin issues involved in the manipulation should not surprise us, given that the control and management of the different sacred and civic treasuries financing the coin emissions lay ultimately in the hands of the Council and the Assembly.

Financing bronze coinage

The only documents pertaining to the Hellenistic coin production in Pergamum are at present the coins themselves. However, the institutional framework in which it took place can be described with some plausibility from the evidence available from other cities.

The fundamental feature which enabled the issue of coins by the different authorities, such as the temples of Asklepios Soter and Athena Nikephoros and the city of Pergamum, is the presence of separate treasuries for each of them, which reflect the strict distinction between the sacred revenues and expenses and those of the city.⁵⁸

⁵⁵ F. PIRSON, *IstMitt* 54, 2004, 197–213 and n. 7.

⁵⁶ The proximity of Elaia to Pergamum alone cannot explain the massive presence of these coins, because other bronze series of Elaia are not common in Pergamum (J. CHAMEROY – I. SAVALLI-LESTRADE, *Topoi Suppl.* 14, 2016, 257). C. GRANDJEAN, *RN* 2012, 15f. recalls similar cases (e.g. a huge quantity of bronze coins of Sicyon found in Argos and in other cities of the northern and western Peloponnese). The hypothesis of foreign bronze coins circulating in Priene has been investigated by B. WEISSER, in: K. DÖRTLÜK – O. TEKIN – R. BOYRAZ SEYHAN (eds.), *Proceedings of the 1st International Congress of the Anatolian Monetary History and Numismatics*, 2014, 667.

⁵⁷ CHAMEROY, *Chronologie*, 159, 180f.

⁵⁸ CARDINALI, *Amministrazione*, 182. The topic is discussed with many examples by H. SWOBODA, *Wiener Studien* 9–10, 1887, 278–307, who concluded that the sacred and public treasuries were separate in most of the cities (id., *Wiener Studien* 11, 1889, 75, 83); see further F. SOKOLOWSKI, in: *Actes du 1^{er} Congrès de la Fédération internationale des Associations d'études classiques*, 1951, 388, who argued that in Greek states the sacred finances were just a division of the public finances, although a distinction was made between *ιερά χρήματα* and

Indeed, the aim of those who managed sacred resources was to finance the religious activities of the temple (sacrifices, festivals, markets, building activities, panegyries) from their own resources without the need to seek financial support from the city or private persons.⁵⁹ Even if the public treasury⁶⁰ of Pergamum were stored in a temple next to the sacred treasury, it seems very likely that both treasuries would have been strictly separated as, for example, on Delos.⁶¹ Thanks to the epigraphic inventories of temples, we are well informed about the wealth of the gods, which comprised a variety of precious objects including ingots, clothes and coins stored in jars, chests or bags⁶² specifically called money of the god, for example the «sacred money of Apollo» mentioned in two inventories from the sanctuary of Artemis Brauronia.⁶³

Be that as it may, the existence of different treasuries does not preclude the centralised administration of the public and sacred funds respecting the separate accounting of each of them. In Pergamum a letter of Eumenes I to the city (IvP 18; OGIS I 267) and the Astynomoi Law⁶⁴ mention that the treasurers (ταμίαι) were in charge of the revenues and the expenditure of the city. Acting as official receivers and payers, they were under the control of a higher magistrate or at least received their orders from the Assembly.⁶⁵ The Astynomoi Law refers to a person in charge of the sacred finances (ὁ ἐπὶ τῶν ἱερῶν προσόδων), who was an inspector or controller with authority over the expenditure and revenues of the sanctuaries and their local administrators.⁶⁶ Of

δημόσια χρήματα in the financial documents reflecting different modes of administration; L. MIGEOTTE, in: H.-A. RUPPRECHT (ed.), *Symposion 2003*, 2006, 235, 238 emphasises that the magistrates in charge of the wealth of the gods acted under the control of the city, i.e. under the Assembly of citizens; id., in: J. GONZÁLEZ CASTRO (ed.), *IX Congreso español de estudios clásicos VI*, 1998, 181–185; id., *Finances*, 123.

⁵⁹ V. CHANKOWSKI, *Topoi* 12–13, 2005, 81, 88.

⁶⁰ The interpretation of the διοίκησις τῆς πόλεως as one civic fund among other public funds for revenues and expenses (C. SCHULER, *Chiron* 35, 2005, 392f., 398f.) has been criticised by P. J. RHODES, *Chiron* 37, 2007, 352f., who argues that διοίκησις was not a specific fund, but the funds of the city in general; see also L. MIGEOTTE, *Chiron* 36, 2006, 389, n. 51 who argues that there was only one public treasury shared in different items.

⁶¹ H. FRANCOTTE, *Les finances des cités grecques*, 1909, 155.

