Assus Troadis: the beginning of coinage and its later silver emissions in the V and IV century B.C.

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The beginning of coinage in the Troad starts very likely in the last quarter of the VI c. B.C. with small silver fractions issued by Abydus, Cebren and Dardanus, all characterized by the presence on the obverse of the animal symbol of each polis (an eagle, a ram, and a cock, respectively), and an incuse square on the reverse. To these poleis we may now add Assus, whose main emblem was a griffin. This town flourished in the VI c. B.C. and became famous in the second half of that century in the ancient world for an imposing Doric temple standing on its high acropolis. This new conclusion comes from a reconsideration of the iconography of the crouched griffin (always crouching at Assos, seated at Teos) on rare Archaic diobols hitherto attributed to Teos that are here more correctly assigned to Assos and dated to 520-510 B.C. thus bringing forward the beginning of coinage in this important Troadic mint by at least two decades. The paper describes all the other Archaic and Classical silver series including some unpublished fractions which have recently appeared on the antiquarian market, and proposes a new sequence and dating. It also comments on a very early (for the region and for the whole Asia Minor) bronze emission.

Parole chiave / Keywords

Asso, Troad, inizio della monetazione, monete d’argento, VI-IV s. a.C.

Assus, Troad, coinage, beginning, silver coins, VI-IV c. B.C.
I. Ancient Assos

The ruins of ancient Assos are situated at the centre of the southern coast of the Troas on a site now partly occupied by the modern Turkish village of Behramkale. An ancient Aeolic polis founded by colonists from the town of Methymna on the island of Lesbos (Strabo XIII, 1-58), Assos probably coincides with the Pedasos mentioned by Homer (Hom. Il X, 429) as the capital of the Leleges, a pre-Greek population that inhabited the southern area of Troas from the Early Bronze Age. The town was captured by the Persians in 549 B.C. and ruled by them with some freedom for its citizens until 479 when it acquired a semi-independence that lasted for over a century. In spite of the Persian dominion, the town flourished in the last decades of the VI c. and at the very beginning of the V c. B.C. as an important harbour for the commercial routes connecting the N Aegean areas with Ionia and the southern shores of Asia Minor. Around the middle of the V c. it fell under the influence of Athens, which must have marked a certain economic decline if we consider that the town contributed with a phoros of only one talent to the Delian Confederacy as opposed to the three paid by Cebren, a neighbouring inland polis.

After the peace of Antalcidas (387 B.C.) Assos once more fell under Persian rule, although again with a certain amount of autonomous power until 365 when the governor Ariobarzanes, who had rebelled against the Persian king Artaxerxes, was defeated at Assos, and the town was soon after governed by the banker Euboulos, and after his death by Hermias a scholar of Plato (that attracted to Assos his fellow-pupils Xenocrates and Aristotle), under re-established Persian control.1

Assos is well known to archaeologists for the importance of its ruins, namely its very well preserved Late Classical walls, the Greek-Roman necropolis, and the Archaic Doric temple standing at the very top of its acropolis. These ruins have been known since the XVIII c. when they were first drawn by the Count de Choiseul Gouffier,2 and later became the subject of detailed studies and excavation campaigns by the Archaeological Institute of America,3 starting in 1881 and lasting forty years. Bacon, one of the American diggers, considered the remains of Assos to his times «the most perfect idea of a Greek city that is anywhere to be obtained».

The temple, with six by thirteen columns, surrounded by architraves and metopes decorated with animals (real, such as boars, bulls and lions, but also ‘orientalizing’ like sphinxes and centaurs) and scenes from the Heracles cycle, is thought to have been dedicated to Athena on the sole, weak, basis of numismatic evidence, i.e. the appearance of Athena’s head on drachms and hemidrachms (infra) towards the end of the V c. B.C. and of an arcaic-looking palloidion shown on the reverse of a single tetradrachm dated to the same period (infra).4 Assos was also known for its stone, cited by Pliny as lapis sarcophagus, which according to him was the perfect stone for sarcophagi since it consumed the bodies buried in it, except for the teeth, within 40 days (Plin. Nat. Hist. XXXVI, 131), so that the soul could rapidly begin a new life. This stone is a porous andesite which is quite hard and intractable to work.5 It was used everywhere at Assos, also for the building of the temple on the acropolis and for sculpting its frieze dated to 530 B.C. on the basis of stylistic considerations.6 Following detailed appraisal of its architectural characteristics, the same temple has more recently been dated to 540 B.C., although a later date, namely the last decades of the VI c is also considered possible.7

1 For general information about the geographical position, the ruins and history of Assos, Cook 1973, pp. 240-50 and references therein contained. For the Persian rule of the Troas and of the town of Assos, Debord 1999 pp. 94-6 and 417-8 respectively.

