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Graecia capta?

Rome et les monnayages du monde égéen (IIe-Ier s. av. J.-C.)

From the Antigonids to the Romans: Macedonia and Thessaly in the 2nd and 1st Centuries BC

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1. The consequences of the settlement of 196 BC

The outcome of the Second Macedonian war was the first serious challenge to the dominance of the Macedonians in the Balkans and the Aegean. Throughout the 3rd c. the Antigonids had controlled cities in Southern Greece and Thrace, but also as far as Caria. Since the reign of Antigonos Gonatas the Macedonians had developed a considerable naval power that threatened Ptolemaic supremacy in the eastern Mediterranean. The defeat of Philip V by the Roman army in 197 BC put an end to all this. The terms of the settlement of 196 BC that followed the defeat were harsh: the Macedonians had to pay a high indemnity to the Romans, they were deprived from all their external possessions and were obliged to surrender their fleet. Thessaly, which had been under tight Macedonian control since the time of Philip II, now became one of the most faithful allies of the Romans. What, at the time, might have seemed a temporary defeat proved to be the beginning of the end for the Macedonian monarchy.

These important changes had their impact on coinage in both regions: after a long interval of at least a century the Thessalian League, detached from Macedonia and under pro-Roman governance, inaugurated a new federal coinage in silver and bronze that circulated locally and lasted until the late 1st c. BC. The consequences of the new equilibrium can also be seen in the circulation of Macedonian coinage. Unlike the tetradrachms of Philip's series 2 that are found in hoards from Asia Minor (CH 10.277) and Syria (CH 10.289; IGCH 1410), the circulation of his silver produced after Kynoskephalai was restricted to Macedonia and its neighbouring regions (IGCH 228 and CH 8.421, CH 9.247 from Thessaly, IGCH 474 and CH 8.419, 429 from Macedonia, IGCH 231 from Epiros, IGCH 232 from Euboia). Furthermore, the coins of the Attic standard mostly in the form of posthumous Alexanders that had dominated areas controlled by the Antigonids were now replaced by small silver coins of the 'symmachic' standard. Macedonia's military and political isolation was clearly reflected in circulation patterns.

Patterns of production and organisation of the royal mint also showed significant changes: For the first time since Alexander III, silver was produced in the form of hemidrachms, drachms and didrachms in addition to the traditional tet-

radrachms.¹ To these one should add the 'shield/helmet' tetrobols signed by the Macedonians that complemented the royal coinage with an additional denomination, one that was very popular with the Leagues of Southern Greece. As for the Maenad/stern and the shield/stern tetrobols of the Macedonians these should be placed in the last decades of the 3rd c. and do not belong to the period we are examining.² Philip's policy was continued by Perseus³ and the Macedonian silver fractions produced by the last two Antigonids circulated locally and were found in hoards of the first third of the 2nd c. BC, in other words before Pydna. The elaborate system of mintmarks that was now introduced, three monograms and one symbol, shows a different mint organization, influenced perhaps by Rhodian coinage.

The absence of silver fractions during the whole 3rd c. in Macedonia is rather unusual. The Seleucids, for example, continued to produce them after the reign of Seleucos I, although in reduced numbers. A new interpretation of the coinage of Histiaia may perhaps shed some light on this absence. It is well known that the tetrobols of Histiaia, especially those of the so-called 'late' period, vaguely dated to the 3rd and 2nd c. BC, were one of the most abundant civic coinages of the late Hellenistic period. These small silver coins are found in large numbers in all numismatic collections, they are overrepresented in hoards, and they show a circulation pattern that much exceeds what one would expect for the coinage of a medium-sized Hellenistic city. Their importance is further underlined by the inventories of the temple of Apollo at Delos where the *nomisma histiaikon* was deposited in very large numbers.

No convincing interpretation of this phenomenon has so far been proposed⁴ and one could suggest that these coins were issued partly to meet expenses of the Macedonian state. During most of the 3rd c. Histiaia had been under tight Antigonid control and one could anticipate that the city's coinage could have been used to contribute to the expenses of the kings. Although there is no direct literary evidence to support this hypothesis, this suggestion not only explains where the Antigonids found small denominations for their military and other payments but, more importantly, it is the only possible interpretation of the imitation of this coinage by the Macedonians. The coinage of Histiaia had become so familiar to the recipients of the Macedonian payments that, at some point, they had to produce their own currency with very similar types and on the same standard. The practice of the Romans, therefore, of using local currency for covering their military and other expenses was not new; it had been applied by the Hellenistic kings and was familiar to the Greek world.⁵

- On the silver coinage of Philip V see Mamroth (1930) 277-303; Boehringer (1972) 102ff; on Philip's series 2 see the mint study of Burrer (2009) 1-61. For a recent overview, see Kremydi (2018) 203-208.
- ² Kremydi (2018) 377-380.
- ³ Mamroth (1928) 1-28 and Boehringer (1972) 100-102.
- The interpretation put forward by Robert (1951) 179-216 and Robert (1960) 63-69, was rejected with convincing arguments by Marek (1977) 72-79.
- ⁵ Kremydi (2018) 225-230; Kremydi (forthcoming).

Within this context one needs to discuss the role of the Rhodian imitations that circulated in the region. Such imitations are often encountered in hoards mostly from Thessaly, but also from Macedonia and, to a smaller extent, from Euboia, Bojotia and Epiros. They are found with coins of Histiaia, the Macedonians. and the small denominations of Philip V and Perseus. Following the traditional dating that places the Maenad/stern issues to the reign of Perseus, a dating for which no solid arguments have ever been presented, all these hoards have been dated to the period of the Third Macedonian war. A closer examination of the hoard evidence, however, has led us to the conclusion that the coins of Histiaia and those of Rhodes were not strictly contemporary in hoards. The 'late' Histiaian tetrobols were hoarded mostly with Macedonian tetrobols of the types Maenad/stern and shield/stern with which they also shared similar types and the same weight standard (common median of 2.20g), whereas the Rhodian and pseudo-Rhodian coins were hoarded mainly with the Macedonian tetrobols of the shield/helmet type with which they shared a slightly heavier standard (median of ca. 2.40g). We would place a first group of hoards with Histiaian and Macedonian coinage to the last decades of the 3rd c. BC.8 The second group of hoards was concealed in the 2nd c. BC, and may be divided in two subgroups: the hoards buried under Philip V after Kynoskephalai9 and those buried under Perseus.10 The hoards buried in Thessaly in the early 2nd c. BC could perhaps be connected with the hostilities between Antiochos III and the Romans that took place mostly in this region. If this reconstruction is correct it would oblige us to back-date some of the Rhodian imitations by ca. twenty years. Richard Ashton has suggested that a number of Rhodian imitations bearing the names of Ainetor, Ameinion, Gorgos, Stasion and others encountered in Thessalian hoards must have been struck locally. This is a very reasonable assumption that everyone has accepted. Ashton has also shown that drachms with the same names had been struck in Rhodes in the period between ca. 205-190 and were replaced by the plinthophoric coinage in ca. 190 BC.¹¹ According to the traditional dating of the Thessalian hoards, the Rhodian imitations would have been struck after the introduction of the plinthophoric coinage. some twenty years later than the originals. If the Thessalian pseudo-Rhodians are back-dated, however, they would be closer to their originals, with which they are anyway found together in hoards.

