

Four coin production techniques used in the three *officinae* of Châteaubleau (ca 260-280 AD)

It has recently been confirmed that major minting activity took place in the Gallo-Roman town of Châteaubleau (Seine-et-Marne, France), and in its immediate vicinity, during the second half of the third century AD (Pilon, 1998). Moreover its products look so impressive that an archaeological study has been initiated since 1997 that has produced remarkable results. These have been the subject of a PhD thesis for about one year¹ and some articles related to very specific aspects (see for example Pilon 2003a and Gricourt, Hollard, and Pilon, 2003) have already been published or are in print. Nonetheless, it was deemed important to bring this recent discovery to the attention of numismatists working on Gallo-Roman coins or, more generally, on monetary technologies.

However, it was not possible at this time to include all the numismatic artefacts and relevant archaeological data for this paper, and so to present an exhaustive and comprehensive study. What is more, the minting activity that we are gradually revealing is part of a wide-ranging research program that has only just begun. For this reason our intention is to focus on the four production techniques that were used in the three workshops identified –sometimes simultaneously– and also on the coins thus produced. To this end, we will introduce the main aspects of these two topics and illustrate them with good examples.

1. *The Gallo-Roman town of Châteaubleau*

A correct understanding of the local and regional importance as well as the status of the ancient town of Châteaubleau is obviously necessary to give us a better understanding of the reasons for the existence of the mints. So what are its main features?

Today, Châteaubleau is a small village of 270 inhabitants, located 70 kilometres south-east of Paris (Fig. 1). Its Gallo-Roman roots, which have been known since

the middle of the 19th century, are above all visible in the ruins of two sanctuaries (a group of temples called *fana*, and a water sanctuary, linked by a covered gallery certainly used for processions), a theatre, and also a housing area from the ancient town. All these structures have been excavated during the last four decades by a local archaeological society, “*La Riobé*”. The town was also crossed by a very important road –especially during the late Empire– known as *via Agrippa*, which linked Lyons and Boulogne-sur-Mer. However no military camp has been identified at present in Châteaubleau or in its suburbs.

Despite the excavations that have been carried out, the status of the town is not yet completely understood and will require further research to solve the question. However, what is clear is that the town had an important religious function that must be taken into account in an interpretation of the minting activities. Furthermore, we should remember that the sanctuaries should have been an excellent way to find sufficient quantities of monetary alloy thanks to the *stips* given to the deities by the pilgrims.

2. *The officinae*

However that may be, it's in this context that minting activity began and developed during the second half of the 3rd century AD.

Three *officinae* were localised in 1995, a hundred and thirty years after the first archaeological discovery –a large number of clay moulds used to cast coins– related to this activity. Two of them are situated inside the town: *officina* 1 is alongside the *via Agrippa* and *officina* 2 is next to the central sanctuary (*fana*). The last

1. F. Pilon: L'émission de monnaies à Châteaubleau et Vieux-Champagne (Seine-et-Marne, France) au III^e siècle après J.-C., University of Paris X - Nanterre, 2002-2005.

one –*officina* 3– is located 1,5 km from the village, in a modest Gallo-Roman *villa*.

Because we have already acquired many important archaeological data and found hundreds of numismatic artefacts in *officina* 1 and 3, this paper is only concerned with these two workshops.

2.1 *Officina* 1

Officina 1 was partially excavated between 1997 and 2000 (Parthuisot 1995-2000). The workshop was located between the *via Agrippa* and a housing area of the town. The buildings that belonged to it were unfortunately not accessible to our excavations, but many hollowed-out structures (wells, latrines, pits) had been dug in its backyards where plenty of monetary artefacts were found.

Thanks to them, we already know six different kinds of coins produced in *officina* 1 –*denarii*, *antoniniani*, double *sestertii*, and each of them cast and struck– as well as the production techniques themselves. Four techniques have already been recognised (Fig. 2): cast coins in clay moulds; struck coins with cast blanks, with blanks cut in sheets or sticks, or with blanks cut in rods.

We will not discuss the cast forgeries of *officina* 1, because they were presented one year ago at the Arezzo Conference (Pilon 2004), and will be published in detail in a future article. This paper will present the 400 or so clay moulds, broken or complete, that have been found, and 60 defective products which testify to the production of cast *denarii*, *antoniniani*, and –very unusually– double *sestertii* of Postumus (Fig. 3). Many sets of clay moulds have been found which present different features: some of them are composed of *denarii* moulds; others are of *antoniniani* moulds; the last ones consist of a mixture of *denarii*, *antoniniani*, and double *sestertii* moulds. Moreover some of these sets contain a lot of artefacts related to struck forgeries, and this fact will be very important to establish a chronology of issues.