⁶² L. MIGEOTTE, *LEC* 73, 2005, 28.

⁶³ The money was probably a loan from Apollo to Artemis dating to the end of the 5th century (D. PEPPAS-DELMOUSOU, in: D. KNOEPFLER [ed.], *Comptes et inventaires dans la cité grecque*, 1988, 330–334).

⁶⁴ A 2nd century AD transcription of a late Attalid law (G. KLAFFENBACH, *Die Astynomeninschrift von Pergamon*, 1954).

⁶⁵ CARDINALI, *Amministrazione*, 186f.; so in Delos, too (VIAL, *Délos*, 212).

⁶⁶ CARDINALI, *Amministrazione*, 191; MIGEOTTE (n. 60) 386; id., in: Á. MARTÍNEZ FERNÁNDEZ (ed.), *Estudios de Epigrafía Griega*, 2009, 258; id., *Finances*, 51. In the Astynomoi Law the ἐπὶ τῶν ἱερῶν προσόδων shares responsibility with the στρατηγοί for assigning the repair jobs of the city fountains, which should be linked with sanctuaries (so S. SABA, *The Astynomoi Law from Pergamon. A new Commentary*, 2012, 72).

course, the magistrates of civic and sacred funds did not act independently, but had to implement the decisions over revenues and expenditure made by the Council, the Assembly and the higher magistrates. In Pergamum the financial magistrates were under the control of the college of the five στρατηγοί – the highest political magistrates in the polis.⁶⁷ One may surmise that even in a metropolis like Pergamum the production of bronze coinage was sporadic, with long periods during which no new coinage was struck. This would suggest that there was no source of income specifically earmarked for the production of bronze coinage,⁶⁸ so that each proposal to issue new coins by a member of the boule, a magistrate or a private person⁶⁹ required a specific vote of the Assembly for the funds to cover the expenses involved.⁷⁰ The Council and the Assembly should also have appointed a commissioner (ἐπιμελητής?)⁷¹ to take care of the emission. Hence, the use of the sacred funds of Asklepios Soter or Athena Nikephoros to finance the production of bronze coins in the name of both deities depended on a vote of the Assembly, whose decision was implemented by ὁ ἐπὶ τῶν ἱερῶν προσόδων, who made the funds available, and his subordinate magistrates.

The use of sacred funds for civic needs after a decision of the Assembly was certainly not exceptional. Inscriptions from Athens, Delos and Cos⁷² have shown that it was a common practice for the Assembly to borrow money from the temple(s), in order

⁶⁷ The letter of Eumenes I to the city mentioned above reveals the role of the στρατηγοί in the organisation of the public finances. However, the Astynomoi Law does not reflect the exact relation between ὁ ἐπὶ τῶν ἱερῶν προσόδων and ὁ ἐπὶ τῆς πόλεως in financial matters during the Attalid period (H. MÜLLER, *Chiron* 33, 2003, 424f.).

⁶⁸ Even on Delos, where we know most about the διάταξις, i.e. the division of revenues to those responsible for expenditure, we hear nothing about coin production (MIGEOTTE [n. 62] 37; id., *Finances*, 672–674); however, Delos' output of coinage was tiny, so that mentions of expenditure for coin production should have been particularly rare.

⁶⁹ A proposal from a private citizen also had to go through the στρατηγοί, who referred it to the Assembly. On the στρατηγοί of Pergamum, see G. CORRADI, *AAT* 48, 1912–13, 246f.; H. BENGTSON, *Die Strategie in der hellenistischen Zeit II*, 1944, 232f.; H. SWOBODA, *RhMus* 46, 1891, 501f., 506 emphasises the continuity in the civic institutions of Pergamum and the role of the στρατηγοί before, during and after the Attalids; A. CHANKOWSKI, *BCH* 122, 1998, 184; MÜLLER (n. 67) 425f., 433. The same role for the στρατηγοί is observed at Cyme, where they preside over the sessions of the boule and ecclesia (P. HAMON, *Chiron* 38, 2008, 65).

⁷⁰ Surprisingly, the production of coinage does not figure among the expense items for any city in the recent, magisterial synthesis of MIGEOTTE, *Finances*.

⁷¹ Appointment by election in Delos (VIAL, *Délos*, 186, 245).