Many have been studied by Richard Ashton. See, for example, Ashton (1988) 21-32; Ashton (1997) 188-191; Ashton (2000) 93-116, as well as Ashton & Warren (1997) 5-16. The hoard evidence has been summarised by Apostolou (2004) 259-276.

⁷ Kremydi (2018) 255-273, esp. Table 11.

⁸ IGCH 475 and 476, CH 8.436, CH 6.35, CH 4.56.

⁹ CH 9.236, CH 8.420, CH 8.424, IGCH 474, IGCH 228, CH 8.421.

¹⁰ IGCH 231, IGCH 232, CH 8.419.

¹¹ Ashton (2001) 88-89.

The question that interests us mostly is that of the issuing authority of the Rhodian imitations. Since these were local issues the possible authorities would be either the Thessalian League or Macedonia, and a Macedonian attribution seems more probable. In this case they would have been struck either by the king or, more probably, by the Macedonian Koinon, 12 perhaps in the context of the war against Antiochos that took place largely in Thessaly. A very large number of Rhodian imitations in the name of Hermias, all in very fresh condition, formed the main bulk of currency of the famous Sitochoron hoard dated to c. 168 BC and it has been suggested that they were produced by Perseus during the third Macedonian war. 13 It seems that the practice of producing pseudo-Rhodian drachms was not a single episode in Macedonia.

To resume therefore, we could conclude that some of the issues of Histiaia could have been used as contributions of the city to the Antigonids, at least until 196 when Macedonia lost control over Euboia. Some of the Rhodian imitations that circulated in Thessaly and Macedonia, on the other hand, could have been used for payments of the Macedonians in the war against Antiochos and later issues could be connected to the third Macedonian war. The Roman policy of using 'foreign' coins that is being discussed in this conference had its origins in practices that had been familiar to the Greek world.

2. Before or After Pydna?

The view that Greek coinage ended after 146 BC has been long ago abandoned. The dating of a number of coinages that were inaugurated around the middle of the 2nd c. BC, however, remains controversial. What was struck before or after the battle of Pydna is not always clear and the consequences of one or the other version are – from a historical point of view – quite important. Such coinages are the silver issues of the Thessalian League, those of the Macedonian districts, as well as the bronze issues of Thessaloniki, Pella and Amphipolis over which much ink has been spilt. These questions were addressed at the London congress thirty years ago and some of the answers remained open. ¹⁴ Serious progress has been made since then. ¹⁵

- Knoepfler (1999) 205-206 has suggested that the pseudo-Rhodian drachms struck in Boiotia could have been produced by the Boiotian League, whereas Ashton (2008) 123-129, restored them to Haliartos and perhaps Larymna.
- One Hermias drachm was also found in the Metsovon hoard (*IGCH* 231, *CH* 9.234) buried under Perseus. Earlier fresh pseudo-Rhodian drachms in the Metsovon or the Oreus hoards (*IGCH* 232, *CH* 9.235) could have been stockpiled by Philip V before Kynoskephalai and recovered by Perseus. See Ashton (2000) 109.
- ¹⁴ Touratsoglou (1987) 53-78. See also Burnett & Crawford (1987) vi.
- 15 For an overview of coinage in Macedonia after 167 see: Picard (2010) 175-184.

2.1. The Thessalian League

First of all, the coinage of the Thessalian league. After the end of the important issues of Larissa, Pharsalos and Pherai in the late 4th c. BC, the striking of silver was interrupted in Thessaly, and resumed only after its detachment from Macedonia in 196 BC. 16 The coinage of the revived Thessalian League was struck in three denominations that followed two different weight standards. 17 The staters (didrachms) of c.6g were of the correct Aiginetan weight, ignoring the reduction that had taken place during the 3rd c. These coins bear the head of Zeus Eleutherios on the obverse, in full accordance with the Roman ideology of 'restoring freedom in Greece' and a local Athena on the reverse. In addition to the staters, the League struck drachms and hemidrachms on the Attic standard, a much more common denomination that was used widely in Thessaly during the 3rd c. BC. The 6g staters could be easily exchanged with one drachm plus one hemidrachm and later with one denarius plus four obols. The reason behind these issues is not clear. Helly has suggested a political interpretation: coinage was produced as a declaration of Thessalian sovereignty. 18 Today one tends to view such an interpretation with some scepticism, although both the choice of coin types and the use of the traditional Thessalian standard show an eagerness to underline the identity of the new federal institution. Whatever the reason behind the resumption of minting in Thessaly, there is no doubt that this new coinage is connected to the reformed Thessalian League, now independent of Macedonia and attached to the cause of the Romans. It has been shown that the issues of the Thessalian League were not annual but they were produced irregularly and that production was intensive in the period between 49-44 BC, suggesting 44 BC as the possible ending date of the Hellenistic issues.²⁰ Coining was soon resumed, only this time with the imperial portrait.²¹ But when did this coinage begin? Both Crawford²² and

No complete study of the 2nd and 1st c. BC coinage of the Thessalian League has so far been published, but several hoards have been studied and the interpretation of the names on the coins has been discussed. See Franke (1959) 61-67; Helly (1966) 7-29; Helly (1987) 39-53; Klose (1998) 333-350; Intzesiloglou (2004) 457-478. Klose (1998) 334, n. 10, resumes the discussion concerning the function of the individuals whose names appear on the Hellenistic coins of the Thessalian League. On the issues of the imperial period however, the title *strategos* accompanies the name: Burrer (1993) and *RPC* I 1428ff.

On the double weight standard see: Kremydi-Sicilianou (2004) 255-258.