On the other hand, we should emphasize the struck forgeries from *officina* 1 and the different techniques employed to produce coins, and more specifically to produce blanks which are essential for these kinds of forgeries.

One consists of coins struck on cast blanks. Two limestone moulds for casting blanks in cavities related by

small channels (called *chapelets*) were found in *officina* 1 (Pilon, 2003b). One was complete, consisting of two parts (Fig. 4), and had evidently been used (we can still see a blank in situ as well as the grey marks caused by the molten metal). The other, a matrix, was discarded before being completed (we can see the lack of channels between some mould cavities, and also the absence of the heat marks). The moulds were prepared for casting blanks destined to become imitations of double *sestertii* with an obverse bust of the Gallic emperor Postumus. Such coins were produced in the years 266-270 in the principal unofficial mint of this time, the “atelier II” (Bastien, 1967, 77-89), according to the recent works of Daniel Gricourt and Dominique Hollard² (Gricourt, 1994).

This find is exceptional in many respects. It is the first find of stone moulds for casting blanks from the Gaul in the Roman period, but also the latest and the most western such find, at some distance from those found on Cyprus or in the Middle East and which date from the 2nd century BC to the 1st century AD³. It also confirms that this type of mould was widely used in antiquity for the mass production of bronze blanks. Reconstruction experiments have been carried out at the CNRS Orléans in the course of the PhD work of Aurélie Deraisme (Deraisme, Barrandon and Pilon, 2003; Deraisme, Barrandon, Pilon, Poirier and Guibert, 2003).

The third technique consists of coins struck on blanks cut from sheets or sticks: the blanks thus cut were also calibrated to strike double *sestertii* of Postumus, which are characteristic of the years 266-270 as we have seen above.

The final technique, which consists of coins struck on blanks cut from rods, was widely used to produce *antoniniani* in Gaul, and *denarii* too⁴. Several discoveries related to this technique have already been identified in other places, and some of them published in detail⁵. For this technique, a bronze rod was generally cut in two, then each half also cut in two, and so on. Each of the final cylinders so produced was hammered to form the blanks, and then stamped with dies to produce the coins (Fig. 5). Some of these blanks were also plated, sometimes the

2. Cabinet des Médailles de la Bibliothèque Nationale de France, Paris, France.

3. For a detailed bibliography on that topic, see: Pilon, 2003b.

4. For example, segmented bronze bars were used in *Augusta Raurica* (Augst, Switzerland): Peter, 1990, 18-22, 98-105.

5. For a detailed bibliography on the topic see for example: Hollard, 2000 and Pilon, 1998.

final cylinders which were approximately four millimetres thick. This is especially the case at the beginning of the *antoniniani* production, which can be dated to 265 (or perhaps a little earlier⁶). This method of production is represented in *officina* 1 by at least 300 artefacts (rods, cylinders, blanks...), 30 *antoniniani* (many of them die-linked) with obverse busts of different emperors and empresses, among them Gordianus III, Gallienus, and especially Postumus⁷, and also three die proofs (Gricourt, Hollard and Pilon, 2003a, 23-28, 32-33, 32, pl. 1). However no die has been found yet. The production of struck *denarii* is also known thanks to the find of a lead proof of an obverse die of Maximinus I (Gricourt, Hollard and Pilon, 2003a, 21-23, 32, pl. 1; Fig. 6).

2.2 *Officina* 3

Officina 3 was located outside the town of Châteaubleau, about 1,5 kilometres from the central group of temples. It reused the buildings of a Gallo-Roman *villa* which was occupied from the middle of the first century AD until the end of the third century. Its ruins have been partially excavated (Pilon, 2001-2003), and these excavations will continue up to 2004. This research provided information on the division of labour inside the workshop. Thus the production of double *sestertii* blanks was probably set up in an agricultural building, probably a barn, whilst the production of *antoniniani* blanks was located in the main domestic building.