⁷² The expeditions of the Athenian army to Samos (440–439) and Corcyra (433) might have been financed by the Treasury of Athena, from which the city borrowed probably between 1,200 and 1,400 talents (IG I³ 363) for the first one and about 76 talents (IG I³ 364) for the second (C. FLAMENT, *Une économie monétarisée: Athènes à l'époque classique [440–438]*, 2007, 123, further examples on p. 126–136). Delos: from 301 to 175 BC at least 28 public loans from the Temple of Apollo are epigraphically attested; their amounts range from 190 to more than 51,630 drachmas (BOGAERT, *Banques*, 131f.). Cos: IG XII 4, 298 (1st half of the 3rd century BC) and 102 (early 2nd century BC) mention that the city reimbursed the Temple of Hermes for loans contracted previously (MIGEOTTE, *Finances*, 217).

to finance war campaigns, some construction projects or just to ensure cash flow for day-to-day civic administration.⁷³ Moreover, the decree of the Assembly to borrow money from the sacred funds could take the form of «internal loans» (LÉOPOLD MIGEOTTE)⁷⁴. This action was clearly facilitated by the circumstance that the magistrates in charge of the sacred funds were elected by the city itself, and the administration of the sacred funds was also organised by the polis without forgoing the strict distinction between the sacred and public treasuries.⁷⁵ Thus, at various times in the 4th century BC, Carthaia on Ceus borrowed sums of money ranging between 16 and 100 drachmas from the Temple of Apollo Pythios; during a period of seven years at the end of the 4th or the beginning of the 3rd century the transfers involved in some cases very small amounts of only 12 to 14 drachmas. Similarly, the city of Priene occasionally borrowed modest amounts from the Temple of Athena, as did Delos from the *ἐπὶ ἀρχήματα* of Apollo during the independence of the city.⁷⁶ Some of the best examples of internal loans come from Sicilian Locri, where on the decision of the Council and the demos (late 4th to the 3rd century) money was sometimes directly transferred from the Temple of Zeus to the treasury of the city and the loans recorded on bronze tablets.⁷⁷

*Countermarking and overstriking: motivations
and a possible scenario for the manipulations*

The manipulations of the late Hellenistic bronze coinage of Pergamum described above may be examples of similar behaviour of the city towards the sacred funds. However, they took a more subtle form than the examples exposed previously, because there is no evidence that the city borrowed from the sacred funds to finance the supply of bronze coinage. The issues of bronze coins probably ordered by the ecclesia at the expense of the temples of Asklepios Soter and Athena Nikephoros from ca. 129 BC (Tab. 1, n° 29–37) would have relieved the city of the need to finance bronze emissions from the public treasury in the first post-Attalid decades. Nevertheless, it

⁷³ For the use of sacred funds for civic purposes see H. SWOBODA, *Wiener Studien* 11, 1889, 81, 87; L. MIGEOTTE, in: J. GONZÁLEZ CASTRO (ed.), *IX Congreso español de estudios clásicos VI*, 1998, 184f. (Athens, Delos); id., *LEC* 70, 2002, 20; id., *Finances*, 213–218; CHANKOWSKI (n. 59) 10, 71f.

⁷⁴ L. MIGEOTTE, *L'emprunt public dans les cités grecques*, 1984, 4; id., in: J. ANDREAU et al. (eds.), *La dette publique dans l'histoire*, 2006, 119f.; id., *Finances*, 322.

⁷⁵ In Bargylia the same board of *ταμίαι* had direct access to both public and sacred funds, and it is clear that both treasuries were under the control of the polis (K. ZIMMERMANN, *Chiron* 30, 2000, 479f.).

⁷⁶ BOGAERT, *Banques*, 197f. (Carthaia); MIGEOTTE 2006 (n. 74) 120f., 124f.; loans accorded to private Delians voted by the Assembly (VIAL, *Délos*, 378).

⁷⁷ L. MIGEOTTE, in: D. KNOEPFLER (n. 63) 192, 198–200; id., in: F. COSTABILE (ed.), *Polis ed Olympieion a Locri Epizefiri*, 1992, 151, 155f., 159.

must have been clear for the public that not the city itself produced coinage with the sacred funds: as indicated by the legends in the genitive, the circulating bronze coins remain the *χρήματα* of Asklepios Soter and Athena Nikephoros respectively. Nor was it a matter of high civic magistrates (e.g. *στρατηγοί*) intending to assert their authority over the administration of the sacred and public treasuries: the motivation for the temple coin production, as well as its overstriking with civic types, should have been of a purely financial nature in assigning the costs for coin supply (or at least a part of them) to the temples instead of the public treasury.

It may be a surprise to consider bronze coin production as a financial burden for a polis like Pergamum, but the situation was compounded by the fact that the supply of bronze coinage, which lay in the hands of the dynasts until Attalos III,⁷⁸ became a new assignment for the Assembly after 133 BC. Moreover, financial difficulties encountered in the cities of Asia Minor during the late 2nd and 1st century BC are well attested.⁷⁹ The war against Aristonicos and especially the Mithridatic Wars had devastating effects on the economic life of Pergamum and other cities of western Asia Minor, not only because of the warfare itself, but also because of the Roman fiscal administration acting through the *publicani*. The inscriptions in honour of Diodoros Paspáros⁸⁰ reveal the efforts of this benefactor and ambassador of Pergamum at Rome to liberate his fellow citizens from the burden of tribute and debt, imposed by the Romans on Pergamum following its loss of freedom after the First Mithridatic War, as well as from the abuses of Roman troops billeted in the city. Ancient authors clearly stressed the main role of the Roman administration in the financial hardship faced by the cities.⁸¹ It is precisely within this context that manipulations on bronze coinage occur repeatedly in Mysian, Aeolian and Ionian cities.⁸²

⁷⁸ CHAMEROY, *Chronologie*, 154.

