

The Inscribed Seaborne Commerce

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Ship Cargoes are an excellent source for the economic history of the ancient world: They are closed finds; often with a large number of relevant finds which represent a combination of different groups of merchandises. Additionally, a good state of preservation often simplifies the typological classification of the finds as well as the quantification of the cargoes.

However, the scientific potential of this group of sources does not yet seem to have been exhausted. Studies which are focused on individual cargo residues allow analyse on the reconstruction of trade journeys. However, they have to be questioned with regard to their value for a broader view on the economy. A comparative perspective emerges by looking at wreck finds over a long period of time. All studies refer to the statistics published by A. J. Parker based on his catalogue where the wreck finds are broken down by centuries.¹ However, it seems that these summarising observations that are problematic. This could be explained by A. Wilson in a contribution which critically examined the chronological basis of Parker's statistics and the various factors that were influencing the statistics of the wrecks.² In his article he rightly draws attention to problematic economic-historical conclusions from such statistics.³ Apart from the question which the frequency of wreck finds indicates economic cycles there are further problems for interpretations in behalf of aspects of economic history. Amphorae as the as by far the most common type of finds were container of good – especially food-stuffs – have a significant impact on the assessment of the cargoes. The certainty with which chronology, origin and content can be determined is, however, very different and also depends on the level of experience of involved researcher. If the mentioned points in particular are uncertain, an interpretation of the economic background seems to be problematic. The possibility of reusing amphorae aggravates the difficulties of an interpretation.⁴

The Significance of the Inscriptions

Without relativizing the problems described above, however, I try to harness the unquestionably great potential of cargoes for economic history. It is obvious that the problems regarding the classification of amphorae also apply to the finds ashore. However, some groups of finds are better represented in shipwrecks than ashore. This applies, for example, to the metal bars which origin and dating can often be interpreted on basis of the combinations of finds. For a better understanding of maritime trade, the focus in the following is on remains of cargo with all kinds of inscriptions.⁵ These objects are more significant than those without labelling and they are also easier to interpret. In contrast to amphorae for which an advanced typology depends on a specialist, the

interpretation of stamps or graffiti is often easier. Also, they are often published quite well. They can inform us about producers, products and different qualities, and also sometimes about the dealer or the owner of the goods. So, conclusions can be drawn about the composition of the freight and the export areas. Inscriptions can also provide information about the ship owner or skipper, the crew and the origin of the ship. The potential of these sources can thus be clearly determined. It is possible to reconstruct details of the seaborne commerce which would otherwise remain hidden. The localization of target export areas in detail allows conclusions to be drawn about distribution channels and the ports which could have been the final destinations of the ships. Ultimately, a shipload is the result of contracts between ship owners and merchants. The graffiti and stamps could be used to reconstruct parts of them. An interpretation of the epigraphic material with regard to the legal basis of maritime trade would also be possible. É. Mataix Fernández discusses this aspect in her contribution. However, focusing on labelled charge residues also limits the interpretation: They generally represent only a more or less small proportion of the cargo which might restricts or even prevent the possibilities of quantification.⁶

Groups of finds and chronology

Inscriptions and stamps can be found on a variety of objects of different material (fig. 1). The labelled objects provide information especially about the cargo, less about the possession of the crew and travellers. Only in a few individual cases information about the

Group	Objects	S	G	T
Containers	Amphorae, dolia	×	×	×
Fine Wares	e.g. Terra Sigillata	×	×	
Coarse Wares	e.g. Mortaria	×	×	
Lamps	Lamps		×	
Metal Objects	Weights and balances, bronze vessels, furniture, statues	×	×	
Resources	Ingots (lead, copper, tin, sulphur, iron)	×	×	
Building materials	Brick and tile, ashlar	×	×	
Parts of ships and equipment	Timber, anchors, pumps		×	

Fig. 1: Inscribed objects from shipwrecks (S = stamps, G = graffiti, T = tituli picti).