More than 1,000 artefacts have already been found during the excavations. Consequently, we are now able to identify some of the produced coins: struck *antoniniani*; struck double *sestertii*; perhaps also cast *antoniniani* as well. The production techniques are identical to the ones described for *officina* 1: probably coins cast in clay moulds (this is still a hypothesis because five defective products with the same alloy composition were found, but no clay moulds have come to light); coins struck on cast blanks of the correct size for double *sestertii* (certainly prepared in limestone moulds as in *officina* 1); coins struck on blanks cut from sheets or sticks (this is a very interesting technique which is particularly well-documented in *officina* 3: the blanks were first drawn tangentially on the sheet with a compass (Fig. 7) and then cut out line by line; we also often find the small rectangular pieces of bronze which are left over from cutting four adjacent blanks); and finally *antoniniani* struck on blanks cut from rods (Fig. 8).

Six silvered *antoniniani* struck with an obverse bust of Postumus were found during the excavations (Fig. 9). Five of them are die-linked to each other and also die-linked to four other coins from the Stevenage hoard from the UK (No 613/2: cf. Bland, 1988, 71), from the Guiry-en-Vexin hoard in France (Nos 593 and 599: cf. Foucray and Hollard, 1990, 20, 29-30), and from a private collection (the provenance of this coin is unknown). These all belong to the first stage of minting identified at *officina* 3, which can be dated from circa 265 to 268 (or perhaps a little earlier).

With regard to this kind of production, two lead proofs were also found, struck from the same obverse die of Tetricus II⁸ which is of a very good style and form, and probably belong to a second period of minting datable from circa 268 to 275. Six *antoniniani* with obverse busts of Tetricus I, mostly die-linked, were also found (Fig. 9). These are related to a third and final period of *antoninianus* minting (the so-called “barbarous radiates”) that can be dated between circa 275 and 285.

3. Overview

Finally it should be understood that this paper is only a brief but optimistic review of our present state of knowledge on the *officinæ* of Châteaubleau. It is an opportunity to present some of their major characteristics, of which the following are particularly important:

- At least three *officinæ* but perhaps more;
- Six types of coins and four production techniques used (simultaneously at least during the period circa 266-270);
- Mass production of coins and especially struck silvered *antoniniani* of good style, appearance and form;
- The presence of several die engravers;
- From 10 to 20 years of production.

It is also appropriate to note here that these characteristics, as well as some others, are very similar to the main features of the “Atelier II” identified by Pierre Bastien as the principal unofficial mint working under the reign of Postumus. So we now have to wonder if the *officinæ* of Châteaubleau can be identified with the Atelier II, and

6. According to Dr. Hollard.

7. The plates of coins and die-links will be presented elsewhere.

8. These two proofs were found after completing the article Gricourt, Hollard and Pilon, 2003a. They will be published in a future *addendum*.

this question will be an important part of our future research with Daniel Gricourt and Dominique Hollard from the Cabinet des *Médailles* of Paris.

Beyond the possible identification of the *officinæ*, many other important questions need to be resolved in the course of our work. Here is a short list of some of them. Do we have one mint composed of several *officinæ*, or

independent workshops? Who were the initiators of this activity? What was the relationship between the priests in the sanctuaries and the owners of the *officinæ*? To what extent could the owners rely on political acceptance or support? How can we explain the presence of several skilful die engravers? What was the impact of the *officinæ* of Châteaubleau on coin circulation in the late third century AD in Gaul?...