⁷⁹ BOGAERT drew a very dark picture of cities in Asia Minor (e.g. Ilium, Priene) and the Greek islands being embroiled in financial difficulties in the 2nd–1st centuries BC (BOGAERT, *Banques*, 193 f., 240, 255, 281, 294); CHANKOWSKI (n. 59) 74 f. (Apollonia Salbake in the 2nd century BC). Around 80–70 BC two citizens of Aphrodisias (Caria) and other ambassadors were chosen by the koinon of the Hellenes to defend the interests of many cities oppressed by the *publicani* (T. DREW-BEAR, *BCH* 96, 1972, 445, 466) until the reforms of Lucullus in 71 BC; D. MAGIE, *Roman Rule in Asia Minor*, 1950, 160, 237–240, 252 f.; useful synthesis of the literary and epigraphic evidence by F. DELRIEUX, in: R. VAN BREMEN – J.-M. CARBON (eds.), *Hellenistic Karia*, 2010, 505–526.

⁸⁰ C. P. JONES, *Chiron* 4, 1974, 194 f., 203; L. ROBERT, *BE* 1974, 269, n° 466.

⁸¹ DELRIEUX (n. 79) 508–510.

⁸² On Mysia and Aeolis, see n. 85. On Lesbos, see P. TSELEKAS, in: id. (ed.), *Coins in the Aegean Islands*, 2010, 127–153; P. KINNS, in: A. BURNETT – M. CRAWFORD (eds.), *The Coinage of the Roman World in the Late Republic*, 1987, 110 observed a «rash of overstriking, counter-marking, and successive re-coinage» in the civic coinages of Ionian cities, whose finances were devastated by the indemnity imposed by Sulla. He interpreted it as a form of taxation. However, the cited examples of countermarking are not precisely dated.

Focusing attention on the well attested countermarking of Asklepios/snake on omphalos and Athena/trophy, it turned out that manipulations of both coin series concern exclusively the reverse (Figs. 9, 11) and were clearly linked with the production of new bronze coins (Figs. 10, 12), having as part of the type the image of the countermarks (owl, city's monogram). One can argue that in all probability, the face value of the new coins was higher than the older, which were demonetised and could be revalidated with the countermark. Thus, a reconstruction of the process and its motivations could be as follows: On decision of the Council and the Assembly, the face value of the Asklepios/snake on omphalos coins may have been increased during or after the emission to augment the available cash flow without minting more metal or changing the weight or the alloy of the bronze coins. Only the addition of a symbol on the reverse (owl) would have distinguished the new coins with higher face value from the older, which continued circulating at their original value or were demonetised. The apposition of the countermark owl equated or revaluated them to the face value of the new emission. If a fee were required for countermarking,⁸³ its amount would correspond to the difference between the old and new face value and it would have been paid by the public bringing its coins for countermarking possibly to the Pergamene «mint building». At a later point, the same might have happened with the Athena/trophy coins. In both cases, the fee should have been considered as a tax, but the question arises whether the supposed fee was intended to provide the issuing treasury or that of the countermarking authority with cash.

Indeed, it is worth noting that all three countermarks owl, city monogram and snake-staff were not stamped according to the deity represented on the coin or to the issuing authority, thus leading to unusual associations:⁸⁴ the countermark owl was stamped on the snake of temple coins of Asklepios Soter (Fig. 9), the city's monogram on the trophy of temple coins of Athena Nikephoros (Fig. 11), the snake-staff behind the head of Athena on temple coins of Athena Nikephoros (Fig. 16). Even if the countermark owl on the bowl of Athena's helmet on the obverse of Athena/Nike coins (Fig. 13) offers a correct deity-attribute combination, one wonders why the countermark related to Athena Nikephoros has been used to stamp this civic coin type. Such discordance is surprising, because in neighbouring cities a countermark does not sel-

⁸³ P. TSELEKAS – C. PAPAGEORGIADOU-BANIS, in: C. PAPAGEORGIADOU-BANIS – A. GIANNIKOURI (eds.), *Sailing in the Aegean*, 2008, 164, 169 interpret the countermarking as an attempt to increase the income of the cities, including reissuing of bronze issues, supplementing issues with old (revalued) coins. Hence I do not see how these cities achieved any financial advantage in the 1st century BC from countermarking operations, if they did not involve a fee.