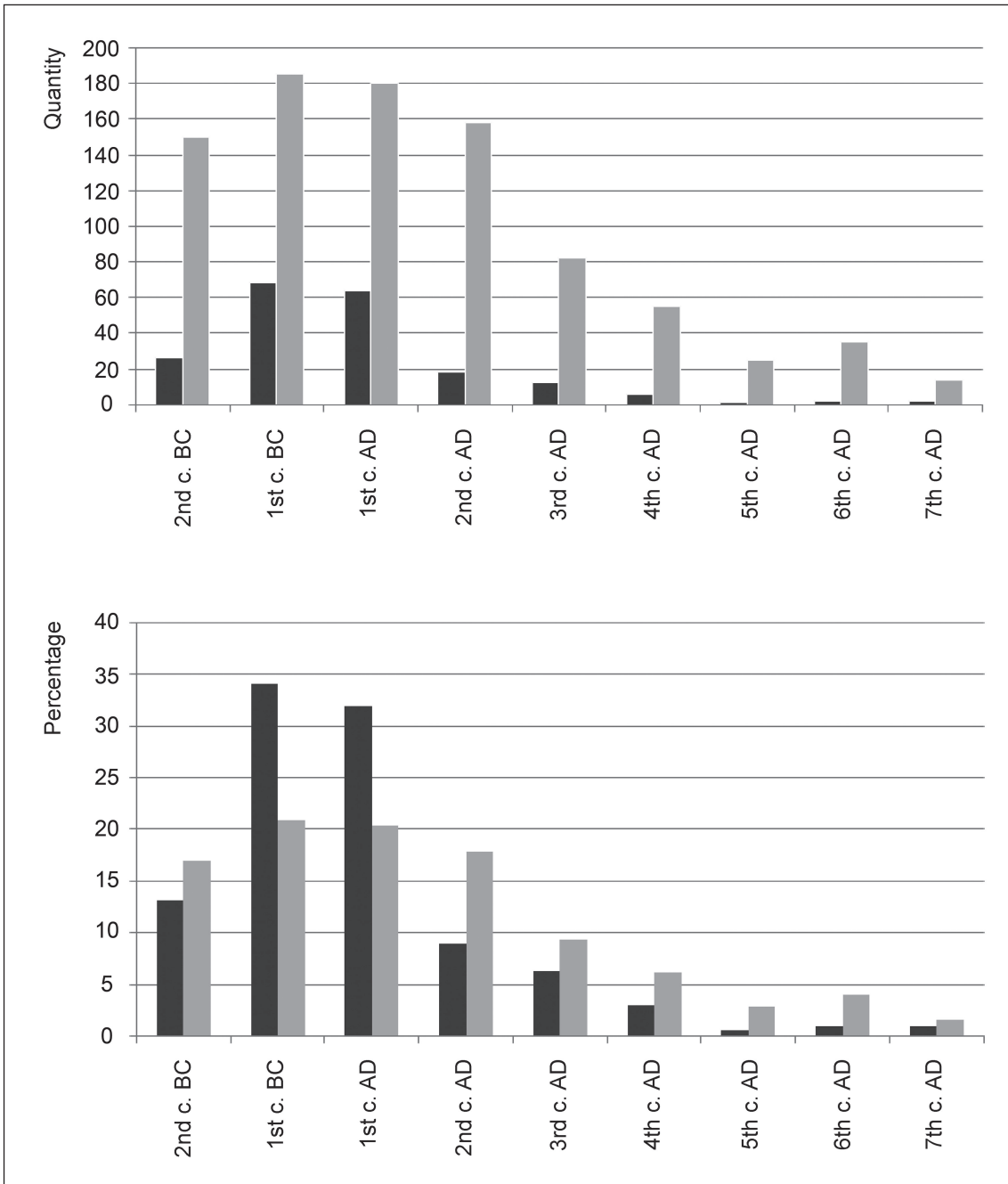


Fig. 2: Shipwrecks from the 2nd century BC to the 7th century AD with inscriptions (dark grey) compared to the entire stock of wrecks (light grey; based on Parker 2008, 187 fig. 12). Above: quantity; below: percentage.

ship itself is given. The chronological distribution can currently only be based on the number of wrecks for which inscriptions are published. It concerns 199 wrecks from the period from the 2nd century BC to the 7th century AD.⁷ Their percentage distribution over the centuries roughly corresponds to the total number of wreck finds published by Parker with a peak in the 1st century BC and 1st century AD (fig. 2).⁸ However, it is noticeable that the inscriptions are overrepresented in wrecks of the 2nd and 1st century BC and otherwise underrepresented. Whether the deviations can only be explained by a general trend in the labelling of goods, has to be investigated in the future. At least for late antiquity this would not be surprising. The relevant wrecks are located almost exclusively in the western Mediterranean, while the Adriatic and eastern Mediterranean are under-represented. On the one hand, this can be explained by a lower rate of labelled ceramics from the eastern provinces of the Roman empire; on the other hand, a relatively low state of publications would also have to be taken into account.