Helly (1987) 40. The remark of Helly 'la plupart de trésors comportent, au IIe comme au Ier s., une proportion étonnamment faible de monnaies fédérales" does not accord with our conclusions; Kremydi-Sicilianou (2004) 254.

¹⁹ Helly (1987) and Klose (1998).

²⁰ Klose (1998) and the other articles cited in note 16.

²¹ Burrer (1993) 104, has dated the first portrait issues to the period 31-27 BC, although they could also have been somewhat later.

²² Crawford (1985) 125.

Price²³ have suggested a date after 168 BC for its inauguration, but the question has never been treated systematically. Hoard evidence, although not conclusive, does not impose a dating after 168 BC. Issues of the Thessalian League are found together with tetradrachms of Antiochos III in the 'Northern Greece/1981' hoard (*CH* 7.91), with issues of Philip V, the Macedonians and pseudo-Rhodian coins in the 'Volos 1983' hoard (*CH* 8.421) and with a drachm of Alexander III and several Aiginetic drachms and hemidrachms in the 'Larissa/1948' (*IGCH* 239) hoard. Although it cannot be excluded that these currencies could be hoarded in Thessaly in the middle of the 2nd c. BC, they are more comfortably placed in the years 190-170 BC. In any case, hoard evidence does not impose a post-168 BC dating and inscriptions and prosopography have so far offered no crucial evidence that would resolve the problem. The question of the inauguration date of this coinage should, therefore, remain open.

2.2. The Macedonian Districts

In describing the Roman settlement after the battle of Pydna and the abolition of the Macedonian monarchy Livy stated that the country was divided into four districts (regiones, partes).²⁴ The national assembly was reduced to a council, whereas the regional assemblies were reinforced. Each district had its capital, namely Amphipolis, Thessaloniki, Pella and Pelagonia, where the district assemblies met to elect magistrates and collect tribute. Commercial and other contacts between the districts were prohibited and any sources of revenue from mines or royal lands were suspended since they could support the rise of a unifying power.²⁵ However embellished with the usual claims of 'liberty and freedom' under Roman 'protection' of the pre-Roman sources, this was a very harsh settlement that put an end to Macedonian sovereignty. The prohibition on exploiting the precious metal mines has sometimes been assumed to have led to temporary interruption of the minting of silver.²⁶

Historians have shown that Macedonia's division into administrative districts existed before the Roman settlement. They had existed as recruitment areas for the Macedonian army since the time of Philip II and had formed the basis for state administration under the Antigonids.²⁷ The technical terms used for these units have been debated and the contribution of coinage to this discussion is important: the

Price (1987) 98. Klose (1998) 339, also opts for a dating after 168 BC for its inauguration, because of the new dating of the 'New Style" Athenian coinage.

²⁴ Liv. 45.18; 45.29-30.

²⁵ Liv. as above; D.S. 31.6-10; Strab. 7, frag. 48.

A connection between the prohibition on exploiting the silver mines and the prohibition on minting was supported by Gaebler (1902) 143 and Gaebler (1906) 3. Contra: Boehringer (1972) 113-114.

²⁷ Papazoglou (1983) 195-210; Hatzopoulos (1996).

examination of hoard evidence, iconography and mintmarks have lead us to the conclusion that the silver and most of the bronze coinages of the Botteatai and the Amphaxians date to the period of the last Antigonids.²⁸ The Botteatai were the people that lived in the central Macedonian plain, an area that more or less coincided with the Third district. In addition to the coins, a letter of Antigonos Doson addressed to the Botteatai and to the city of Beroia leaves no doubt that the Botteatai were organized as political body.²⁹ As for the Amphaxians, they inhabited the area around the Axios river, later known as the Second district. Both these coinages were produced by the regional assemblies under the kings.

But what about the silver coins of the First meris and the bronze of the Fourth? The discovery of the famous Sitochoron hoard opened a discussion on the dating of the Tauropolos tetradrachms under Perseus;30 it has furthermore been argued that the rare didrachm of the first region could be even earlier,31 although the evidence is not decisive. The main argument against an early dating of this issue lies in the use of the technical term meris in the pre-Roman period. Recently published archaeological evidence sheds interesting light on this question. Excavations at the city of Gitana in Thesprotia have revealed the remains of the city's prytaneion destroved by fire. All archaeological finds, which included many coins and several coin hoards, impose a date of the destruction around 168 BC, at the time when the Epirot cities were devastated by the Romans.³² Hundreds of clay seals that were kept at the prytaneion – mostly city badges which sealed public documents - were burned and preserved by the fire. Several of them copied coin types very closely, including a seal with the head of Apollo and the legend ΤΕΤΑΡΤΗΣ ΜΕΡΙΔΟΣ.³³ The head of Apollo is not encountered on the bronze issues of the Fourth district, but rather on a bronze issue of the Amphaxians. Therefore, it cannot contribute to the dating of the Fourth district bronzes but it provides evidence both for the existence of the Fourth district as a political entity, and for the use of the technical term meris in the pre-Roman period.

Whereas the Tauropolos and didrachm issues of the first region were of limited volume, the Artemis / club tetradrachms were a vast coinage that circulated down to the 1st c. BC. Ilya Prokopov has studied these coins systematically and has published numerous hoards from Bulgaria. In a recent study he has distinguished three groups with different mintmarks, style and circulation patterns. His first group, small in volume, contained coins of good style that bore mintmarks

²⁸ Kremydi (2018) 380-382 (conclusions).

²⁹ First published by Allamani-Souri & Voutiras (1996) 13-39. See also BE 1997, 370; BE 1998, 247; Επιγραφές Κάτω Μακεδονίας I, 4.

³⁰ Kremydi-Sicilianou (2009) 191-201, with earlier bibliography.

³¹ Kremydi-Sicilianou (2007) 91-100.

On the city and a first presentation of the seal finds: Preka-Alexandri (1996) 195-198.