Bibliography

- Bastien, P. (1967): *Le monnayage de bronze de Postume*, Wetteren, 239 p. and 66 pl.
- Bland, R. (1988): 8. Stevenage, Hertfordshire. In: *The Normanby hoard and other Roman coin hoards, Coin Hoards from Roman Britain*, VIII, Ed. R. Bland and A. Burnett, p. 43-73.
- Deraisme, A., Barrandon, J.-N. and Pilon, F. (2003): L'hétérogénéité des teneurs en plomb dans les monnaies antiques de bronze au plomb. In: 13th International Numismatic Congress, Madrid (15-19/09/2003), *lecture*.
- Deraisme, A., Barrandon, J.-N., Pilon, F., Poirier, J. and Guibert, P. (2003): Recreation of ancient process used to produce lead bronze blanks, In: *Archaeology in Europe*, 24-26/09/2003, *Proceedings*, 2, p. 387-391.
- Foucray, B. and Hollard, D. (1990): Le trésor d'antoniniens de Guiry-en-Vexin (Val d'Oise), *Trésors monétaires*, XII, p. 19-30 and pl. III-VIII.
- Gricourt, D. (1994): La chronologie des imitations de bronzes radiés à l'effigie de Postume, *Cahiers Numismatiques*, 122, p. 13-27.
- Gricourt, D., Hollard, D., and Pilon, F. (2003): Plomb et faux monnayage en Gaule romaine: épreuves de coins et empreintes monétaires inédites, *Revue belge de Numismatique*, 149, p. 11-41 and pl. I-II.
- Hollard, D. (2000): Le dépôt de flans monétaires et d'imitations radiées du théâtre gallo-romain d'Arleuf "Les Bardiaux" (Nièvre), *Trésors monétaires*, XIX, p. 117-128 and pl. XIII.
- Parthuisot, F. (1995-2000): Châteaubleau (Seine-et-Marne). Site des Grands Jardins, *Rapports de fouilles intermédiaires* (Service Régional de l'Archéologie d'Île-de-France).
- Pilon, F. (2004): La fabrication de fausses monnaies coulées à Châteaubleau (Seine-et-Marne, France) au III^e s. après J.-C., in Vanni, F.-M., Bussi, S. (dir.), *Convegno Internazionale di Studio La moneta fusa nel mondo antico. Quale alternativa alla coniazione?* (Arezzo, Italie, 19-20 settembre 2002), *Collana di Numismatica e Scienze Affine*, 4, Milan, 2004, p. 235-262.
- (2003a): La villa gallo-romaine du Bois du Châtel (Vieux-Champagne, Seine-et-Marne): production de fausses monnaies en milieu rural. In: Actes du VI^e colloque de l'association AGER, Cultivateurs, éleveurs et artisans dans les campagnes de Gaule romaine, Compiègne, 05-07/06/2002, *Revue archéologique de Picardie*, n°1/2, p. 177-183.
- (2003b): Un fait unique en Gaule romaine: la découverte de moules à flans monétaires en pierre calcaire, *Revue Suisse de Numismatique*, 82, p. 37-60.
- (2001-2003): Vieux-Champagne / Le Bois du Châtel (Seine-et-Marne), *Rapports de fouilles intermédiaires* (Service Régional de l'Archéologie d'Île-de-France).
- (1998): La fabrication de monnaies d'imitation frappées et coulées à Châteaubleau (Seine-et-Marne) au III^e siècle après J.-C., *Trésors monétaires*, XVII (issued in 1999), p. 77-106 and pl. X-XIII.

Fig. 1: Localisation of Châteaubeau (France)