Case Studies

The following examples presented here should give an impression of the value of epigraphic material for the understanding of maritime trade in the Roman Empire. Their selection is not representative of the group of shipwrecks. The focus is on stamps and graffiti on pottery. Lead and other metal ingots are another important group which will not be discussed in detail here. They are also inscribed frequently.⁹

The wreck of La Madrague des Giens discovered east of Marseille off the coast of southern France is remarkable in many aspects. The ship itself with a reconstructed length of approx. 40 m and a cargo capacity of at least 400 t belongs to the largest class of antique merchant vessels, which have been discovered yet. 2364 amphorae were documented of a cargo which is estimated of more than 6,000 amphorae. These are mainly Italian wine amphorae of the Dressel 1b type, dated to the third quarter of the 1st century BC.¹⁰

On the basis of the epigraphic evidence, the origin, presumed ownership and loading procedures could be reconstructed by A. Hesnard.¹¹ The amphora stamps testify that the amphorae were produced at several sites in the Fondi plain in southern Latium. This area was famous for its white wines, especially *Caecubum* and *Fundanum*. Seals on Pozzulan mortar that were applied to the corks as amphora closures show that several wineries were involved in delivering the contents. Three series of amphorae can be classified as the main charge, a further series as a secondary charge. In one series of amphorae of the main charge, the presumed owner of the vineyard, P. Veveius Papus, was also the producer of the amphorae. Due to the anepigraphic seals, the other suppliers can be distinguished, but not named. But, the combination of manufacturer stamps and seal enables the reconstruction of different groups. The assumption that one long-distance trader (or a consortium) was the owner of the main cargo is based on the arbitrary dis-

tribution of the seals within the shipwreck. The secondary cargo included amphorae of the Dressel 1b type with different stamps and seals as well as further amphorae, partly from the Eastern Mediterranean. Less clear than the amphorae are three lead ingots, whose stamps point to an origin from Hispania. A classification as a merchandise on the way from Lazio to Southern Gaul did not seem to make much sense. Therefore, they were interpreted as part of the on-board equipment, namely material for maintaining the ship.¹²

Without a doubt, the remains of the cargo from the wreck of La Madrague de Giens are certainly an excellent example. The quantity and quality of stamps, graffiti is extraordinary as well as the conservation conditions and, last but not least, the state of research and publication. This example illustrates the knowledge potential that stamps and graffiti offer.

The Dramont A wreck which sunk near Fréjus also dates in the third quarter of the 1st century B.C. and its cargo consists almost of Italian wine amphorae of the type Dressel 1b. The name Sextus Arrius, son of Marcus, appeared several times on the seals and also on a lead anchor stick.¹³ So it seems clear that Sextus Arrius, who transported the wine he had bought himself to Gaul, was the *navicularius* and merchant in one person. Also, the name Lucius Lentulus is mentioned on the amphora stamps (L. Lentulus P. f.). It is probably identical to L. Cornelius Lentulus Crus who was an owner of a large estate from Minturnae and consul of the year 49 BC.¹⁴

The wreck Cala Culip IV was discovered off the northern Spanish coast not far from Narbonne. It was a relatively small vehicle of approx. 9 m length which can be interpreted as a coaster. The cargo consists almost entirely of fine ceramics, mainly terra sigillata: 814 terra sigillata vessels were decorated and 1947 decorated. They come exclusively from the pottery centre La Graufesenque in southern Gaul. The research on the decorated vessels by X. Nieto and A. M. Puig led to a date between 75 and 85 AD with a probable limitation to the period 78–82. About 40 different potters could be identified by the stamps. The stamps of Iucundus III, which were frequently found in the cargo, are mainly distributed in the western Mediterranean and at the Atlantic coast (fig. 3). Within this area the maximum radius of action of vessels such as the Cala Culip IV should be sought with Narbonne as port of departure. Its cargo also included stamps on some amphorae of the Dressel 20 type and mortaria.¹⁵