⁸⁴ There is one apparent exception in the form of an Asklepios/snake on omphalos coin with two round countermarks depicting a snake-staff: one countermark on the obverse is very large covering almost the whole of the head of Asklepios, and is about twice the size of the other which was applied to the reverse (Savoca ^oZZZ1435 [8/12/2014]). However, both countermarks differ from the oblong snake-staff countermark known in Pergamum (Fig. 16) so that their provenance remains uncertain.

dom add a symbol related to the god figuring on the coin.⁸⁵ In Pergamum, however, one can recognise that each countermark should correspond precisely to one of the issuing authorities identified in the introduction: the owl of Athena Nikephoros, the snake-staff of Asklepios Soter and the monogram of the city of Pergamum.⁸⁶ This identification should be reinforced by the fact that the same authority represented by the countermark at a later stage (?) overstrikes exactly the same coin series: by doing so, Athena Nikephoros and the city produced coins at minimal cost by taking older (certainly demonetised) coins as blanks (Figs. 1–8). As we know, the payment of a fee for both manipulations cannot be proven⁸⁷, but, if it were, one could ask if the fee for countermarking would not have been paid to the treasuries of the public or sacred authorities symbolised on the stamp.⁸⁸ Maybe it was the aim of the isolated actions of countermarking a snake-staff on coins of Athena Nikephoros (Fig. 13) or an owl on civic coins (Fig. 16), too, which are apparently not linked with the overstriking of older emissions.

If the system proposed above is right, the systematic countermarking and/or overstriking of bronze coins in Pergamum by an issuing authority that did not finance their production reveals the possibilities offered to the city and temples to use the bronze coinage to increase revenues to the treasuries of the city and the temples. By

⁸⁵ Even though it was not the practice to countermark a symbol related to the god depicted on the coin, this can be observed on the civic coins of Gambrium, where Apollo/star coins were countermarked on the obverse with a tripod (BMC [Mysia] 62, n° 2); in Elaia, some Persephone/Athena advancing r. coins show a countermark «ear of corn» on the obverse (SNG München 405; VOEGTLI [n. 14] Streufund 84); in Aegae, some Apollo/goat coins were stamped with a lyre on the obverse (SNG München 358), while Athena/Zeus coins have an owl countermarked on the obverse (ibid. 364). But unlike Pergamum, there was only one issuing authority in those cities – the polis itself.

⁸⁶ The question arises of how to interpret the bronze coins whose reverse legend and symbol refer to two different mint authorities (Figs. 9–10). Taking the example of the temple coins with Asklepios/owl sitting on a snake coiled around an omphalos, I do not think that the association of the owl and the coiled snake around an omphalos on the new type (above and Fig. 10) had a specific (e.g. religious) significance, other than to identify the new emission triggering the countermarking with an owl of the older type. The addition of an owl to the new coin type (Fig. 10) was part of the process leading to the recall of the whole emission of Asklepios temple coins to profit the Temple of Athena Nikephoros. That this interpretation may be true is shown by the further and extreme step of the manipulation, i.e. the overstriking of these Asklepios Soter coins with types of Athena Nikephoros.

⁸⁷ The payment of a fee for the overstriking is assumed by LE RIDER, *Contremarques*, 53; MACDONALD (n. 11) xi.

⁸⁸ Although the temple coins themselves were certainly not produced in relation to panegyries, one cannot say on the basis of current knowledge, if these manipulations were prompted by any festivals or panegyries of Athena Nikephoros or Asklepios Soter, because the date of the countermarking and overstriking operations is not precisely known. Nevertheless, given the four-year cycle of the panegyries, we would expect a greater variety of countermarks applied to more coin types than is actually the case at Pergamum.

decree of the Assembly, countermarking fees should have been ordered as an expedient for raising funds or improving the cash flow, while coin issues financed by the temple treasuries and later overstruck by civic issues avoided the polis contracting loans from the temples to produce coins with its own types.⁸⁹ We should not forget that the specific cases presented above probably reflect only a little part of the real extent of the manipulations. While the use of countermarking seems to have been limited to relatively few coin types, the overstriking of heavy bronze coins may have been a more common practice in the production of late Hellenistic coins in Pergamum than is actually suggested by the small amount of evidence.⁹⁰

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Addendum

After completing the manuscript a further temple coin Athena/trophy (Tab. 1, n° 33) overstruck on Asklepios/snake on omphalos (Tab. 1, n° 30a) occurred in the auction Nomos 5 (26/06/2016) 310; behind the head of Athena, the snake coiled on the omphalos and the letters ΠΙΟ of the legend [ΑΣΚΛΗ]ΠΙΟ[Υ ΣΩΤΗΡΟΣ] of the undertype are still visible.