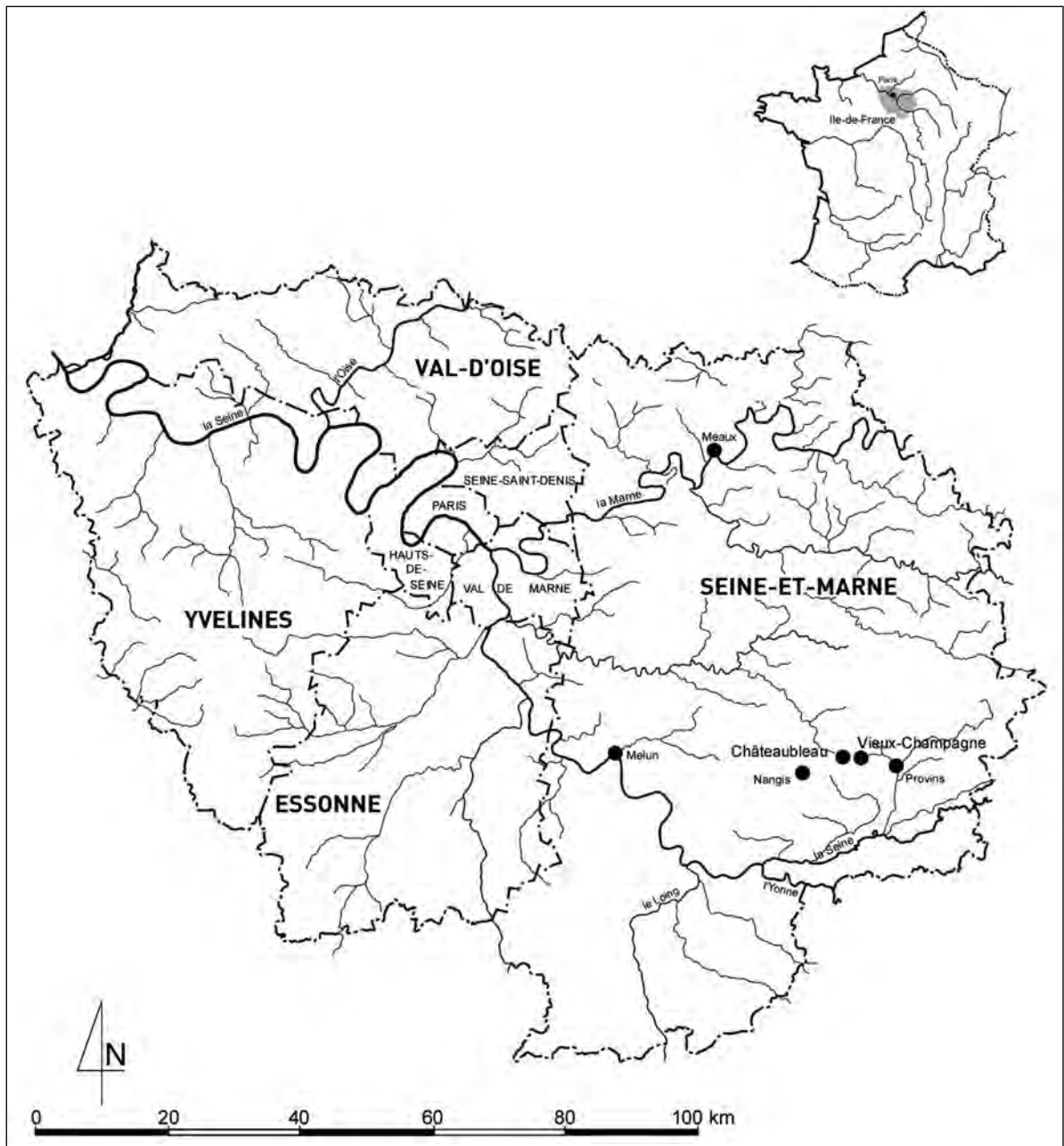


Fig. 2: Coins and production techniques in officina I

Type	Production technique	<i>Antoniniani</i>	<i>Denarii</i>	<i>Double sestertii</i>
1	Cast coins in clay moulds	X	X	X
2	Struck coins on cast blanks	?	?	X
3	Struck coins on blanks cut from sheets/sticks	X	?	X
4	Struck coins on blanks cut from rods	X	?	-

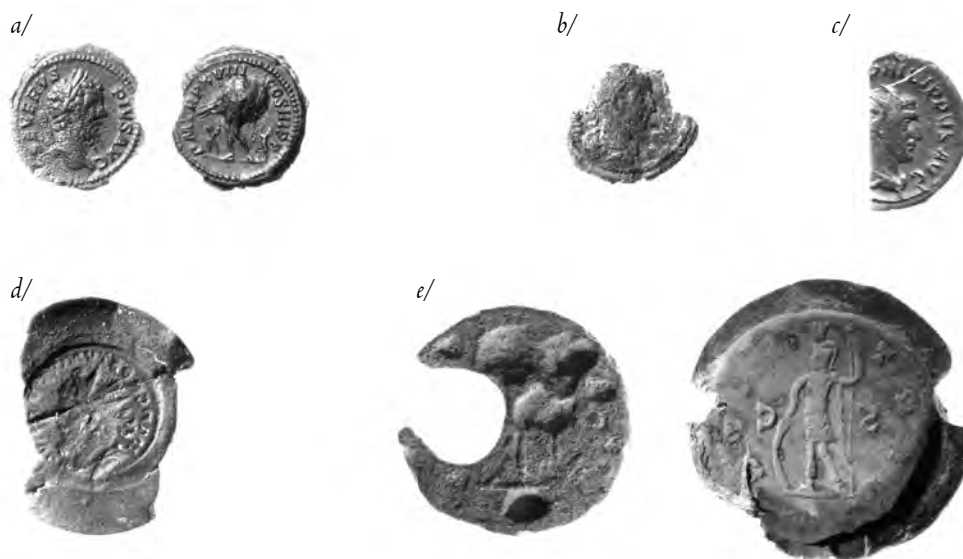


Fig. 3: Some artefacts related to the production of cast coins in *officina* 1: a/ Obverse and reverse of a cast *denarius* of Septimius Severus; b/ Obverse of a cast *denarius* of Gordianus I; c/ Obverse of a cast *antoninianus* of Philip the Arab; d/ Clay mould stamped with an official *antoninianus* of Postumus; e/ Clay mould stamped with an official double *sestertius* of Postumus and the defective product found inside.