Preka-Alexandri & Stogias (2011) 680-681. On seals copying coin types see Preka-Alexandri (2013) 221-234.

that were later abandoned; these issues circulated in hoards from northern Greece and NW Turkey that date to around the middle of the 2nd c. BC. They are the only Artemis / club tetradrachms to have been discovered in or, near, the Macedonian territory. Prokopov has tentatively suggested that they could have been struck under the Antigonids.³⁴

These first tetradrachms show a deliberate change from the iconography of the Tauropolos coins. Zeus, the Macedonian deity per excellence, closely connected to the royal family and its religious beliefs, was omitted from the new coins. The effigy of Artemis on the other hand - the tutelary deity of the city of Amphipolis remained, but the figure of the goddess riding a bull on the reverse was replaced by her diademed head engraved on the more prominent obverse side. The club, a common attribute of Herakles, was now chosen for the reverse. Although these coins draw on Macedonian tradition, they also show an iconographic break that requires explanation. And it seems difficult to find an interpretation for this rupture other than the radical political change that followed the abolition of the monarchy. Since there is no hoard evidence to support Prokopov's proposal, I would suggest we retain the traditional dating of the First district Artemis tetradrachms after Pydna. The rare tetradrachms of the Second district with the same types are clearly contemporary. Both replaced the royal silver and were struck by the new district councils, undoubtedly compliant, of their own free will or not, with the Roman authorities. These coins are present in hoards dated to the middle of the 2nd c. BC and were therefore produced earlier. Neither their date nor their circulation pattern allows their connection to the Thracian wars. According to the literary sources serious problems with the Scordisci, a Gaulish tribe, and later, the Thracians first occurred in the 140's BC.35 The initial purpose of the Artemis tetradrachms therefore must have been to serve as a regular currency.

2.3. The bronze issues of the cities and the quaestors

In his studies on Macedonian coinage Hugo Gaebler dated the bronze issues of Thessaloniki, Pella and Amphipolis to the period between the last years of the reign of Philip V and the time of Augustus. In his paper at the 1985 London congress, Yannis Touratsoglou proposed a much more limited period of issue, that of 187-168 BC.³⁶ This proposal was not accepted by Martin Price³⁷ and the editors of the *BAR* 1987 volume concluded that more evidence was needed in order to settle the question.³⁸

³⁴ Prokopov (2012) 38.

On the literary sources referring to the Thracian wars see: Picard (2008) 489-493. On coinages related to the Thracian wars, see Psôma (2011) 155-157.

Touratsoglou (1987) 55-56; Touratsoglou (1993) 37. This view was repeated recently by the same author in Drougou & Touratsoglou (2012) 264-272.

³⁷ Price (1987) 100, n. 3.

³⁸ Burnett & Crawford (1987), introduction.

Since then two doctoral theses have treated the subject from a different point of view. In his unpublished study on the circulation of bronze coinage in Macedonia, Christos Gatzolis made the first attempt to treat the hoard evidence systematically. He assembled over 70 published and unpublished bronze hoards that contained coins of the two last Antigonids, the Macedonians and the districts, as well as those of the three cities, and sorted them into groups according to their contents without any preconceived ideas about their dating. His most important conclusions may be briefly summarised as follows:³⁹

- a) The issues of the three cities did not always circulate together with the late Antigonid coins. In fact when civic issues are dominant in hoards, royal issues tend to be absent, whereas the contrary is also true. The general picture is that the dates of issue of these two groups of coins do not coincide and that at least a large part of the civic issues were struck after those of the kings.
- b) The issues of the Macedonians and the districts seem to be somewhat earlier than those of the cities and were probably struck under Perseus.
- c) The production of the civic issues must have probably continued until c. 31 BC, as originally proposed by Gaebler.

Kourempanas' study of the Hellenistic coinage of Thessaloniki,⁴⁰ on the other hand, treats the matter from another perspective, by proposing an interesting pattern for the relative chronology of the issues of this city. Kourempanas divided the issues of Thessaloniki into two successive periods: first he placed the issues that bear the same types but different monograms, a pattern which seems to follow the Greek model of monetary production, whereas in the second period he placed the issues that bear different types but no monograms, a practice reminiscent of Roman Republican coinage. The author proposed that the same pattern was also followed at Pella and Amphipolis. According to his reconstruction, all three cities began their production with the common variety 'Rome / ethnic within oakwreath'. The types 'Rome / inscription within oak-wreath' were also used on the coinage of the quaestors and the author reasonably considered that the cities copied the type from the quaestors and not vice versa. If this reconstruction is correct, then the coinage of the cities followed the coinage of the quaestors and must therefore be dated to after 168 BC.

Both studies agree therefore, that the three groups of bronze coins – regional, Roman and civic – were issued successively and not simultaneously, as traditionally believed. It is safe to accept that the bronze issues of the cities were produced under Roman domination and cannot be related to the presumed monetary reform of Philip V. It is also clear that they were long-lived issues that continued down to the 1st c. BC, as Gaebler had originally suggested. They are found in large num-

³⁹ Gatzolis (2010) 361-373.

Kourempanas (2009). This thesis remains unpublished but a Greek version of the catalogue has been published, without the text: Kourempanas (2016).

bers in all archaeological sites in Macedonia and some of these issues were imitated in Thrace.

When Aemilius Paullus held the meeting at Amphipolis in 167 he invited the delegates of the cities to participate bringing over all archives and documents, together with all the money due to the royal treasury (Livy 45.29). This and many other passages in our sources leave no doubt that the cities had existed as political entities under the kings but, contrary to what has been so far believed, they were not accorded the right to coin. After the fall of the monarchy these cities became the basis for the new organization of the country. And the coinages of the cities illustrate this 'new organization'. After the extinction of the royal family and the transfer to Rome of their entourage with all the members of their families, the old ruling class of the country was eliminated. A new one must have been created, which headed the regional assemblies and produced the abundant coinages of Amphipolis, Thessaloniki and Pella.

But how long after Pydna were these issues inaugurated?⁴² The answer lies in the dating of the issues of the quaestors. In praising the virtues of Aemilius, Plutarch stated that 'he would not consent even to look upon the quantities of silver and the quantities of gold that were gathered together from the royal treasuries, but handed them over to the quaestors for the public chest' (πολὺ μὲν ἀργύριον, πολὺ δὲ χρυσίον ἐκ τῶν βασιλικῶν ἡθροισμένον οὐδ' ἰδεῖν ἡθελήσαντος, ἀλλὰ τοῖς ταμίοις εἰς τὸ δημόσιον παραδόντος).⁴³ Are these the quaestors that signed the bronze issues in Macedonia? If so, the coins would belong to the year immediately after Pydna (168/67 BC), when the consul stayed in Macedonia with his army. If not, the coins would belong to the period after the creation of the province in 148 BC, when Roman institutions became the norm and quaestors were regularly appointed. On present evidence a definite answer cannot be given, but I would suggest that historical probability favours the second interpretation.