The wreck St. Gervais 3 that was found in the Rhône estuary dates to the middle of the 2nd century AD. 34 of the at least 43 Hispanic oil amphorae of the type Dressel 20 had stamps of three different types. Furthermore, brush inscriptions (*tituli picti*) were visible on 18 of them due to good conservation conditions. Comparable *tituli picti* are otherwise known especially from Monte Testaccio in Rome. According to a standardised scheme, weight indications, names (producers, traders), the places of delivery and control notes are shown. The evaluation of the *tituli picti* by B. Liou and J.-M. Gassend indicates four groups, for each of which a separate merchant could be assigned (fig. 4). In two of these groups production and bottling of the oil amphora were conducted by



Fig. 3: Distribution of Terra Sigillata with stamps of Iucundus III. The size of the dot is according to the quantity. The colours indicate high percentage (black) or low percentage (grey) of Iucundus III within the Terra Sigillata spectra (after Mees 2011, 195 fig. 180).

		N ^{os} 9, 10, 11, 12	N ^{os} 1, 2, 3, 4, 5, 6, 7, 8	N ^{os} 14, 15	N ^o 16
1 ^{er} niveau : <i>production de l'huile</i>	propriété	(fundus) <i>Vetrianus</i>	(fundus) <i>Charisianus</i>	<i>callectr.?</i>	?
	propriétaire	<i>Pontianus</i>	<i>Aelia Aeliana</i>	<i>Aelia Marciana</i>	?
2 ^e niveau : <i>production de l'amphore et conditionnement</i>	estampille	Q I A L	L. S. A. R.	L. S. A. R.	–
	ponderator	<i>Martialis</i>	<i>Anicetus</i>	<i>Anicetus</i>	?
3 ^e niveau : <i>commercialisation</i>	acceptor	<i>Herac(lius, -litus?)</i>	<i>Primus</i>	<i>oni..?</i>	?
	mercator	<i>L. Antonius Epaphroditus</i>	<i>L. Antonius Epaphroditus</i>	<i>Antonii Melissus et Peregrinus</i>	<i>Q. Vinisius Serenus</i>
Localisation géographique		<i>Malpica Astigi</i>			<i>Astigi</i>

Fig. 4: Synopsis of tituli picti on Dressel 20 amphorae from the shipwreck Saint Gervais 3 (after Liou – Gassend 1990, 208).