2 De Choiseul-Gouffier 1782; Chevalier (ed.) 2007.

3 Clarke 1882; Clarke, Bacon, Koldewey 1921: the coins found and assigned by the Turkish authorities to the American archaeologists have been published therein by Bell 1921, pp. 295-313. The results of more recent excavations made by German and Turkish teams of archaeologists are reported in various volumes of the journal «Asia Minor Studien» starting from the monographic volume 2 by Serdaroglu, Stupperich, Schwertheim 1990.


5 Lazzarini 1994, pp. 103-16.


7 Daix-Wescoat 2012, p. 239. A date around 520 B.C. seems more probable to Prof. Clemente Marconi of New York University considering that the stone material of the temple's frieze is too difficult to sculpt in sophisticated detail, and this is influencing the dating of the frieze (personal communication).
2. The Assos’ silver emissions

Systematic checking of the numismatic market, including printed auction catalogues, e-auctions, e-bay and numismatic fairs, has led me to observe the appearance over the last five years of abundant small silver Troadic mint fractions of the archaic and classical periods, namely diobols, obols, hemiobols and tetartemoria of Abydus, Antandrus, Assus, Cebren, Dardanus, Gargara, Gergis, Lamponia and Neadria, very probably connected to the finding of one or more hoards in the Troad. Many of these fractions were, and several still are, totally new and/or unpublished in the standard references: the volumes of the Sylloge Numorum Graecorum and the catalogues of the most important numismatic museums and collections. This paper presents and discusses some new fractions of the V c. BC, certainly issued by Assos since they bear its ethnic, as well as some others dating to the end of the VI c. hitherto attributed to Teos but which in my opinion should instead be given to Assos, and constitute the initial emission of this polis. A new arrangement and dating of the nine silver series of Assos is also attempted.9

I first proposed that the beginning of coinage at Assos should be placed around 500 BC10 with the issue of a drachm together with a hemidrachm and an obol. I now think that the date should be brought forward by two decades and that the first Assian series11 was only of diobols of ca. 1.43 g12 with the obverse featuring a crouched griffin with feathered wings facing right, the left forepaw slightly raised from the ground13 and, on the reverse, an irregular incuse square (fig. 1). This issue was known, although in my opinion hitherto wrongly identified as trihemiobols of Teos by Balcer14 (his numbers 57 of 1.43 g, and 59 of 1.47 g) and Matzke15 (same coins, numbered 81 and 77, respectively) since the Tcean griffins are always seated (fig. 2), not crouched like these diobols, and show a well raised left forepaw as well as some other small differences in the treatment of the animal. As is well known, iconography in the Archaic period was very important as a means of differentiating and easily identifying the coins struck by the Greek poleis, and this is exactly the case of the four Aegean Archaic coastal towns adopting the griffin as a poliadic symbol in their early coinage:16 Teos (griffin seated facing right, initially with forepaws together, later and throughout the Classical and most of the Hellenistic periods with the left forepaw well raised), Phocaea (left-fac-

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8 Particularly important for Troad are the volumes by Ashton, Ireland 2007 and Tekin, Erol-Özdizbay 2015.
9 Dating is here based uniquely on numismatic evidence. In fact, unfortunately, only postumous Alexander III tetradrachms attributed to Assos are so far known in coin hoards, see Thompson, Mørcholm, Kraay 1973.
11 A series is here identified by important changes on the coin types.
12 One piece is in the British Museum, ex Lambros 1894, Balcer 1968, nr. 59 (1.47 g); one is in the Danish National Museum (SNG Ionia, nr. 1435, 1.46 g); one is in the Klein collection, Klein 1999, nr. 472 (1.36 g); three pieces have appeared on the market (Hirsch, auction 203, lot 317, Balcer 1968, nr. 57 (1.43 g) Peus, auction 372, lot 321, 1.46 g; CNG e. Au 321, lot 135, 1.47 g); H.I. private collection, Germany, 1.44 g; the average weight of the seven pieces is 1.43 g.
13 The depiction of the griffin resembles that of two sphinxes (crouched, facing each other and with a forepaw raised) in the temple frieze: Finster-Hotz 1984, pl. XII.
14 Balcer 1968, p. 32, pl. XV.
15 Maetzke 2000, pp. 36-7, pl. of p. 49, nr. 77 and 81.
16 For the iconography and history of the griffin in Mediterranean antiquity, Bin-V 1965; for the presence of griffins in coins of Asia Minor, Lenger 2009.
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The second silver Assian series is composed of three nominals, a drachm of a reduced weight, also (as usual) with respect to the theoretical one of 3.9 g, namely of 3.50 g, 22 that may be assumed to have been struck on a Chian standard, 23 a hemidrachm, or triobol, of about 1.9 g (1.43 g), 24 and an obol of ca. 0.6 g (0.45 g). 25 The drachm shows a crouched griffin facing left, much more elaborate in style than that of the previous diobol, and the head of a roaring lion with protruding tongue facing right and in an incuse square (fig. 3a); the triobol has similar types, but the griffin is facing right (fig. 3b); the obol has a right-facing griffin’s head, and a left/right-facing lion’s head (fig. 3c). 26 All the heads end with a truncated dotted line. A likely date for this second series is 500-480 B.C.