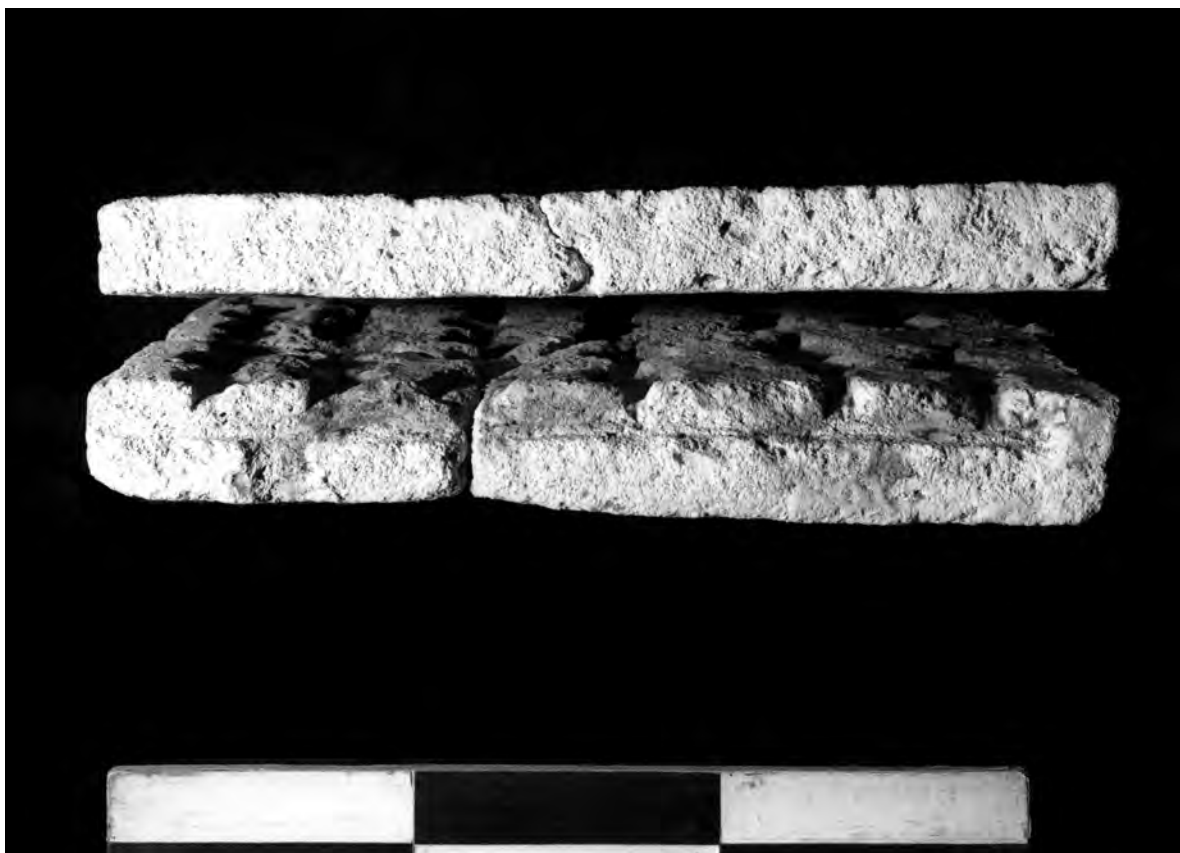


Fig. 4: A limestone mould consisting of two parts used for casting bronze blanks (*officina* 1)



Fig. 5: The production of bronze blanks by cutting rods and hammering the resulting cylinder, and an *antoninianus* of Postumus struck on one of them in *officina* 3



Fig. 6: Lead proof of an obverse die of a *denarius* engraved in *officina* I (bust of Maximinus I)