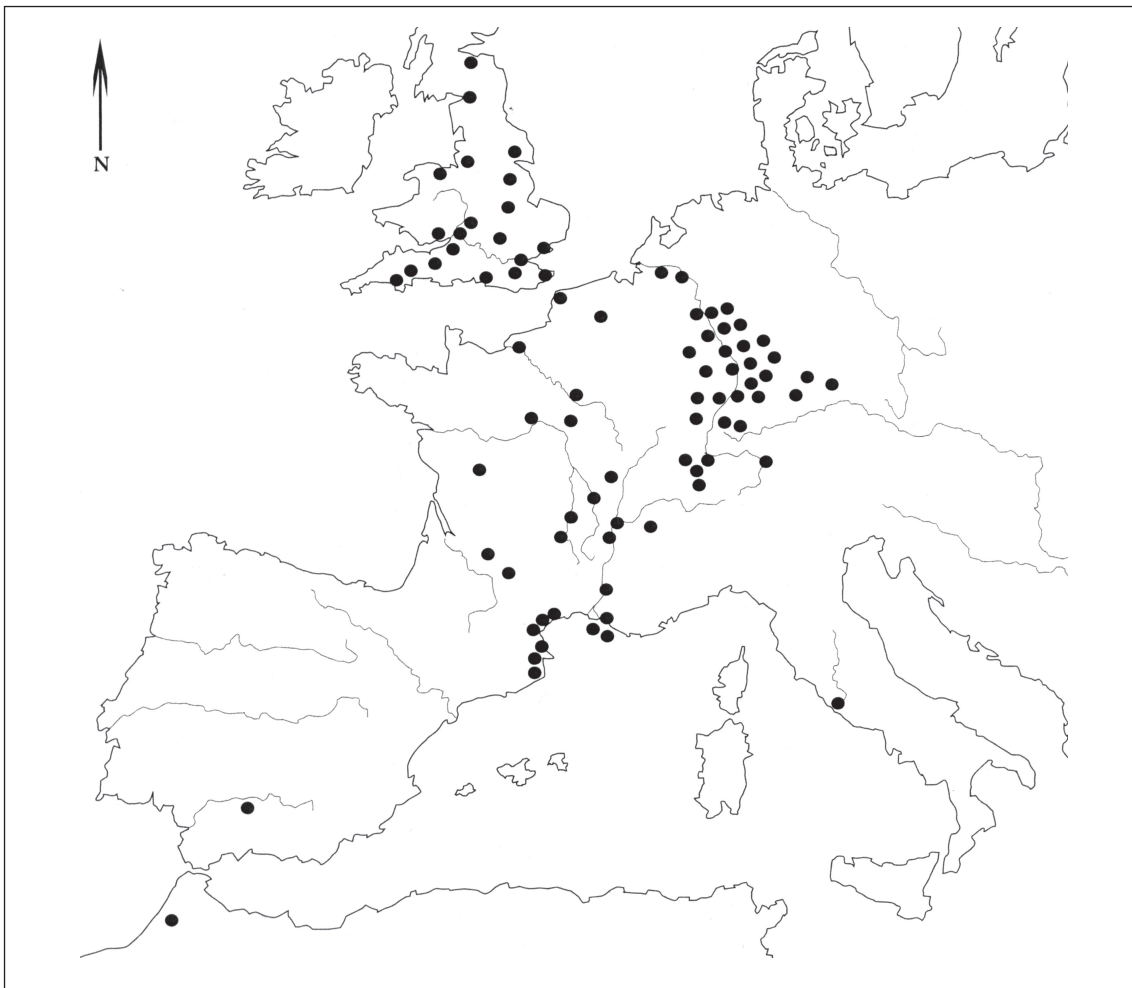


Fig. 5: The distribution of stamps on Dressel 20 amphorae found in the cargo of the Saint Gervais 3 shipwreck (after Étienne/Mayet 2004, 211 fig. 58).

one manufacturer. The instructive map published by R. Etienne and F. Mayet (fig. 5) illustrates the distribution of the stamps found in the wreck. They are often found in the interior of Gaul and in the Limes region. This characterises the potential export areas. The cargo also contained fish sauce and wine amphorae from Gaul and Hispania with *tituli picti* relating mainly to the quality or age of the products.¹⁶

From the 3rd century AD onwards, the amount of evidence for goods with stamps or graffiti on the ship's cargo has decreased considerably (see above). The use of stamps in particular became relatively rare in Late Antiquity. However, graffiti and brush inscriptions can still be found, especially in the eastern Mediterranean. The early 7th century (terminus post quem 625/626) wreck A of Yassi Ada, discovered off the south-western Turkish coast, is chronologically at the period that is observed in this article. The cargo of the freighter consisted mainly of amphorae of the types LRA1 and LRA 2. The 116 graffiti convey monograms of Names as well as information on the content or quality of the amphora contents. In addition, the graffiti indicates the reuse of amphorae by overwriting. Single might could refer to dates within the reign of Emperor Heraklios. Christian symbols also appear, which hints to the church as new actors in maritime trade.¹⁷ In this context, an important piece of evidence is the chased inscription on a steelyard, which was also part of the wreck's inventory: ΓΕΟΡΓΙΟΥ ΠΡΕΣΒΥΤΕΡΟΥ ΝΑΥΚΑΕΡΟΥ. It shows that the scales belonged to the *naukleros* Georgios. The term *presbyteros* is either to be interpreted in the sense of "the elder" or identifies Georgios as a cleric, which seems to make sense in the context of the already mentioned graffiti and further objects.¹⁸