Lists of illustrations

Fig. 1: Temple coin Athena/trophy (Tab. 1, n° 33) overstruck on temple coin Asklepios/snake on omphalos (Tab. 1, n° 30). Photo: SABINE STEIDL, RGZM.

Fig. 2: As last. The reverse undertype is no longer visible. British Museum (BMC [Mysia] 131, n° 177).

Fig. 3: As last. H. Grün 64 (20/11/2014) 750 (former P. R. FRANKE collection).

Fig. 4: As last. The reverse undertype is no longer visible. Seen on Ebay (08/06/2014, n° 112036371943).

⁸⁹ Just as extra or emergency resources concerning other items than the supply of coinage are attested elsewhere in Greek cities short of funds (L. MIGOTTE, RPh 82, 2008, 331).

⁹⁰ For technical reasons it was easier to overstrike large bronze coins rather than small denominations. But the proportion of overstrikes cannot be estimated, as successful overstrikes leave no traces of the host coins. Moreover, the civic Athena/Nike coins with magistrates' names are far rarer than those bearing the name of the prytanis (?) Pergamos, so that I cannot exclude the future discovery of other Athena/Nike coins (Diodoros, Demetrios etc.) overstruck on older coins. Some Athena/Nike coins issued under the magistrate Choreios (Berlin 18233265; ANS 1984.66.271) seem to show traces of overstriking, but the undertype is still not identifiable.

- Fig. 5: As last. The obverse undertype is no longer clearly visible. On the reverse, the head of the snake and the letters ΣΚΛ of the legend [Α]ΣΚΛ[ΗΠΙΟΥ ΣΩΤΗΡΟΣ] of the undertype are still visible. S. BARBARA, in: K. DÖRTLÜK et al. (n. 56), 58, n° 3,2.
- Fig. 6: Civic coin Athena/Nike (Tab. 1, n° 39,1) overstruck on temple coin Asklepios/snake on omphalos (Tab. 1, n° 30). RGZM O.43346. Photo: SABINE STEIDL.
- Fig. 7: As last. The reverse undertype is no longer visible. Savoca °ZZZ0324 (14/03/2015).
- Fig. 8: Civic coin Athena/Nike (Tab. 1, n° 39,1) overstruck on temple coin Athena/trophy (Tab. 1, n° 33). RGZM O.43369. Photo: SABINE STEIDL.
- Fig. 9: Temple coin Asklepios/snake on omphalos (Tab. 1, n° 30a) countermarked with owl. Coin find from Pergamum, excavations of the DAI Istanbul, MK 2162. Photo: JÉRÉMIE CHAMEROY.
- Fig. 10: Temple coin Asklepios/owl seated on snake on omphalos (Tab. 1, n° 30b). Münzkabinett der Staatlichen Museen Berlin 18233403. Photo: DIRK SONNENWALD.
- Fig. 11: Temple coin Athena/trophy (Tab. 1, n° 33) countermarked with city monogram. Münzkabinett der Staatlichen Museen Berlin 18233513. Photo: DIRK SONNENWALD.
- Fig. 12: Temple coin Athena/trophy (Tab. 1, n° 33) with city monogram in the engraved type. Münzkabinett der Staatlichen Museen Berlin 18233512. Photo: DIRK SONNENWALD.
- Fig. 13: Civic coin Athena/Nike (Tab. 1, n° 39,6) countermarked with owl. Münzkabinett der Staatlichen Museen Berlin 18232769. Photo: DIRK SONNENWALD.
- Fig. 14: Reverse of Attalid coin Athena/snake coiled right (Tab. 1, n° 20) countermarked with owl. Coin find from Pergamum, excavations of the DAI Istanbul, MK 3793. Photo: JÉRÉMIE CHAMEROY.
- Fig. 15: Temple coin Asklepios/snake-staff (Tab. 1, n° 29) countermarked with owl. Coin find from Pergamum, now Münzkabinett der Staatlichen Museen Berlin 18233382. Photo: DIRK SONNENWALD.
- Fig. 16: Temple coin Athena/owl in wreath (Tab. 1, n° 34) countermarked with snake-staff. Münzkabinett der Staatlichen Museen Berlin 18233409. Photo: DIRK SONNENWALD.
- Fig. 17: Temple coin Athena/trophy (Tab. 1, n° 33) countermarked with bee (not applied in Pergamum). Coin find from Pergamum cited by REGLING (n. 13, 355), now Münzkabinett der Staatlichen Museen Berlin 18233551. Photo: DIRK SONNENWALD.

The images are not to scale.