The third silver series was composed only of very abundant obols and fewer hemiobols, thus testifying a period of economic difficulty for Assos. These small silver coins continue to feature the already described types of a right-facing crouched griffin, more rarely facing left, on the obverse, and a lion’s head mostly facing right and within an incuse square, on the reverse (fig. 4). In the latter, after an initial more abundant anepigraphic series 27 (fig. 4a, 4b),

17 This is the average weight of the 7 diobols so far found in museum collections and offered on the market (see note 11).
18 See for ex. Muenzen & Medaillen, list 237, lot 348.
19 See for ex. the diobols of 1.46 and 1.47 g, London Ancient Coins (LAC) and Guttus, auction 11, lot 42 and LAC, auction 50, lot 90, respectively.
20 See for ex. the diobol of 1.37 g, Pecunem, auction 28, lot 110.
21 See for ex. the obol of 0.73 g, Pecunem, auction 32, lot 134.
22 This is the average weight of seven pieces from museums (and other published/unpublished collections), and from the market known to the present writer.
24 Only six pieces known to me, with a. w. of 1.43 g.
25 Four pieces known with a. w. of 0.45 g.
26 A fraction with very similar types, but with the lion’s head facing right, is sometimes confused with the Assian one: it was struck by the Massaliote Greeks: see Furtwangler 1978, Gruppe FF, table 40.
27 So far I have inventoried 38 obols with an a. w. of 0.55 g, and 9 hemiobols with an a. w. of 0.29 g.
the initial of the ethnic ΆΣΣ appears over the lion’s head, retrograde at the beginning, then prograde,\textsuperscript{28} and later with a full ethnic in the lexical variation ΆΣΣΟΟΝ (fig. 4c)\textsuperscript{29} instead of ΆΣΣΙΟΝ,\textsuperscript{30} the much more common ethnic at the end of the V and during the IV-III centuries B.C. The probable date of emission may be fixed from 479 (when the town was freed from Persian rule), to ca. 440 B.C.

Somewhat later, and less abundant\textsuperscript{31} is the fourth series with the same types as before, but with a different griffin iconography facing left, standing on a base, and without a raised forepaw) and lion’s head (also facing left, and in a shallow incuse square) with a Ά Σ (the initial of the ethnic, Ά to the left, and Σ to the right of the head) on the obverse (fig. 5): the style of both types is more evolved, and this is the very last of the griffin/lion’s head fractional series, very likely to be placed around 440/30 B.C.

The fifth series is a bronze issue, the first to be struck by Assos around 420 B.C. and very likely one of the very earliest in Asia Minor.\textsuperscript{32} This chalk-ous is iconographically closely connected to the fourth series described above, showing a very similar crouched griffin (here facing right) on the obverse, and a lion’s head, also in a slightly incuse square, on