3. Hoarding patterns after the creation of the Roman province

The middle of the 2nd c. BC was marked by the suppression of the revolt of Andriskos in 149/48 BC, the last in a series of earlier and less successful uprisings, which resulted in the establishment of a regular Roman administration headed by a governor of proconsular rank at Thessaloniki, as well as in the constant presence of the Roman army in the region. This turning-point marked the beginning of a new era, known as the provincial era, replaced by the Actian era after the victory

⁴¹ Papazoglou (1988) 64 wrote: 'La nouvelle organisation du pays avait pour fondement les communautés autonomes, les civitates'.

On the history of Macedonia after Pydna, see Daubner (2018).

⁴³ Plu., Aem., 28.6.19.

of Augustus in 31. The provincial era was used to date official documents, including occasionally the coins.⁴⁴ After the end of the Achaian wars in 146 BC which resulted in the final triumph of Rome, parts of southern Greece were attached to the jurisdiction of the proconsul of the new province. Thus Macedonia became the first Province of Rome east of Italy. This radical change in political status and administration influenced coin production and circulation in Macedonia and Thessaly.

In the first half of the 2nd c. BC precious metal hoards from Thessaly⁴⁵ and Macedonia⁴⁶ had followed a similar pattern. They contained coins of various minting authorities and denominations: royal coins – mostly Antigonid, some *Lysimachi* and a few Seleucid or Ptolemaic specimens –, drachms and hemidrachms of Greek cities and Leagues on the Aiginetan standard, hemidrachms and tetrobols of the Macedonians, as well as Rhodian drachms and their imitations. Silver fractions such as drachms, tetrobols and hemidrachms, were more common than tetradrachms. This was, more or less, the continuation of the general hoarding pattern of the 3rd c. BC with the addition of a few new currencies such as the Rhodian or the Thessalian.

After the middle of the century, however, some kind of 'regulation' seems to have taken place. Hoards containing a variety of issuing authorities were now replaced by single- currency hoards. In Thessaly the staters and drachms of the newly established League were practically the only currency encountered in the hoards, sometimes accompanied by issues of the neighbouring Magnetes. The Athenian tetradrachms, which were present in some Thessalian finds of the first half of the 1st c. BC, seem to be less frequent in Thessaly than in other parts of mainland Greece. Roman *denarii* were first encountered in the dispersed 'Nea Pharsalos' hoard (*CH* 9.291) dated somewhat vaguely between 100-50 BC and in the 'Aidona' hoard (*IGCH* 351) dated more precisely to 44 BC. Although evidence is scarce the general impression is that the *denarii* succeeded the Athenian coinage.

The new Thessalian coinage of this period must have been the only currency used in internal affairs and transactions. This can be seen through the contents of the hoards, through the stray finds and is confirmed by epigraphic evidence: hundreds of inscriptions of various Thessalian cities refer to the local staters, especially in the context of manumission taxes, but also in the context of other payments. There can be no doubt that the use of a local coinage was profitable to the Thessalians who had constantly supported Rome, not least by providing their whole production

⁴⁴ It has been suggested that the date ET Δ KAI Λ (34th year) found on a bronze issue of Thessaloniki, which Gaebler had regarded as referring to the regnal years of Philip V, was in fact a reference to the new Provincial era: Kourempanas (2011a) 200-201; Kourempanas (2011b) 251-252.

For a systematic treatment of hoarding patterns in Thessaly see Kremydi-Sicilianou (2004).
 Touratsoglou (1993) 32 and pl. IIa.

of grain when it was needed.⁴⁷ Their support was rewarded and Augustus, the first foreigner to bear the title of *strategos* of the League after Philip II, established a very favorable exchange rate between the Thessalian staters and the *denarii* with his famous *diorthôma*. Even though the use of *denarii* had in the meantime become current, the Thessalians continued to profit from their privileged coinage.⁴⁸

The picture in Macedonia was very different.⁴⁹ In the second half of the 2nd c. local silver currency seems to disappear from the hoards. The Artemis / club tetradrachms of the First district were rarely encountered in hoards from Macedonia, whereas the rare tetradrachms of the Second district were totally absent, and it has even been suggested that they were not minted in Macedonia at all.⁵⁰ Tetradrachms of Philip V and Perseus are found in just one hoard after the middle of the century (*IGCH* 480-481) and were clearly 'leftovers'.

In the second half of the 2nd c., the dominant silver currency in Macedonian hoards were the New Style Athenian tetradrachms. The presence of Athenian coins in Macedonian hoards dated to the second half of the 2nd c. was first discussed by Touratsoglou who underlined that 'the period following 148/47 BC, saw Macedonia flooded with Athenian tetradrachms of the New Style, transferred there, obviously, by the Roman authorities in order to deal with the problem created by the repeated invasions of barbarian tribes from the north throughout the second half of the second century BC'. ⁵¹ The discussion was continued by De Callataÿ who argued that there was a massive import of Athenian currency into Macedonia in the years between 126/25 BC and 121/20 BC which must have been 'organized by a central state [rather] than by individual transactions'. ⁵² These are interesting suggestions that are worth examining in the context of a broader study of the circulation of the Athenian stephanephoroi.

Local silver issues in Macedonian hoards reappeared in the 1st c. BC, when the Aesillas series and, to a smaller extent, the LEG Macedonon series replaced the Athenian currency. Their introduction has been dated to the 90s. The Aesillas series was not a very large coinage and just over 100 obverse dies are known for these tetradrachms, whereas 170 have been counted for the issues of the First district⁵³ and 400 for the Thasian-type tetradrachms.⁵⁴ These 1st c. BC Macedonian

⁴⁸ Helly (1997) 63-91.

First discussed by Touratsoglou (1993), see pl. IIa.

⁴⁷ Garnsey et al. (1984) 30-44.

The First district tetradrachms are only present in the 'Leibithra' hoard (CH 9.249) and the 'Macedonia 1962' hoard (IGCH 481). The 'Bogdanci' hoard (CH 9.250) was buried north of the Macedonian border. For a systematic study of these coins and the suggestion that groups II and III were not produced in Macedonia see Prokopov (2012) 29-30, 36-40.

⁵¹ Touratsoglou (1987) 54; Touratsoglou (1993) 37.

⁵² De Callataÿ (1991-1992) 11-20.

The coinage of Aesillas has been systematically studied by Bauslaugh (2000).