CHAMEROY, Chronologie		BMC (Mysia)	Denomination	Weight in g (number)	1 st series: ΠΕΡ(ΤΑ)	Countermarked with Star	Owl
1	ca. 400–350?		Chalkos	0.96 (5)	female head/two boars' heads facing		
2			Chalkos	0.99 (7)	female head/boar's head		
3			Chalkos	1.00 (13)	laureate head of Apollo/as last		
4	late 4 th -early 3 rd c.	22–23	Chalkos	0.92 (18)	head of Herakles with lion's scalp/ head of Athena (Att.)		
5	1 st third of 3 rd c.	11–15	Tetrachalkon	3.73 (46)	head of Athena (Att., laur.)/two bulls' protomes facing		
6			Dichalkon	1.91 (2)			
7 ⁱ		16	Chalkos	0.88 (13)			
8			Chalkos	0.95 (4)		head of Athena (Cor.)/as last	
9	1 st third of 3 rd c.	17–21	Tetrachalkon	4.04 (46)	head of Athena (Cor.) r. or l./bull's protome r. or l.		
10		24–25	Chalkos	0.88 (15)	head of Athena (Att.)/two stars, above Θ		
11		2–3	Chalkos	0.78 (22)	head of Apollo (laur.)/two bulls' protomes facing		
2nd series: ΦΙΛΕΤΑΙΡΟΥ							
12	2 nd third of 3 rd c. to 214 (f.?)	54–59	Dichalkon	1.91 (61)	head of Athena (Att., g.)/bow		
13			Chalkos	0.93 (7)	head of Athena (Att./Cor.)/bow		
14			Chalkos	0.87 (1)	head of Athena (Att.)/bow in quiver		
15		60–62	Dichalkon	1.84 (27)	head of Athena (Att., g.)/ivy leaf		
16			Chalkos	0.77 (1)			

17	2 nd third of 3 rd c. to 214 (f.?)	73-74	Tetrachalkon	3.94 (34)	head of Athena (Att., g.)/Asklepios sitting l. with a sceptre in the l., feeding a snake from a cup in the r.		
18		70-71	Tetrachalkon	3.86 (18)	head of Athena (Att., g.)/thyrsos with bandages		
19			Dichalkon	1.46 (1)			
20		75-83	Tetrachalkon	3.40 (93)	head of Athena (Att., g.)/snake coiled r.		(on the reverse)
21		63-64	Chalkos	0.86 (8)	head of Athena (Att., g.)/eight-pointed star		
22		66	Chalkos	0.83 (27)	head of Apollo (laur.)/tripod		
23		67	Chalkos	1.27 (1)	head of Apollo (laur.)/thyrsos with bandages		
24		68-69	Chalkos	0.62 (1)	head of Apollo (laur.)/bow in quiver		
25		65	Chalkos	1.14 (10)	head of Apollo (laur.)/bee		
26		84-85	Tetrachalkon	3.85 (12)	head of Asklepios (laur.)/snake beneath temple key		on the obverse
27			Chalkos	1.14 (2)			on the reverse
28			Dichalkon	2.04 (9)	head of Asklepios (laur.)/snake beneath grape		on the obverse

CHAMEROY, Chronologie	BMC (Mysia)	Denomination	Weight in g (number)	3 rd series: ΑΣΚΛΗΠΙΟΥ ΣΩΤΗΡΟΣ	Countermarked with			Overstruck
					Owl	City's monogram	Snake- staff	
29	150–157	?	3.52 (162)	head of Asklepios (laur.)/ snake-staff	(on the reverse)			
30a	158–159	?	7.84 (108)	head of Asklepios (laur.)/ snake on omphalos	on the reverse			
30b	160			head of Asklepios (laur.)/owl sitting on snake on omphalos				
31	171	?	3.83 (5)	head of Apollo (laur.)/tripod				
				ΑΣΚΛΗΠΙΟΥ ΚΑΙ ΥΓΙΕΙΑΣ				
32	163	?	4.25 (11)	head of Hygieia, in front of snake/snake on omphalos				
				4th series: ΑΘΗΝΑΣ ΝΙΚΗΦΟΡΟΥ				
33	172–182	?	6.51 (143)	head of Athena (Cor., g.)/ trophy		on the reverse		overstruck on n° 30
34	183–184	?	2.35 (26)	head of Athena (Cor.)/owl with closed wings standing on city's monogram, the whole in laurel wreath			on the obverse	
35		?	1.3 (1)	head of Athena (Att., s.)/owl with closed wings standing front in a laurel wreath				