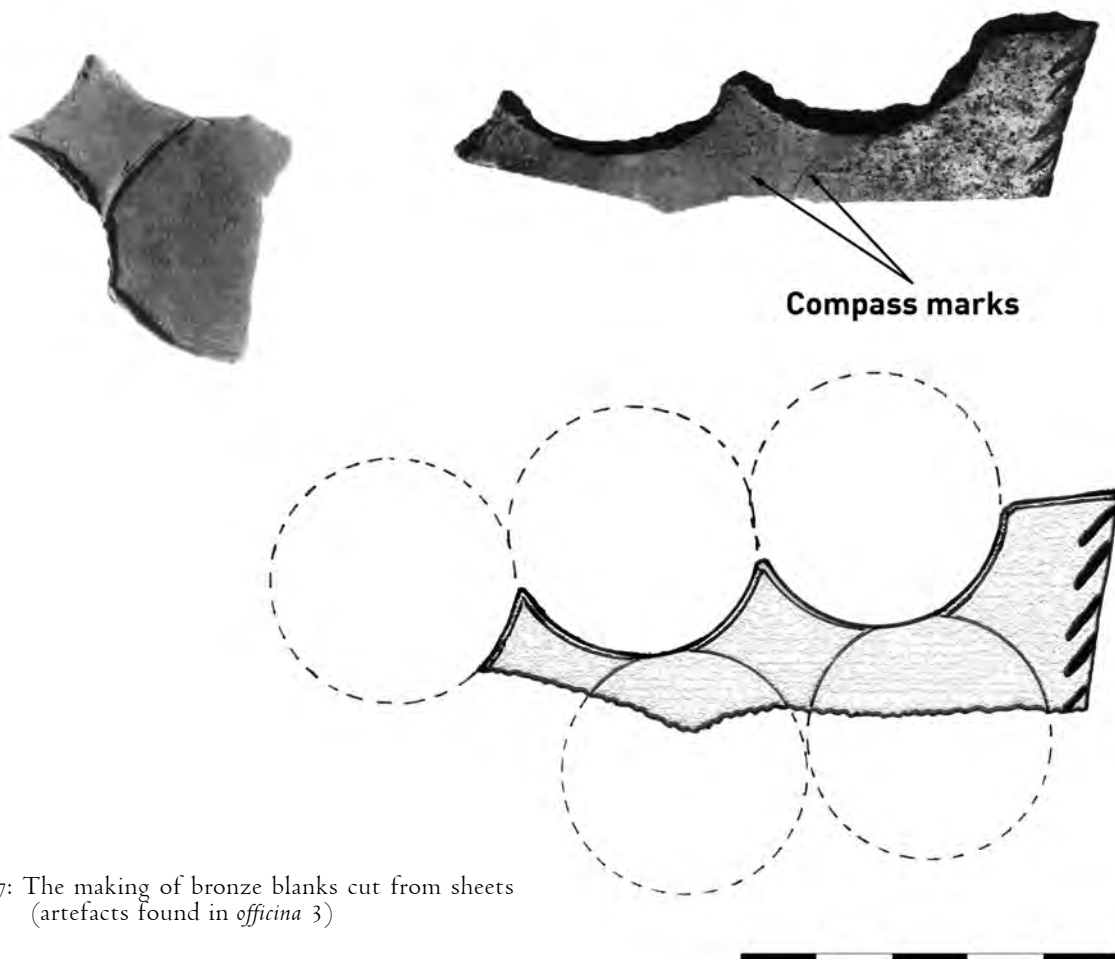


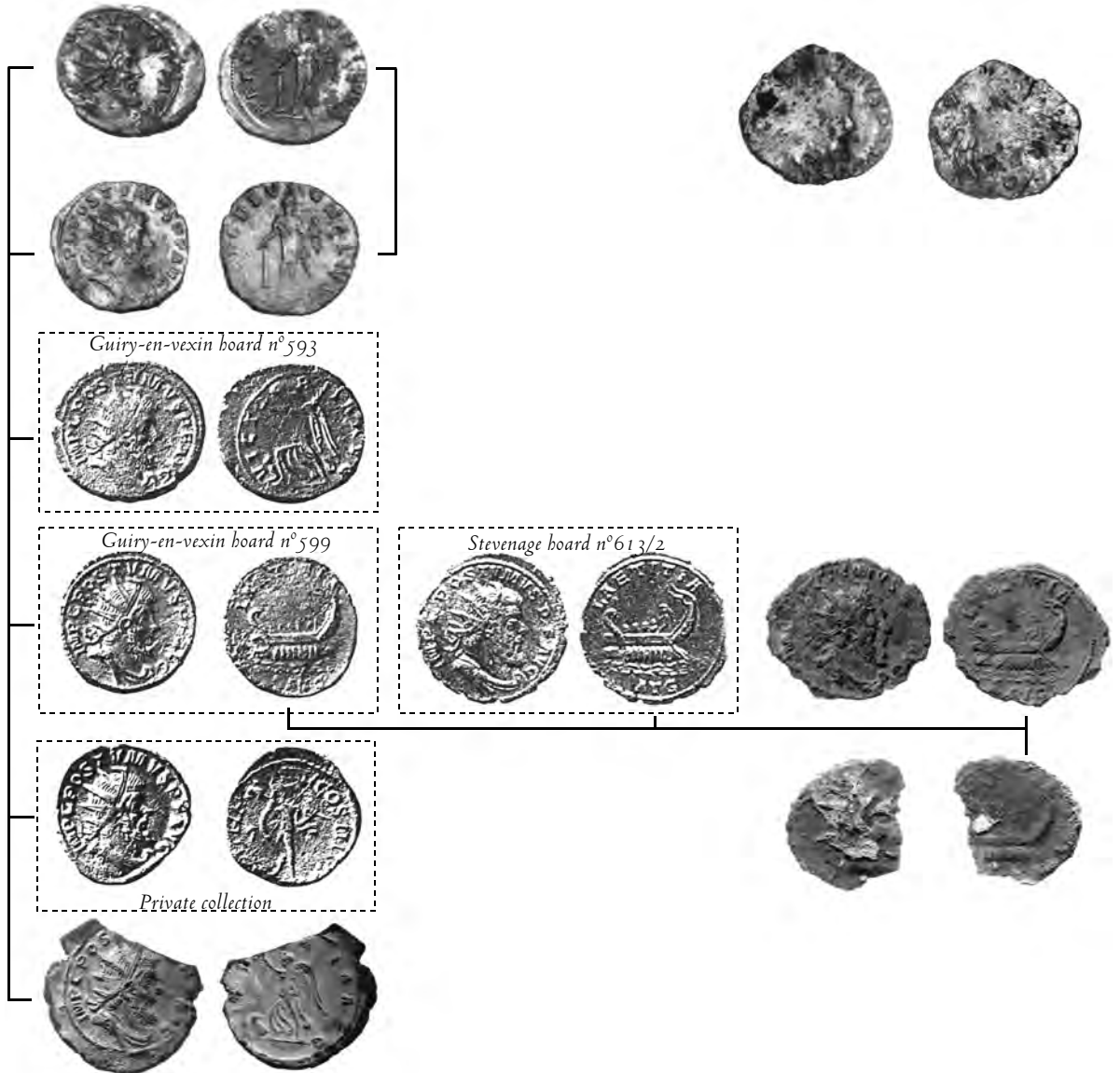
Fig. 7: The making of bronze blanks cut from sheets (artefacts found in *officina 3*)

Fig. 8: Coins and production techniques in *officina 3*

Type	Production technique	<i>Antoniniani</i>	<i>Denarii</i>	<i>Double sestertii</i>
1	Cast coins in clay moulds	(X?)	?	?
2	Struck coins on cast blanks	?	?	X