⁵⁴ Prokopov (2006).

coins are one of the rare cases of bilingual coins where the legend MAKE Δ ON Ω N accompanied by the head of Alexander is engraved on the obverse, and the name of a Roman quaestor together with his attributes on the reverse. The Aesillas issues are encountered in many Macedonian hoards, replacing the Athenian tetradrachms, as well as in hoards from southern Thrace. Their circulation pattern, however, is different to that of the tetradrachms of the First district which had a wider circulation further to the north. Their production has been connected to the war between the Romans and Mithridates VI.

Denarii were probably introduced earlier in Macedonia than in Thessaly and, judging from the surviving hoards, they circulated more in this region. They become regular from the 70s and were the only silver currency in Macedonian hoards after the 50s (IGCH 653, CH 5.55, IGCH 660, CH 7.139, IGCH 663). As stray finds however, denarii and asses are found earlier than in hoards. Although we cannot be sure at what moment they had arrived in the region, Roman bronzes of the late 3rd and early 2nd c. BC are often found in excavations, whereas the first denarii date to around the middle of the 2nd c. BC or even earlier. Denarii dated after the 120s (the time of the concealment of the Stoboi hoard) are very common as stray finds.⁵⁵ These coins were brought over by Roman soldiers and merchants who were established as organised communities in large urban centres such as Thessaloniki as early as the 2nd c. BC.

To return to the Artemis / club tetradrachms of the First district, Prokopov's groups II and III are quite different from those of group I minted before 148. In addition to the difference in style, these later issues show a different treatment of the monograms; whereas the earlier issues of group I bear monograms that change with each issue, in these later issues the same monograms were repeated for different issues. Although the function of the monograms escapes us, it is clear that it was not the same as before.56 Mixed hoards containing such tetradrachms with other, better datable coinages, were buried in the area of the central Balkans (between the Rhodope mountains and the Danube river) in the years between 125-100 BC. Another group of hoards containing mainly Prokopov's group III were buried in the upper Strymon valley and could have been later. The circulation pattern of these coins is comparable to that of the coins of Thasos or, to quote Picard, to the coins 'with the types of Thasos'. 57 However, unlike the Thasian-type coins that were struck by various minting authorities such as Thasos itself, Roman officials and Thracian tribes, the Artemis / club tetradrachms were produced by one issuing authority, named on the coins as the Assembly of the First district. The dat-

Touratsoglou (1993) pl. IIb and more recently Amandry & Kremydi (2018). The earlier Stoboi hoard (*CH* 1.153) of ca. 500 denarii seems to have been brought over from Italy as a lot and not to have entered circulation.

⁵⁶ Prokopov (2012) 29-30, 36-40.

⁵⁷ Picard (2008) 465-493.

ing of these tetradrachms cannot be established with great accuracy but they were produced much later than was once believed, towards the end of the second and perhaps the early 1st c. BC. Prokopov has even suggested that they were possibly not struck in Macedonia at all. It seems well established that groups II and III of the Artemis / club tetradrachms, as well as the Thasian-type tetradrachms were a 'special' coinage produced to finance the wars of the Romans in Thrace. Both the dating and the circulation patterns are in accordance with this interpretation. 58

To resume therefore, the currencies that were produced and circulated in Macedonia after the establishment of a Roman province in 148 BC consisted nearly exclusively of tetradrachms and bronzes. The absence of smaller silver denominations that had been dominant in hoards before Pydna, points to a coinage with a different function. The new silver coinages were clearly produced by the Roman authorities and were used to meet payments made by the Romans, often outside the northern borders of the Province. The civic bronzes must have been produced by the new pro-Roman elites that governed the cities. But the provenance of the metal used for the striking of these coinages was certainly local. It either derived from the precious metal mines of the region or from the re-striking of earlier coins. During the turbulent years of the late Republic, producing local currencies from local metal was undoubtedly a much easier and more profitable way for the Romans to meet their payments than to systematically import *denarii*.

4. The end of the production of silver and the continuation of the bronze

The end of the production of silver coins in the regions we are examining may be placed around the middle of the 1^{st} c. BC. The latest silver issues of the Thessalian League have been dated to the 40s BC although the coins must have continued to circulate later. The regulation of the exchange rate between the *denarius* and the stater dates to the reign of Augustus, but inscriptions reveal that the Greek system of reckoning continued to exist alongside the Roman. Hence the expression ' $\delta\eta(v\dot{\alpha}\rho\iota\alpha)$ κβ', $\dot{\delta}(\betao\lambdao\dot{\nu}\varsigma)$ δ' in inscriptions from Perrhaibia dating to the time of Augustus. However, the survival of the term 'stater' in texts of the imperial period is usually understood as an archaizing use of the term that does not refer to the actual denominations, similar to the use of the term 'drachm' in imperial inscriptions from Thrace. In Macedonia, the last silver issues of Aesillas have been placed around the early 60s BC, and from the 50s BC silver hoards in Macedonia

For numismatic circulation in Thrace and the Thracian wars see also Psôma (2011) 143-161.

⁵⁹ IG IX, 21296 and 21297; ArchEph (1945-1947) 110.

⁶⁰ Psoma (2008) 182, n. 138.

⁶¹ Bauslaugh (2000) 114.

were single- currency hoards containing *denarii*. The earliest surviving epigraphic reference to Roman currency from Macedonia dates to the reign of Claudius and comes from an inscription from the gymnasium at Styberra where the price of oil is tariffed in *denarii*. ⁶² The absence of earlier references to Roman denominations from Macedonia is certainly due to the lack of inscribed monuments in this region during the late Hellenistic period.

Whereas the production of silver coins was interrupted in Thessaly and Macedonia around the middle of the 1st c. BC, the production of bronze continued. The issues of Amphipolis, Thessaloniki and Pella continued in the second half of the 1st c., but they became more Roman in appearance. Their iconography was influenced by Roman coins and they switched to the Roman system of denominations. The production of local bronzes by Hortensius could have been the starting point of this development. In the years between 44-42 BC a series of bronze coins in three denominations were struck in his name and the largest clearly followed a Roman standard. 63 Such large and heavy bronze coins, a denomination unfamiliar to Greek currency, were also issued at Thessaloniki in a series of three denominations minted under Antony (RPC I, 1551-1553) after the battle of Philippi. RPC 1, 1545 from Pella must be contemporary. Regular civic issues in Macedonia continued from the 20s BC. The general picture, therefore, is that the civic bronzes in Macedonia were minted more or less continuously in the period between the creation of the Province and the reign of Augustus. A gradual 'romanisation' occurred with the introduction of iconographical patterns and types influenced by Roman coinage and with the adoption of Roman denominations after the abandonment of the local issues in silver. The adoption of the imperial portrait was the last step in this procedure.