36		187–188	(brass)	3.04 (6)	head of Athena (Att., s.)/owl with closed wings standing r. on thunderbolt				
37	ca. 80–ca. 10	190–204	(brass)	2.78 (148)	head of Athena (Att., s.)/owl with opened wings standing r. on palm branch				
38 ⁱⁱ			(brass)	0.89 (3)	head of Athena (Att., s.)/owl with closed wings standing r.				
					5th series: ΠΕΠΤΑΜΗΝΟΝ				
39		142		(1) 8.14 (109)	head of Athena (Att., s.)/Nike walking r. with laurel wreath in the r. hand and palm branch in the l. hand				overstruck on n° 30 and 33
		139	?	(2) 8.42 (19)	ΠΕΠΤΑΜΗΝΟΝ				
	1 st c.	141		(3) 7.94 (36)	ΔΙΟΔΩΠΟΥ				
		140		(4) 7.56 (19)	ΔΗΜΗΤΡΙΟΥ				
				(5) ⁱⁱⁱ 7.76 (18)	head of Athena (Cor.)/as last				
(40)		143			ΧΟΡΕΙΟΥ				
		135–138		(6) 6.58 (116)	head of Athena (Att., s.), no legend on the obverse/as last				on the obverse

41		144-149	(brass)	7.77 (82)	head of Asklepios (aur.)/ eagle with closed wings standing l., head r., on thun- derbolt			
42	ca. 80-ca. 10	129-134	(brass)	9.37 (23)	bust of Athena (Cor.), l./ Asklepios standing front, the r. hand on snake-staff			

ⁱ Head of Athena r. or l.

ⁱⁱ Replaces CHAMEROY, *Chronologie*, n° 38 in the name of Athena Areias (see n. 3). The first coin of new n° 38 in the name of Athena Nikephoros (Berlin 18233412) was published by S. ZIESMANN, SM 261, 2016, 9; two further coins in Pecunem 42 (03/04/2016) 195 and Savoca [^]TTT0960 (15/05/2016).

ⁱⁱⁱ = CHAMEROY, *Chronologie*, n° 40.

Tab. 1: Classic and Hellenistic bronze coinage from Pergamum.

Head r. unless otherwise specified; Att. = with Attic helmet; Cor. = with Corinthian helmet; g. = helmet decorated with griffin; laur. = laureated; s. = helmet decorated with star. Weights as in CHAMEROY, *Chronologie*, 169 except for n° 39, 1-6; 317 coins from auctions.

Countermarks in () denote rare occurrences.

ΦΙΛΕΤΑΙΡΟΥ	ΑΣΚΛΗΠΙΟΥ ΣΩΤΗΡΟΣ			ΑΘΗΝΑΣ ΝΙΚΗΦΟΡΟΥ			ΠΕΡΓΑΜΗΝΩΝ
	n° 29	n° 30	n° 33	n° 37	n° 39–40		
Athena/ snake coiled r.	Asklepios/ snake-staff	Asklepios/ snake on omphalos	Athena/trophy	Athena/owl in wreath	Athena/Nike		
no counter-mark with owl	no counter-mark with owl	no counter-mark with owl	no counter-mark with owl	no counter-mark with owl	no counter-mark with owl	no counter-mark with owl	no counter-mark with owl
counter-marked with owl	counter-marked with owl	counter-marked with owl	counter-marked with owl	counter-marked with owl	counter-marked with owl	counter-marked with owl	counter-marked with owl
61	80	24	9	20	1	10	7
REGLING ^{iv} (total: 443 coins)	4	2	some of 24	some of 24	some of 24	some of 10	7
89	103	7	7	1	3	0	6
Stadtgrabung (1973–1998) total: 520 coins)	1	1	2	1	4 to 6	1	6

^{iv} 4 countermarks are not included: 1 on type n° 5 (probably «lion's head, r.»), see n. 15), 2 on n° 33 («bee», see n. 15) and 1 on n° 41 (not described); they were certainly all stamped outside Pergamum.

Tab. 2: Occurrences of Hellenistic countermarks among the Pergamene coin finds from Pergamum (sources: see n. 13–14).

	ΑΣΚΛΗΠΙΟΥ ΣΩΤΗΡΟΣ	ΠΕΡΓΑΜΗΝΩΝ	
	n° 29	n° 39	n° 41
	Asklepios/snake-staff	Athena/Nike	Asklepios/eagle
	bronze	bronze	brass
mean weight ^v	3.5 g	7.7 g	7.8 g
value relation	0.5	1	1.5 or 2

ΕΠΙ ΠΕΡΓΑΜΟΥ	X	X	X
ΔΙΟΔΩΡΟΥ	X	X	X
ΔΗΜΗΤΡΙΟΥ	X	X	X

^v After Tab. 1.

Tab. 3: Temple and civic coins from Pergamum struck under the same officials.



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8



Fig. 9



Fig. 10



Fig. 11



Fig. 12



Fig. 13



Fig. 14



Fig. 15



Fig. 16



Fig. 17

Der CHIRON wird jahrgangweise und in Leinen gebunden ausgeliefert.
Bestellungen nehmen alle Buchhandlungen entgegen.

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