\textsuperscript{28} I know a total of 16 obols, with an a. w. of 0.55 g.
\textsuperscript{29} I know of 8 obols, with an a. w. of 0.53 g.
\textsuperscript{30} In the literary and epigraphic sources the ethnic of the Assian inhabitants is reported in various forms: Assios, Assēus, Essios, Hessios. On Assoon see Hansen, Nielsen (edd.) 2004, p. 1005. The ethnic ΆΣΣΟΟΝ, although not explained, is the first to appear in full, and well attested and repeated in the four coin emissions: it is not possible, as sometimes suggested, to consider it a mistake of the official Assian celators.
\textsuperscript{31} I know of 6 obols, with an a. w. of 0.44 g.
\textsuperscript{32} The traditional low dating (very end of the V – beginning of the IV c. B.C. of the introduction of bronze coinage in the East should be abandoned, since it has been demonstrated that several Macedonian towns like Mende, Potidaea and possibly Acanthus issued like Assos small chalkoi of an average weight around 0.9 g in the years 420 B.C.: see Gatzolis 2013 pp. 117-28.
the reverse (fig. 6). It weighs about 0.70 g, this coin was probably an obol (or its fraction) in value and judging by its rarity, its emission will not have lasted long; after this piece, bronze coinage at Assos was to be interrupted for at least thirty years, and resumed with only chalkoi of about 1 g in the tenth series Athena/bull’s head (infra), and soon after the middle of the IV c. when only bronze coins were struck by Assos, with the same unit and its multiples of 2, 4 and 8 chalkoi according to the well known Attic standard, all with an Athena head on the obverse, and a crouched griffin on the reverse.

The sixth series is a rather abundant silver issue, comprising drachms and hemidrachms with the same types: a head of Athena with an Attic helm decorated by a laurel crown on the obverse, and a lion’s head in a deep incuse square on the reverse, both types facing left (figs. 7a, 7b). Around the lion is again the ‘strange’ ethnic ΆΣΣΟΟΝ, probably changed into ΆΣΣΊΟΝ in some hemidrachms at the very end of the series which show a different style in the lion’s and the Athena’s heads, the latter sometimes with three pellets behind, probably to indicate the value of the coin, a triobol (hemidrachm) (fig. 7c). The head of Athena refers to an already existing and important local cult, but very likely also to the full entry of Assos into the Athenian (Delian) League around 430 B.C.: from this period until the beginning of the Roman coinage, Athena remained a permanent type on the Assian coins.

Probably connected to the early sixth issue was that (the seventh) of a very scarce (and probably rather short-lived, although with numerous varieties) coinage of obols judging by the very limited number

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33 The average weight of 11 known pieces, several very worn, is 0.65 g.

34 Also in Macedonia the first chalkoi were « issued for a very short period of time probably for a specific reason [...] may be in the context of the Peloponnesian war » Gatzolis 2013 p. 127.


36 I know of a total of 10 pieces, with an a. w. of 3.16 g, thus showing a 10% weight reduction with respect to the Archaic drachm.

37 A total of 14 pieces is known to me, with an a. w. of 1.66 g.

38 They seem to have been struck in a smaller quantity than those with ΆΣΣΟΟΝ.
ably depicts the head of a nymph with the hair fixed by a taenia; the head is stylistically quite similar to that shown in earlier anepigraphic obols of Phocaea, and later of Methymna. It may therefore be related to a local Aegean cult, in Assos possibly connected to a spring such as the one monumentalized in Roman times (and still pouring water) that can be seen by the sea close to the harbour. The average weight of all these fractions is 0.41 g., as for the older obols; the date for these coins should probably be almost contemporaneous with the previous ASSOON emission, and may perhaps be fixed to 430-410 B.C.

The beautiful and interesting tetradrachm coined by Assos mentioned above (eighth series) has been dated to the same period. This unique piece, now preserved in the Cabinet des Médailles of the Bibliothèque Nationale, Paris, likely a coin celebrating something (perhaps an early establishment of

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39 A total of 5 pieces are known to me, with an average weight of 0.41 g.
40 H.I. private collection, Germany, 0.40 g.
41 Pecunem Au 22, lot 82, 0.40 g.
42 Two pieces in the market: CNG e-Au 287, lot 128, 0.40 g; Gorny & Mosch, Au 212, lot 1745, 0.42 g
43 Pecunem Au 10, lot 178, 0.42 g.
44 To this town should be given, I think, the obols without the Assian ethnic that have recently been offered on the market and attributed to Assos (see for example Gorny & Mosch, Au 212, lot 1747).
45 430 B.C., the date of Babelon 2010, p. 1268 is probably too early, and should be lowered to 410-400.
46 See some anepigraphic, or with the ethnic initials, hemiobols like CNG, e-Au 219, lot 268 and CNG, e-Au 239,
the Troadic Panegiria of Athena),\(^{47}\) has a left-facing Athena's head with a helmet decorated with a griffin on the obverse, and on the reverse a palladion, namely an archaic xoanon, a wooden cult statue of Athena\(^{48}\) facing right and holding a spear with the right hand, and fillets with the left; behind the statue is the legend ΆΣΣΊΟΝ (fig. 12). The weight is 14.95 g, which corresponds well to the multiple of the last drachm of the sixth Assian issue (and to other slightly later tetradrachms coined in the Troad by Abydus),\(^{49}\) although the types are not consistent with each other, and rather strange for Assos, especially as regards the palladion that is shown on IV c. B.C. coins of Ilion.\(^{50}\) The presence of the griffin on Athena's helm is also not so common,\(^{51}\) and has a parallel in coins such as some hektai of Phocaea and didrachms of very far away poleis such as Elea in Italy and Soloi in Cilicia.\(^{52}\)