Bibliography

- Allamani-Souri, V. & Voutiras, M. (1996). 'New Documents from the Sanctuary of Herakles Kynagidas at Beroia', in *Inscriptions of Macedonia, Third International Symposium on Macedonia (Thessaloniki, 8-12 December 1993)*. Thessaloniki: 13-39.
- Amandry, M. & Kremydi, S. (2018). 'La pénétration du denier en Macédoine et la circulation de la monnaie locale en bronze', in J. Fournier, G. Parissaki (eds.), La domination romaine en Égée du Nord: ruptures et continuités. Athens 79-115.
- Apostolou, Ε. 'Κυκλοφορία ψευδοροδιακών δραχμών στο θεσσαλικό χώρο', in Kypraiou (2004): 259-276.

⁶³ RPC I, 1509-1511. Kremydi-Sicilianou (1998) 61-76.

IG X/2.2, 323; Papazoglou (1988) 236-237, no 1. For a discussion of epigraphic evidence on the presence of Roman coinage in Macedonia, see Amandry & Kremydi (2018) 95-99.

- Ashton, R.H.J. (1988). 'A Series of Pseudo-Rhodian Drachms from Mainland Greece', NC: 21-32.
- ----(1997). 'More Pseudo-Rhodian Drachms from Mainland Greece', NC: 188-191.
- (2000). 'More Pseudo-Rhodian Drachms from Central Greece: Haliartos (Again), Chalkis, and Euboia Uncertain (?)', NC: 93-116.
- (2001). 'The Coinage of Rhodes, 408-c. 190 BC', in A. Meadows, K. Shipton (eds.), *Money and Its Uses in the Ancient Greek World*. Oxford: 79-115.
- Ashton, R.H.J. & Meadows, A. (2008). 'The Letoon Deposit: Lycian League Coinage, Rhodian Plinthophori, and Pseudo-Rhodian Drachms from Haliartos (yet Again) and Asia Minor', NC: 111-134.
- Ashton, R.H.J & Warren, J. (1997). 'A Hoard of Western Greek and Pseudo-Rhodian Silver', RBN 193: 5-16.
- Bauslaugh, R.A. (2000). Silver Coinage with the Types of Aesillas the Quaestor. New York.
- Boehringer, C. (1972). Zur Chronologie mittelhellenistischer Münzserien 220-160 v. Chr. Berlin.
- Burnett, A.M. & Crawford, M.H. (eds.) (1987). The Coinage of the Roman World in the Late Republic. Proceedings of a Colloquium Held at the British Museum in September 1985. Oxford.
- Burrer, F. (1993). Münzprägung und Geschichte des Thessalischen Bundes in der römischen Kaiserzeit bis auf Hadrian (31 v.Chr.-138 n.Chr.). Saarbrücken.
- (2009). 'Die Tetradrachmenprägungen Philipps V. von Makedonien Serie II', JNG 59: 1-61.
- Crawford, M.H. (1985). Coinage and Money Under the Roman Republic. London. Daubner, F. (2018). Makedonien nach den Königen (168 v.Chr.-14 n.Chr.). Stuttgart De Callataÿ, F. (1991-1992). 'Athenian New Style Tetradrachms in Macedonian Hoards', AJN 3-4: 11-20.
- Drougou, S. & Touratsoglou, I. (2012). 'Hellenistic Pottery in Macedonia: Twenty Years After', in M. Tiverios, P. Nigdelis, P. Adam-Veleni (eds.), Θρεπτήρια. Μελέτες για την αρχαία Μακεδονία / Threpteria. Studies in Ancient Macedonia. Thessaloniki: 264-272.
- Faucher, T., Marcellesi, M.-C. & Picard, O. (eds.) (2011), Nomisma. La circulation monétaire dans le monde grec antique. Actes du colloque international (Athènes, 14-17 avril 2010). BCH Suppl. 53.
- Franke, P.R. (1959). 'Zur Chronologie der Strategen und der Münzprägung des Koinon der Thessaler', *SM* 35: 61-67.
- Gaebler, H. (1902). 'Zur Münzkunde Makedoniens, III', ZfN 23: 141-189.
- --- (1906). Die antiken Münzen Nord-Griechenlands III.1. Berlin.
- Garnsey, P., Gallant, T. & Rathbone, D. (1984). 'Thessaly and the Grain Supply of Rome During the Second Century BC', *JRS* 74: 30-44.
- Gatzolis, C. (2010). Η κυκλοφορία του χάλκινου νομίσματος στην Μακεδονία ($5^{o\varsigma}$ $I^{o\varsigma}$ αι. π.Χ.). [Unpublished PhD thesis, University of Thessaloniki.]