3	Struck coins on blanks cut from sheets/sticks	X	?	X
4	Struck coins on blanks cut from rods	X	?	-

Fig. 9: *Antoniniani* with busts of Postumus and Tetricus I struck in *officina 3* (the coins were found in the workshop unless otherwise stated)

The first period of antoniniani minting (plated coins)



The third period of antoniniani minting («barbarous radiates»)

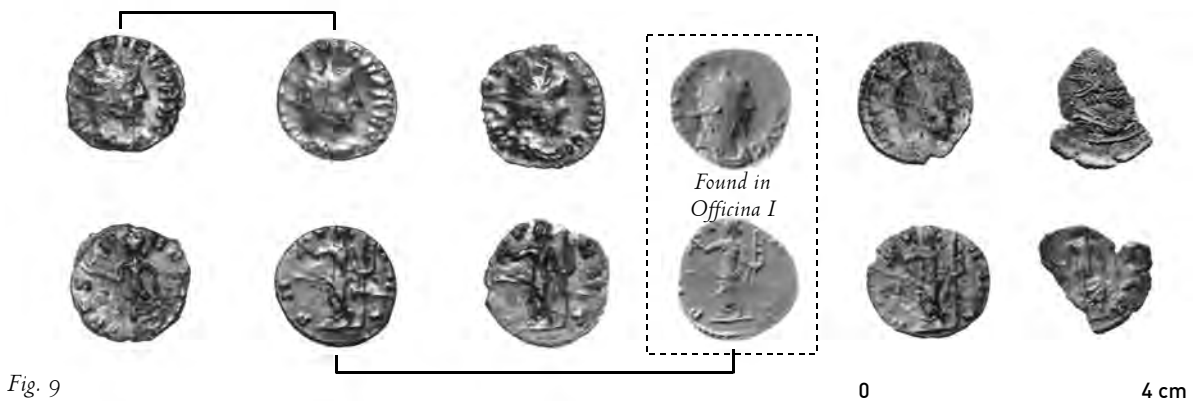


Fig. 9

0

4 cm