The ninth and last\(^{53}\) silver emission of Assos should be placed at the beginning of the IV c. B.C., probably after the Peace of Antalcidas of 387 B.C. when prosperity returned to most Microasian Greek poleis.\(^{54}\) It seems to have been much more abundant than the previous one, and also comprised the same nominals, drachms\(^{55}\) and emidrachms\(^{56}\) of a further reduced weight of about 2.87 g,\(^{57}\) and the emission of a chalkous. In this case too, the considerable size of the emission is probably connected with the construction of the imposing and still well-preserved town wall (over 3 km long), made with good isodomic andesite ashlar, that was built between 398 and 368.\(^{58}\) Another possibility is for military reasons, given the political turbulence in the whole Troad during the first decades of the IV c. B.C.

The types are an Athena's head on the obverse, and a facing bull's head on the reverse with the full ethnic ΆΣΣΊΟΝ around it in the drachms and some hemidrachms, or with only its initial, ΆΣΣ, in some

\(^{47}\) Robert 1966, pp. 18-46; Lazzarini 1984, pp. 3-8.

\(^{48}\) On this important coin, see Lacroix 1949, pp. 122-123.

\(^{49}\) A very similar tetradrachm of Abydos with a palladion, but with an Apollo's head on the obverse is in the Calouste Gulbenkian Collection: Jenkins, Castro Hipólito 1989, pl. LIX, 595, together with two other tetradrachms (Nos. 596 and 597) with an eagle, the symbol of Abydus, on the reverses.

\(^{50}\) If the hypothesis advanced in Lazzarini 1984 would be verified, then the beginning of the Panegiria should be anticipated with respect of the dating (late IV c. B.C.) proposed in Robert 1966.

\(^{51}\) The presence of the griffin on Athena's helmet may legitimize the attribution to her of the temple on the Assian acropolis, although it is also possible that this temple was dedicated to Apollo, with whom griffins are more frequently associated. No dedicatory inscriptions have so far been found in or near the temple.

\(^{52}\) See Bodenstedt 1981, nr. 91, Williams 1992, nr. 220 and ff., and Pecunem, Auction 37, lot 319, respectively.

\(^{53}\) Some obols showing a crouched griffin to the left, with the left forepaw raised, on the obverse, and an astragalus in a slightly incuse square on the reverse have recently appeared on the market. In some auction catalogues they have been attributed to Teos, in others to Assos. I think the first attribution is the most likely since late autonomous bronze coins of Teos with an astragalus are known and very similar, although the second hypothesis is also possible since, once again, the pose of the griffin (as well as the weight) is typically 'Assian' and not 'Teian'. Another important consideration for this second attribution is the presence of the astragalus on an obol of Antandrus (see for ex. Münzen und Medaillen D., auction 36, 30.5.2012, lot 359), a coastal town not very far to the east of Assos. The date of this emission is probably soon after 400 B.C., which would help to fill a gap in the coinage of Assos at the very beginning of the IV c. B.C. A similar attribution problem is raised by some posthumous tetradrachms of Alexander III usually given to Assos since they show a left-facing crouched griffin in the field to the left of the Zeus aethoporous: they are not attributable to our town with full certainty since they have never been found at Assos, in the II c.B.C., an insignificant town, and thus may well have been struck at Abdera.

\(^{54}\) This date is in agreement with the interval 400-375 fixed from the dating of a lekythos found in a tomb of the Assian necropolis containing a chalkous Athena/bull head (personal communication of D.S. Lenger, professor of numismatics at the Akdeniz University of Antalya).

\(^{55}\) 51 pieces are known to me, with an a. w. of 2.87 g.

\(^{56}\) The a. w. of 21 pieces is 1.37 g.

\(^{57}\) This weight is also corresponding to a half Persian siglos.

\(^{58}\) Cook 1973, pp. 242-5.