- Hatzopoulos, M. (1996). Macedonian Institutions Under the Kings. Athens.
- Helly, B. (1966). 'Le groupe des monnaies fédérales thessaliennes avec Athéna "aux pompons", RN: 7-29.
- —— (1987). 'Les émissions monétaires de la confédération thessalienne (IIe-Ier s. av. J.-C.)', in G. Depeyrot, T. Hackens, G. Moucharte (eds.), Rythmes de la production monétaire, de l'Antiquité à nos jours. Louvain-la-Neuve: 39-53.
- —— (1997). 'Le *diorthôma* d'Auguste fixant la conversion des statères thessaliens en deniers. Une situation de "passage à la monnaie unique", *Topoi* 7: 63-91.
- Intzesiloglou, B. 'Θησαυρός αργυρών νομισμάτων από το θέατρο Δημητριάδος', in Kypraiou (2004): 457-478.
- Klose, D.O.A. (1998). 'Zur Chronologie der thessalischen Koinonprägungen im 2. und 1. Jh. v.Chr.: Ein weiterer Schatzfund aus Südthessalien', in U. Peter (ed.), Stephanos nomismatikos. Edith Schönert-Geiss zum 65. Geburtstag. Berlin: 333-350.
- Knoepfler, D. (1999). 'Des ateliers de drachmes pseudo-rhodiennes en Béotie?', in M. Amandry, S. Hurter (eds.), *Travaux de numismatique grecque offerts à Georges Le Rider.* London: 197-206.
- Kourempanas, T. (2009). Le monnayage au nom de Thessalonique à la période hellénistique. [Unpublished PhD thesis, University Paris 4.]
- —— (2011a). 'Les monnayages de bronze en Macédoine après la fin de la monarchie', in Faucher *et al.* (2011): 199-211.
- —— (2011b). 'The Chronology of the Hellenistic Coins of Thessaloniki, Pella and Amphipolis', in N. Homes (ed.), *Proceedings of the XIV*th International Numismatic Congress, Glasgow 2009. Glasgow: 251-255.
- —— (2016). Τα ελληνιστικά νομίσματα της Θεσσαλονίκης. Athens.
- Kremydi-Sicilianou, S. (2004). 'Hoard Evidence from Thessaly in the 2nd and 1st 2nd centuries BC: from a 'Multi-currency' to a 'Double-currency' System', in Kypraiou (2004): 235-258.
- (2007). 'Μακεδόνων Πρώτης Μερίδος: Evidence for a Coinage Under the Antigonids', RN: 91-100.
- —— (2008). 'Quintus Hortensius Hortalus in Macedonia: 44-42 BC', *Tekmeria* 4: 61-76.
- —— (2009). 'The Tauropolos Tetradrachms of the First Macedonian Meris: Provenance, Iconography and Dating', in S. Drougou, D. Evgenidou, C. Kritzas, N. Kaltsas, V. Penna, I. Tsourti, M. Galani-Krikou, E. Ralli (eds.), KEPMATIA ΦΙΛΙΑΣ. Τιμητικός τόμος για τον Ιωάννη Τουράτσογλου. Athens: 191-201.
- ——[Kremydi] (2018). 'Autonomous' Coinages Under the Late Antigonids. Athens.
- (forthcoming). 'Macedonia and Histiaia. Political and Economic Relations', in Ancient Macedonia VIII. Papers Read at the 8th International Symposium Held in Thessaloniki, 21-24 November 2017.
- Kypraiou, L. (ed.) (2004). Το νόμισμα στο Θεσσαλικό χώρο. Νομισματοκοπεία, κυκλοφορία, εικονογραφία, ιστορία: αρχαίοι βυζαντινοί νεώτεροι χρόνοι.

- Πρακτικά συνεδρίου της Γ΄ επιστημονικής συνάντησης / Coins in the Thessalian Region. Mints, Circulation, Iconography, History: Ancient, Byzantine, Modern. Proceedings of the Third Scientific Meeting. Obolos 7.
- Lamboley, J.-L. & Castiglioni, M.P. (eds.) (2011). L'Illyrie méridionale et l'Épire dans l'Antiquité V. Actes du Ve colloque international de Grenoble (8-11 octobre 2008). Paris.
- Mamroth, A. (1928). 'Die Silbermünzen des Königs Perseus', ZfN 38: 1-28.
- (1930). 'Die Silbermünzen des Königs Philippos V. von Makedonien', *ZfN* 40: 277-303.
- Marek, C. (1977). 'Der Geldumlauf der Stadt Histiaia und seine Bedeutung für die Verteilung ihrer Proxenoi', *Talanta* 8-9: 72-79.
- Papazoglou, F. (1983). 'Sur l'organisation de la Macédoine sous les Antigonides', in Αρχαία Μακεδονία, 3. Ανακοινώσεις κατά το τρίτο διεθνές συμπόσιο (Θεσσαλονίκη, 21–25 Σεπτεμβρίου 1977) / Ancient Macedonia 3. Papers Read at the Third International Symposium Held in Thessaloniki (September 21-25, 1977). Thessaloniki: 195-210.
- (1988a). 'Les stèles éphébiques de Stuberra', Chiron 18: 233-270.
- (1988b). Les villes de Macédoine à l'époque romaine. BCH Suppl. 16.
- Picard, O. (2008). 'Les tétradrachmes à types thasiens et les guerres thraces au début du I^{er} siècle avant notre ère', *CRAI*: 465-493.
- (2010). 'Rome et la Grèce à la basse période hellénistique: monnaies et impérialisme', JS: 161-192.
- Preka-Alexandri, K. (1996). 'A Group of Inscribed Seal Impressions of Thesprotia, Greece', in M.-F. Boussac, A. Invernizzi (eds.), *Archives et sceaux du monde hellénistique*. *BCH* Suppl. 29: 195-198.
- Preka-Alexandri, K. (2013). 'Νομισματικοί τύποι σε σφραγίσματα από τα Γίτανα της Θεσπρωτίας', in K. Liampi, K. Papaevangelou-Genakos, K. Zachos, A. Dousougli, A. Iakovidou (eds.), Νομισματική και οικονομική ιστορία στην Ήπειρο κατά την αρχαιότητα: πρακτικά του 1^{ου} διεθνούς συνεδρίου. Νομισματική και οικονομική ιστορία στην Ήπειρο κατά την αρχαιότητα (Πανεπιστήμιο Ιωάννινων, 3-7 Οκτωβρίου 2007) / Numismatic History and Economy in Epirus During Antiquity: Proceedings of the 1st International Conference. Numismatic History and Economy in Epirus During Antiquity (University of Ioannina, October 3rd-7th, 2007). Athens: 221-234.
- Preka-Alexandri, K. & Stogias, Y. (2011). 'Economic and Socio-political Glimpses from Gitana in Thesprotia: the Testimony of Stamped Amphora Handles, Coins and Clay Sealings', in Lamboley & Castiglioni (2011): 663-683.
- Price, M. (1987). 'Southern Greece', in Burnett & Crawford (1987): 95-104.
- Prokopov, I. (2006). Die Silberprägung der Insel Thasos und die Tetradrachmen des 'thasischen Typs' vom 2.-1. Jahrhundert v. Chr. Berlin.
- (2012). The Silver Coinage of the Macedonian Regions 2nd-1st Century BC. Wetteren.

- Psôma, S. (2008). The Coins from Maroneia and the Classical City at Molyvoti. A Contribution to the History of Aegean Thrace. Athens.
- —— (2011). 'Circulation monétaire et thésaurisation en Thrace du Nord des Rhodopes', in Faucher et al. (2011): 143-161.
- Robert, L. (1951). 'La circulation des monnaies d'Histiée', Études de numismatique grecque. Paris: 179-216.
- ——(1960). 'Circulation des monnaies d'Histiée', Hellenica. Recueil d'épigraphie de numismatique et d'antiquités grecques 11-12. Paris: 63-69.
- Touratsoglou, I. (1987). 'Macedonia', in Burnett & Crawford (1987): 53-78.
- —— (1993). The Coin Circulation in Ancient Macedonia (ca. 200 B.C-268/286 AD). The Hoard Evidence. Athens.