Conclusion

Based on a first review of the relevant literature, inscribed objects could be proved for about 200 shipwrecks from the period from the 2nd century B.C. to the 7th century AD. These are stamps, graffiti and brush inscriptions (*tituli picti*) on various objects: Pottery fine and coarse ware, amphorae and dolia, lamps, metal ingots and various metal objects. A small and special group of testimonies consists of graffiti on parts or equipment of the ships. The inscribed objects are mostly parts of the cargo, more rarely the crew's possessions. They provide information e.g. on types of goods, producers, places and people involved in trade. The advantage compared to unlabelled goods is the detailed information that can contribute to the reconstruction of maritime trade. However, this usually concerns only a small part of the cargoes, so that a quantification based on the inscribed objects is hardly possible. The chronological distribution of wrecks with inscribed objects shows, similar to the wrecks in general, a peak in the 2nd and 1st century BC. Spatially the western Mediterranean area is the core area, probably due to the epigraphic habit and the state of research. The potential of future research could be a deeper understanding of the networks on which maritime trade was founded.

Notes

- ¹ Parker 1992, 8–9 on the statistic of the wrecks; also with more data Parker 2008, 187
- ² Wilson 2011; cf. Wilson 2009, 219–229 and the contribution of M. Reinfeld in this volume.
- ³ Wilson 2011, 33 n. 2 gives an overview of publications based on Parker statistics.
- ⁴ Beltrame et al. 2011 with the example of wreck 1 of Grado.
- ⁵ This article is based on preliminary work for a research project that aims a systematic record of inscriptions from shipwrecks in future. The statements are based on an initial review of published graffiti and stamps, mainly those which are mentioned by Parker 1994. – Edmondson 2014 about the importance of epigraphic evidence for the valuation of the ancient economy.
- ⁶ Wilson 2009 describes the possibilities of quantification based on archaeological sources.
- ⁷ For the wrecks which were dated in a range of two centuries, a value of 0.5 was assumed for each of the centuries.
- ⁸ Wilson 2009, 33–39 discusses the problems of the wreck statistics according to Parker and the changes when considering different parameters and data.
- ⁹ Brown 2011 on lead ingots from ship wrecks. As Rothenhöfer 2018, 74 noted a “Corpus of Roman Lead Ingots” should be published soon.
- ¹⁰ Tchernia et. al. 1978 with detailed information on the ship and its cargo.
- ¹¹ So Hesnard 2012 which is a modified version of the previous material template: Hesnard 1978 with pl. XIV–XVI.
- ¹² Laubenheimer 1978 with reference to the ingots of the wreck of Mahdia.
- ¹³ Parker 1992, 165–166 no. 371. – Hesnard – Gianfrotta 1986, 397. 411 Nr 8.6 (seal) and 396–405 (generally on the function of the seals)
- ¹⁴ Tchernia 2016, 16.
- ¹⁵ Parker 1992, 157–158 no. 347. – Decorated vessels: Nieto – Puig 2001; cf. also the datasets of Cala Culip IV in: <<https://www1.rgzm.de/samian/home/frames.htm>> (15. 11. 2021). – Mees 2011, 192 and 194–195 fig. 179–180 on the distribution of Iucundus III stamps.
- ¹⁶ Liou – Gassend 1990 (catalogue of tituli picti). – Parker 1992, 373–374 no. 1002. – Étienne – Mayet 2004, 210–211 with fig. 58; 234–236.
- ¹⁷ On wreck and cargo: Bass – van Doorninck 1982; Parker 1992, 454–455 no. 1239; van Doorninck 2015. – Detailed information on the graffiti and their allocation to individual amphora types: van Doorninck 1989, 247–253 and with further remarks van Doorninck 2015, 207; cf. also van Alfen 1996, 201–202.
- ¹⁸ van Doorninck 2015, 205–206. – Bass – van Doorninck 1982, 212–213 no. 4 and 215 fig. 10–12 (steelyard with inscription).

Image Credits

Fig. 1: T. Schmidts. – Fig. 2: T. Schmidts, auf based on Parker 2008, 187 Fig. 12. – Fig. 3: after Mees 2011, 195 Fig. 180. – Fig. 4: after Liou – Gassend 1990, 208. – Fig. 5: after Étienne – Mayet 2004, 211 Fig. 58.

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