\(^{59}\) The bull's head is probably an Apolline symbol since it appears in silver coins of Delphi.
other slightly lighter drachm and hemidrachms (fig. 13a, 13b) showing an accessory symbol in the fields. In fact, this series often shows symbols such as a thunderbolt, an ear of corn or a grape associated to the bull’s head on the reverses of both nominals, and is accompanied by the abundant coinage of the mentioned bronze chalkoi, very probably obols, with the same types as the silver coins.

3. Conclusion

In conclusion, the beginning of archaic silver coinage of Assos is earlier than thought, dating from around 520-10 B.C., and contemporary with the other important Troadic mints of Abydos and Kebrun, all characterized by the emission of diobols, at Assos showing a crouched griffin and an irregular incuse square. This first series can probably be connected to the need for the payment of salaries to the stoncutters working towards the end of the VI c. B.C. on the famous temple on the acropolis, dedicated to Athena, or to Apollo, the main god of many Troadic poleis. The second series was made up of drachms, hemidrachms and obols, again showing a crouched griffin, and a reverse with a lion’s head, testifying to a period of wealth enjoyed by the town in the first two decades of the V c. The following economic crisis is testified by the third and fourth series consisting only of obols, and more rare hemiobols with the same types as the previous series, sometimes accompanied by the initial or full ethnic and, later, by rare bronze obols. The emission of drachms and hemidrachms with the head of Athena and a lion’s head in an incuse square started towards the thirties of the V c. A rare obol with a female head coupled on the reverse with four varieties of a griffin’s protome is probably contemporaneous with this latter issue, sharing the same ethnic ΆΣΣΟΟΝ, soon followed by the coinage of beautiful tetradrachms showing the reproduction of an archaic cult statue of Athena on the reverse and adopting the new legend ΆΣΣΙΟΝ. The second/third decade of the IV c. B.C. sees the appearance of the most abundant silver coinage of Assos, very probably destined to finance the building of the imposing town walls (still considered the best preserved of the ancient Greek world), or military operations, and continuing until 340 B.C. The types of these very last silver coins again show a helmeted Athena head on the obverse, and a bull’s head on the reverse, the latter a symbol that recalls the cult of Apollo, probably the second most important at Assos.

Acknowledgements

The author is very grateful to the German collector H.I. who has kindly shown the important Assian coins in his collection providing metrological information and photographs. He also would like most warmly to thank the friends and colleagues Claudia Antonetti of Cà Foscari University of Venice, and Mario Lombardo of the University of Lecce for their most precious epigraphic and historical help, as well as D.S. Lenger of the Akdeniz University of Antalya for his information on the coin finds from the most recent excavation conducted at Assos by Turkish archaeologists.
Bibliography


BABELON E. 1910, Traité des monnaies grecques et romaines. Deuxième Partie, Description Historique, XII, Paris


BODENSTEDT F. 1981, Die elektronmünzen von Phokaia und Metylene, Tübingen

BROUSSEAU L. 2010, Sybaris et l’origine de la monnaie de bronze, «RBelgNum» 154, pp. 23-34


DAIX-WESCOAT B. 2012, The temple of Athena at Assos, Oxford


DE CHOEUSE-GOUFFIER M.G.F.A. 1782, Voyage pittoresque de la Grèce, I, Paris


FINSTER-HOTZ U. 1984, Der Bauschmuck des Athena-Tempels von Assos, Rome

FURTWANGLER E. 1978, Monnaies grecques en Gaule, Fribourg


KLEIN D. 1999, Sammlung von Griechischen Kleinsilbermünzen und bronzien, Milano

KRAAY C.M. 1976, Archaic and Classical Greek coins, London

JENKINS G.K., CASTRO HIPOLITO M. 1989, A catalogue of the Calouste Gulbenkian collection of Greek coins. Part II. Greece to East, Lisbon

LACROIX L. 1949, Les reproductions de statues sur les monnaies grecques, Liège

LAZZARINI L. 1983, L’inizio della monetazione di Assos e una nuova ipotesi su Aioloi (Troad), «RIN» 84, pp. 3-15

LAZZARINI L. 1984, La prima monetazione della Panegiria a Ilio, «RIN» 85, pp. 3-8


MACDONALD D. 2005, An introduction to the history and coinage of the kingdom of the Bosporus, «Classical Numismatic Studies» 5, Lancaster (PA) and London


ROBERT L. 1966, Monnaies antiques en Troade, Genève-Paris («Hautes Études Numismatiques» 1)

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Thompson M., Mørcholm O., Kraay C.M. 1973, An inventory of Greek coin boards, New York